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Southern Planter

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DEVOTED TO

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

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CONTENTS.

FARM MANAGEMENT:

Editorial—Work for the Month.....	617
" The Leguminous Crops as Improv- ers of Land	619
" Lime as an Improver of Land.....	620
Improved Farming in North arolina.....	622
Editorial—Hairy Vetch	624
Another Experiment in Curing Cow Pea Hay..	625
Notes on the September Issue.....	625
Clover Seeding	626
Good Yields of Wheat	626
Enquirer's Column (Detail Index, Page 649)..	627

TRUCKING, GARDEN AND ORCHARD:

Editorial—Work for the Month.....	633
The Scarcity of Fruit in Europe.....	634
Notice to Apple Growers.....	634
The Virginia State Horticultural Society.....	635
Orchard and Garden Notes.....	635
The Grass Mulch Method of Apple Culture.....	636
Germination of Seeds	637
Foreigners Want Our Apples.....	637

LIVE STOCK AND DAIRY:

Editorial—Texas or Tick Fever.....	638
Prevention of Texas or Tick Fever.....	639
Hollow Horn—Hollow Tail	639
Right of Owner of Pure Bred Cattle to Recover Damages from Owner of Scrub Bull.....	640
Feeding Pigs at the Vermont Station.....	640
Cattle Feeding Experiments at Tennessee Ex- periment Station	641
Corn Ensilage for Steers	641

THE POULTRY YARD:

Editorial—Building a Hen House.....	642
Picking a Good Layer.....	642
Plucking Chickens	642

THE HORSE:

Notes	643
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MISCELLANEOUS:

Selecting Seed	645
Bulletins from the Virginia Experiment Sta- tion	646
Motors and Methods of Moving Farm Products.	647
Seed Wheat	648
Cow Peas in Tidewater Virginia.....	648
Fall Planting of Irish Potatoes.....	648

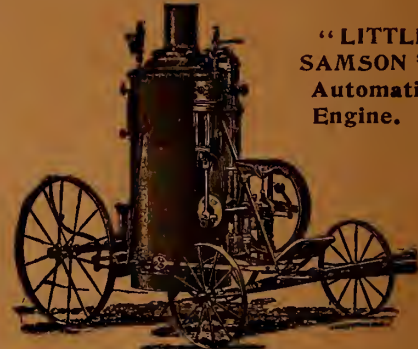
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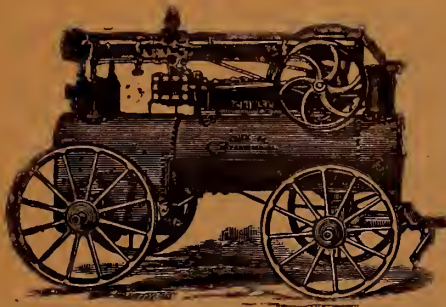
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

64th Year.

Richmond, October, 1903.

No. 10.

Farm Management.

WORK FOR THE MONTH.

The month of September up to this time (20th) has been very like the preceding ones of the summer, cooler than normal and showery, though not quite so far from the normal as August, there having been about a week of really typical September weather, warm, clear and with nights dewy, but not too cold. This has helped crops to maturity, and corn and tobacco are being cut all over the State and the adjoining ones. Further South the crops are mostly harvested except cotton, and this is being picked in all the States growing it. The first bale of Virginia cotton was marketed in Petersburg about the 17th of September. Cow peas are being cut for hay, and second crops of clover and grass are being cut, and excellent yields are being secured. The corn crop of the South, except upon the river low grounds, is probably one of the best ever made, certainly this is so in Virginia. On the low grounds whilst there are some good crops, yet the majority are not up to the highest average. The land was too wet and cold at planting time, and good stands were not secured, and the weather has during all the growing season been too showery to permit of as frequent cultivation as should have been given. We know of many crops that have not had more than one working, and in which the weeds are nearly as tall as the corn. This will cut down the yield considerably. A good deal of the crop is also late, and should we have early frost will suffer some injury. In this respect, however, we are much better off than the Western States, where the crop is also late, and already in many places much injured by frost. A gentleman from Dakota, a

farmer in that State, called upon us a few days ago, and in the course of conversation said that he had crossed the whole corn belt in the course of his journey to this State, and that no where in the course of that long journey of 1,500 miles had he seen a corn crop so good as in Virginia. He was astonished with the crops he saw here. Not only was this the case with the corn crop, but with the cow pea and other fodder crops. He went to see Mr. Bellwood's crops at Drewry's Bluff, Va., and saw them cutting cow peas and millet for hay. He said that he never saw as much feed cut off an acre of land anywhere in the West as was being cut there, and this was not an exceptional field, but only one of many containing scores of acres equally good. Notwithstanding an abnormal season, the South is going to have "hog and hominy" in abundance for all, and more feed for live stock than probably ever before. This is largely to be accounted for in the greater attention given to the growing of forage crops. These are now staple crops, and are the indications of the greater attention given to live stock breeding and feeding in the South. This means that our people are becoming "farmers" and not "planters," and that greater prosperity is to be their lot in the near future.

The conclusion of spring wheat harvesting in the Northwest has been marked by disastrous weather, and our prediction as to the shortage in the wheat crop is being fulfilled. The crop of winter and spring wheat together is going to be more than one hundred million bushels less than that of last year, and as the wheat crop of the world is also likely to be

a short one, we see no reason to alter our opinion that wheat will see a material advance in price; indeed, it is already worth from 10 to 15 cents more per bushel than it was a year ago. Corn is also likely, in our opinion, to be worth more money, as the Western crop is a late one, and certain to be much of it immature when frost strikes it. The oat crop is very greatly below that of last year in quantity, and much of it is badly damaged. This will help to enhance the value of corn, as these two great feeding crops are used interchangeably. Whenever either crop is short the other always advances in price, and when both are short, as will be the case this year, they both advance.

The average condition of the tobacco crop is in advance of the condition for several years, but we are afraid from what we hear that the quality is not likely to be of the best. There is pretty general complaint that the quality is coarse, and that there will be difficulty in securing a nice cure. We would urge that care be taken in this work, and that of grading the leaf when cured. For the best tobacco, notwithstanding what is being said as to the action of the trusts in depressing prices, we believe there will be a fair price paid, but it will largely depend upon the handling of the crop in curing and grading as to what each individual grower will obtain. We believe it is going to pay growers to do some of the work of the rehandlers for themselves this year. Whatever may be the outcome of the sales, one thing seems to be certain, that tobacco growers will need to organize themselves in order successfully to cope with the trusts. This should not be a difficult matter, and we trust that growers will devote some of their time during the winter to this work, so that the next crop to be planted shall be only such an one as can be marketed with profit to the growers. There are plenty of other crops which can be grown at a profit until the trusts are made to understand that they must be prepared to give such prices for the product as will pay the growers or the crop will not be grown.

Cotton is being picked all over the cotton belt, and is likely, if the weather continues open, to make a better yield than at one time seemed possible. The price is still high, and the indications are for this to be maintained. Stocks are low and the demand good.

Sweet potatoes are making a good yield. The second crop of Irish potatoes is not going to be up to the average, as much of the seed rotted from the excessive rains at planting time. It will pay to give attention

to this crop, as the Irish potato crop of the country is very seriously affected with blight, and will not be likely to be large or to keep well.

The work of sowing the wheat and oat crops should receive immediate attention. It is already late to sow winter oats, but where the land is well prepared and the seed drilled so as to get good cover, they may yet be seeded upon well drained, sound land. Wheat should not be seeded until we have had frost, so as to avoid damage from the fly. In the mean time, let all the work possible be done on the land to make the seed bed a perfect one. More depends upon this than upon the quantity or quality of the fertilizer used. Have the under surface soil compact and the top two or three inches as fine as possible. To secure this condition of soil the roller and the harrow should be kept going. Where wheat is to follow corn, the corn should be cut as soon as possible, and either be got off the land or be set up in shocks as far apart in the rows as possible. Corn land that was deeply plowed in the spring and has been kept well and frequently cultivated during the growth of the crop may be seeded to wheat without being plowed again if the surface four or five inches is well broken with the disc harrow or a cultivator, and then brought into a fine condition with the roller and harrow. We have known quite as good crops to be made in this way as by re-plowing the land. In our last issue we wrote fully on the seeding of the wheat crop, and to that issue we refer our readers. One point to which we did not then advert we now press on the attention of readers. See to it that provision is made by furrows for taking off surface water as quickly as possible. Wheat cannot succeed when standing in water. It must have dry feet in winter or it will fail to make a crop.

The showery summer we have had has made the growth of weeds very heavy. These should be got under ground as soon as possible in order that they may add to the vegetable matter in the soil. The ground is now cool, and there will be no danger of souring the land by turning down these crops, and they will greatly improve the condition of the land, especially if it is at the same time subsoiled and deeply broken. All other green crops not required for feed may also be now safely plowed down, but wherever the growth is heavy enough to make hay unless the land badly needs the vegetable matter we would cut the crop, leaving a long stubble, and cure for hay before plowing. We have never had any liking for burying in the soil a crop which has cost money and labor to produce, unless the most impera-

tive need existed for such a course. We prefer to take its feed value out first and then bury the residue. After the crops of weeds and forage have been plowed down, give a top dressing of lime, 50 bushels to the acre, and harrow in lightly, and then seed with rye up to the end of November, and a preparation will have been made for a summer crop which will tell a tale in the harvest.

Continue the seeding of vetches and wheat and rye. Hairy Vetch should be got in at once. English or Winter Vetch may be sown until the middle of November. It is too late to sow crimson clover with a certainty of a stand, though we have known many a good crop raised sown in October. We would seed a few pounds per acre with wheat, rye or oats, or a mixture of the three grains. Much of the clover will probably live over the winter protected by these grains, and will add to the value of the feed and also improve the land. Seed the vetches with a mixture of small grain, say 25 pounds of vetch seed with three-quarters of a bushel of wheat, oats and rye mixed per acre, and if a pound or two of Dwarf Essex Rape be added per acre it will improve the pasturage. We have had a number of our subscribers to tell us that this mixture has given them the best spring pasture of anything they ever tried.

Let all the forage crops be cut and cured as soon as possible. The nights are now too cold for them to make much further growth, and the difficulty of curing them increases day by day. They will now require much more care to get them into a condition to be put into the barn than earlier in the season, but their value as feed will warrant this care being given them. Cut when free from dew or rain, and let them lie for 24 hours, then rake up into windrow and put up into small cocks. Let these stand for a day or two and then open out and sun, and put into larger cocks. Repeat this until the crop is ready for the barn. This will give a hay full of nutriment, and which will be eaten with relish by stock.

Cut up the corn crop at the root and set up in shocks to cure. Much of the corn this year is yet very full of nature, and it will not be safe to put it into large shocks. Have these smaller shocks well set up and tie them round the top with binder twine, so that they may stand well and cure. When dry pull the corn and have the fodder run through the shredder and packed in the barn. If you have not a shredder, let the fodder be carried to the barn or be stacked up under cover, if possible; or, if not, then be

made into stacks and be covered with straw to keep out the wet. Do not leave the fodder to waste in the field. It has cost money and labor to produce it, and is worth much as feed. Farming is not so profitable a business that you can afford to waste nearly one-half of the value of the corn crop.

Irish and sweet potatoes should be dug before the frost cuts the tops. Dig only in dry weather, and do not let the tubers lie longer on the ground in the sun than just sufficient to dry off the adhering soil. In this issue in our Garden Notes will be found advice as to storing sweet potatoes. Irish potatoes may be stored either in a frost proof cellar or in pit or piles in the field. Do not put too many in one heap. Fifty bushels is enough to put in one pile. Make the piles on high dry ground, and cover at first with only some straw and a few boards to keep out the rain. After the potatoes have gone through the sweat, say in a week or ten days, cover with more dry straw and put soil on this sufficiently thick to keep out frost.

Sugar beets and mangold wurtzel beets should be pulled before frost and be stored in a frost proof cellar or shed, or in heaps well covered with straw and soil.

See that all barns, stables, sheds and pens are thoroughly cleaned out and lime washed, and have all doors, windows and roofs repaired, so that when stock are put into the buildings they will be warm and comfortable. They cannot make the best use of the feed given them unless they are comfortable. It is a very extravagant way to use feed to warm buildings and barn yards with it. Make these warm by excluding drafts and rain, and the stock will then use the feed to make flesh and growth.

THE LEGUMINOUS CROPS AS IMPROVERS OF LAND.

For years we have been iterating and reiterating the advice to grow the various leguminous crops, such as cow peas, crimson and red clover, vetches, soy beans and velvet beans, for feed or as improvers of land, and to a very considerable extent this advice has been followed throughout the South, but there are yet thousands of farmers who do not use them or only use them to a very limited extent. These men are standing in their own light and throwing away the greatest opportunity ever given to men in any calling. In a recent visit to the farm of Mr. Bellwood, at Drewry's Bluff, Va., we were more than ever impressed with the truth

of this assertion. When Mr. Bellwood purchased his farm of over 1,000 acres about twelve or fifteen years ago it was a typical example of a run down farm. It had been cropped and cropped by renters and others until nearly all except the low grounds was almost too poor even to sprout peas. Shallow plowing, the want of a system of rotation, and the failure to grow recuperating crops, or to keep stock and apply the manure made to the land, was the cause of this condition. Naturally the land is good. All it needed was good management and farming to make it as it is now, one of the most fertile farms in the South. Mr. Bellwood and his sons set about to give it this, and the result is now seen. We doubt whether there is in the United States a farm upon which heavier crops are grown than are now the rule every year on this place. This wonderfully improved condition has been altogether brought about by a good system of rotation, the constant growing of the leguminous crops, and the keeping of a heavy head of live stock. Every year several hundred bushels of cow peas are sown, and vetches, soy beans and velvet beans are grown in large quantity. Not an ounce of commercial fertilizer has ever been used on the place. Each year crops of wheat averaging from 25 to 35 bushels to the acre, and corn running all the way from 50 bushels on the high land to 125 bushels on the low grounds to the acre, and hundreds of tons of timothy and cow peas and millet mixed hay, which latter crop makes as high as two or three tons to the acre, are made. We saw crops of this hay being cut, which we are satisfied would make nearly three tons to the acre. On all the poorer high land it has been and is the rule to grow two leguminous crops between the crops of wheat and corn, and these are now in almost every case cut for hay, leaving a heavy stubble to plow down. The only exception to this rule is when velvet beans are grown. These are always grown solely for a recuperating crop, and are plowed down during the winter. The experience of Mr. Bellwood is that velvet beans are the most valuable when used in this way. The growth is so heavy and the vines are so long and tangled that it is a most difficult matter to handle them for hay, and he finds that stock do not care to eat them when any other feed is in sight. As a recuperating crop they make a more permanent improvement of the land than any other legume, and put so much vegetable matter into the soil that it is placed in the finest condition possible for the growth of any other crop. Upon one large field of upland we saw a crop of corn which will certainly yield 50 bushels to the acre where a few years ago not nubbins would have been made, and the whole im-

provement has been made by the use of these leguminous crops. Every year hundreds of tons of hay, timothy and mixed is sold in addition to the wheat and large part of the corn. Where the manure from the stock has been used there is now growing a crop of silage corn, which looks like making 15 tons to the acre at least, and this was a few years ago a poor field, which would scarcely grow weeds. The silo at the farm is the largest we have seen. It is built of concrete, and will hold nearly 500 tons of silage. This large quantity is made every year and fed to the cattle with pea and millet hay. The silo corn is well eared, and the silage is therefore rich, and with the pea and millet hay makes nearly a balanced ration, which makes milk in quantity at a small cost, which milk is shipped to Richmond every day and brings in a constant income. This is profitable farming as practically the only outgo is for labor. Why cannot hundreds of other farmers go and do likewise. They may not all be able to make milk production a feature, but they can make beef with the same feed, and beef will pay made in this way.

LIME AS AN IMPROVER OF LAND.

In this issue will be found an enquiry as to the advisability of applying lime to land and as to its effect on crop production. This is only one of numerous similar enquiries which come to us during the year. In some cases the enquirers ask as to using it on light land, in others as to its effect on heavy land. We have deferred replying to many of these enquirers through our columns until this season of the year in order that we might bring the subject before our readers at a time when it is strictly in order for farmers to undertake the work of applying the lime. As readers of our columns are aware, we have for many years held strongly to the opinion that nearly all land in the South requires lime if the best results are to be obtained. We have been confirmed in this view in every case where our advice has been followed which has been reported to us. This view as to the necessity for the use of lime upon nearly all land is now being strongly enforced by experiments, which have been and are being made at a number of the Experiment Stations in different parts of the country. In the past it has been largely held that the use of lime could only be justified where the land was covered with a strong growth of vegetable matter, or where the soil itself was filled with tough vegetable fibre, which required to be broken down by the caustic action of lime. Now it is being recognized by authorities that this is only one of the conditions under which

lime may be successfully used, and that its action is equally beneficial on most land even though little or no vegetable matter is on or in the soil. It has also been thought in the past that lime could not be profitably used in connection with phosphatic fertilizers, but now experiments have conclusively shown that its action in connection with these is most marked and beneficial. Lime is many sided in its effects on land. It acts both physically, mechanically and directly and indirectly as a fertilizer. Applied to light land, it makes it more cohesive and retentive of moisture and fertility. Heavy land it lightens and makes more porous, disintegrating the cohesive soil and rendering it permeable by the fine roots of the plants and checking baking and running together. It corrects acidity in the soil, and much land not thought to be acid is found upon chemical examination to be much too acid for the best growth of crops. There are very few crops which flourish in an acid soil. This is perhaps not so much because of the acidity of the soil, but because in such soils the microbes upon which largely depends the fertility of land cannot there live and work. More especially is this the case where the leguminous crops like clover and cow peas refuse to grow. These crops, upon which so largely depends the quick recuperation of wasted and infertile land, and the maintenance of fertility in all lands are almost wholly dependent upon microbic life in the soil for their vigorous growth. Where this is absent they cannot flourish, and wherever the soil is at all acid the microbes cannot live and the legumes fail and the farmer's cheapest source of fertility is lost to him. Lime again acts as a powerful solvent of inert fertility in the soil. Both potash and phosphoric acid existing in the soil in forms incapable of supporting plant life are rendered available to plants by the action of lime, and especially is this the case with potash. Probably all the different forms of lime compounds are more or less useful when applied to land, but in the form of a carbonate, in which it is found in the limestone of our mountains and in the oyster shell it is undoubtedly the most efficient. Formerly it was thought that to secure good results it should be applied in heavy dressings. Frequently five tons to the acre was applied. It is now found that it is equally and probably more effective applied in less quantity and at more frequent intervals. One ton to the acre applied at intervals of four or five years will be found effective of great improvement on most lands. It may be applied in conjunction with other fertilizers, except those like barn yard manure, especially rich in nitrogen. Where it is applied in connection with nitrogenous manures it will cause a

waste of the nitrogen. Where used in connection with nitrogenous manures it should be first applied and be thoroughly incorporated with the soil and then after an interval of ten or fifteen days the nitrogenous manure may be applied without risk of loss. It may be applied either in the form of ground limestone or as quick lime—that is, lime slacked with water after being burnt. Our experience, and experiments made at the Maryland Station confirm this experience, is that in the form of quick lime it is most effective. We always applied the burnt lime by putting it out on the land in small heaps, say about half a bushel at a place, setting these heaps on the plowed land near enough so that the lime when slacked could be spread with a shovel so as to cover the land half way to the heap on each side of the one being spread. These small heaps we then slacked with half a bucket of water, and after the heap had fallen to powder, which takes only a very short time, proceeded to spread at once, and then lightly harrowed in. In illustration of the effect which lime has in improving land recent experiment made by Dr. Hopkins, of the Illinois Experiment Station, in Southern Illinois, are most instructive. On the farm of a Mr. Hinkley in that section of the State, Dr. Hopkins found the land to be so acid that none of the legumes would grow on it. Mr. Hinkley applied lime in various quantities per acre. In one case he applied ten tons to the acre. His neighbors questioned his state of mind, and declared that nothing could grow in a lime kiln. But things did grow, and are now growing where this heavy application was made. He now grows alfalfa successfully on this land, and when phosphoric acid is also applied and the leguminous crop is followed by wheat or oats profitable crops are raised on land that before this treatment would not grow weeds. Under Dr. Hopkins' direction a number of other farmers in this same section of Illinois have applied lime to their lands and followed this with a leguminous crop, either cow peas or clover, and then with wheat or oats, to which phosphate was applied, and have made excellent grain crops where formerly these crops were practically a failure. The foundation of this success is the lime which makes possible the growth of the legume and then the phosphate supplies the special need of the grain crop in the way of mineral food, and the legume the nitrogen needed, and the result is a profitable crop and improved land. In a series of experiments conducted in Maryland the application of lime in three different forms, sulphate of lime (plaster), 370 pounds to the acre; quick lime (carbonate of lime) 2,000 pounds per acre, and shell marl, 8,000 pounds per acre, on

corn and wheat on a well drained loam soil showed all the applications to be quite beneficial, but the quick lime produced the greatest increase in yields. At the Rhode Island Experiment Station a series of experiments conducted for a period of four years in the use of lime in connection with different forms of phosphatic fertilizers showed very decided favorable results. The crops grown over the four years were corn, oats and hay. In 1894 one ton of lime was applied per acre to half the land. In that year the yield of corn on the cob on the plot on which no form of phosphate was applied, but which had been limed, was 2,613 pounds per acre. On the plot which had neither lime nor phosphate the yield was 1,893 per acre. On the *limed* plot, to which dissolved bone black was applied, the yield was 4,510 pounds of corn on the cob per acre. On the *unlimed* plot, to which dissolved bone black was applied, the yield was 3,698 pounds per acre. On the *limed* plot, to which acid phosphate was applied, the yield was 3,953 pounds of corn per acre. On the *unlimed* plot, to which acid phosphate was applied, the yield was 3,255 pounds per acre. For the years 1896 1899 inclusive, the hay crop on the *limed* plot, to which dissolved bone black was applied, amounted to 19,837 pounds per acre. On the *unlimed* plot, to which bone black had been applied, the yield was 9,820 pounds per acre. On the *limed* plot, to which dissolved bone had been applied, the yield was 19,281 pounds. On the *unlimed* plot with dissolved bone the yield was 8,564 pounds per acre. On the *limed* plot, to which acid phosphate was applied, the yield was 20,205 pounds per acre. On the *unlimed* plot with acid phosphate the yield was 8,951 pounds per acre. On the *limed* plot, to which pure ground bone meal was applied, the yield was 22,012 pounds per acre. On the *unlimed* plot with bone meal the yield was 11,855 pounds per acre. On the *limed* plot, to which no phosphoric acid in any form was applied the yield was 15,737 pounds per acre. On the *unlimed* plot, to which no phosphoric acid was applied, the yield was 2,547 pounds per acre. Note how uniformly an increase is shown wherever the lime was applied. We invite careful consideration of the foregoing facts. We are satisfied that those who use lime will realize profit from it. Those who use it in connection with acid phosphate or bone meal will realize still further profit. As a help to the production of a wheat crop we believe it will be found more advantageous than doubling the quantity of bone meal or acid phosphate, besides putting the land into a condition for growing clover or cow peas, which no other application can compare with.

IMPROVED FARMING IN NORTH CAROLINA.

Editor Southern Planter:

I want your immediate advice along the line of crimson clover. I am told that as good a way to catch a stand as any is to sow the clover right among cow pea vines. How does this style strike you? I have some forty (40) acres sowed broadcast in cow peas, and most of them have a most luxuriant growth of vines. I am thinking of purchasing the clover seed at once and a good broadcast seeder, say "Cahoon's," and seed most of this pea vine bed to crimson clover. The land is in some places very sandy, and the whole is more or less sandy; just the right character for bright tobacco. I said bright tobacco, but ain't we poor fellows catching it in prices? Tell me, quick, how to manage as to the clover and land, would it do seeded on oat stubble, where there is a heavy growth of weeds and grass? The oats were no good, say half a crop. I intended putting this to peas, but tobacco prevented. Would it do as well sown among the weeds and grass, or would you advise the immediate fallowing of the green stuff, and then sow seed and harrow in? All I am after is the certainty of getting a stand of clover. I have no experience with clover. One more thing to ask, and please tell me all you can, and give me your very best advice. Most of my land is, as already stated, very sandy, and in some places rolling, all more or less subject to washes. I notice your advice about using lime. I think that is what my land most needs. We have put lots of manures and used lots of fertilizer. Tell me what character of lime, when to use it, how much, and if broadcast or in drill? I think drill better for my land. Don't you think so? Would lime not benefit any and all crops planted in sandy lands? I am twelve (12) miles from depot, and the draying of lime would be at least one-half of my expense. I am trying stock raising, so as to keep up fertility of my soil. I believe, though, that cow peas will beat all the stock in the world for this purpose, and to this end I am experimenting. Stock require too much feed and close attention, and eat their heads off each winter. Cannot you tell me something about red Polled cattle? I have two bulls, one a red Poll and the other an Angus. The Angus, I find, is a strictly beef animal, and my object will be to sell him to some person or other who wants beef stock. I like the calves of Red Polls, and what I want to know is, How does this breed compare with Jerseys or Holsteins as to milk and butter? Do they give about the same as Holsteins, and what about quality?

The foregoing letter received from a North Carolina farmer deals with so many matters of importance to farmers all over the South that we have published it in full as the text for an article dealing with the subject of improvement of land and live stock hus-

bandry. These two subjects lie at the root of all successful farming in the South. When Southern farmers realize this, as our correspondent evidently does, then they will cease to be "planters" dependent for a living on being able to sell one or two special crops like cotton and tobacco at profitable prices, and will become "farmers" with a variety of products for sale all through the year, the money from which can be largely kept at home and yet the fertility and crop producing capacity of their land be increased and the special sale crops like cotton and tobacco can be held until scarcity compels the manufacturer to give a fair price for them. At present even if the special crops are sold for good prices so much of the proceeds are required to be paid out for fertilizers that little is left wherewith to purchase home supplies and nothing for luxuries. In becoming "farmers" and not "planters," Southern land owners will make their supplies at home and can live in comfort even though the "tobacco trusts" and "cotton trusts" shall become more numerous and exacting. Then the farmers will be able to dictate the price of tobacco and cotton, and not the trust, and prosperity and contentment will be the lot of our country people. The first step in the way to this end is production of leguminous crops like cow peas, crimson clover and vetches upon the farm. These make humus in the soil and feed in the barn. They gather fertility from the atmosphere and fix it in the soil. They make possible big manure heaps, and these, after all, are the true Savings banks of the farm. To secure these results the crops must be successfully grown and fully utilized. This is the season of the year when the work of growing the clover and vetches should be started, and here at the very beginning many make their first blunder. Because they are told that leguminous crops are improving crops they at once assume that they will grow on poor land without any help. This is not so. All the legumes are large consumers of phosphoric acid and potash in their growth. Give them these mineral fertilizers and they will then secure the nitrogen, which they need, and more than they need from the air. In return for a supply of phosphoric acid and potash, where it is lacking in the soil, the legumes will fix nitrogen in the soil and make a heavy crop of vines and roots, which will supply humus to the soil. Where land has been deeply broken and well cultivated for the summer crop crimson clover and the vetches will make a good stand without reploting the land. The surface three or four inches should be broken with a disc harrow or cultivator, and the fertilizer and seed be then sowed and harrowed in, and if the land is dry enough be rolled. Our correspon-

dent asks if clover seed can be successfully sowed in a growing crop of cow peas. Whilst we have known a good stand of clover to be thus secured we have known many a stand to be thus lost. Where the peas are a heavy crop it is a very risky business to sow clover in them. As they mature they will fall down and smother out the clover. Better mow the cow peas and make them into hay, and then break the pea stubble with a disc harrow or cultivator and sow the seed. To seed clover or any other crop in a standing crop of weeds as suggested by our correspondent is bad farming. Even though the clover should make a stand it must of necessity be a weedy crop, and therefore an undesirable one. Cut the weeds down before they seed, break the land and then seed the clover. Weeds are the great curse of most land in the South. They exhaust the fertility of the land and rob it of the moisture which it is so necessary here to conserve. No opportunity should be missed to lessen the weed crop. It is always an unprofitable one. The utilization of the leguminous crops is a matter of as great moment as their growth in the economy of the farm. Our correspondent suggests that simply using them as the medium to supply nitrogen and vegetable matter to the soil by turning them down is more profitable than to use them as feed for stock. In this we are unable to agree with him. To turn under a crop so rich in the element (protein) absolutely essential to the growth of live stock is wasting money. A good crop of cow peas or crimson clover or vetches will make two tons of hay to the acre, worth at the very least \$20 as feed. The full feed value of the crop can be taken out by live stock, and yet nearly the full manurial value can be returned to the land by the careful saving and application of the voidings of the stock. We grant that it may in some cases be wise economy to turn down a crop of cow peas, clover, or vetches, but only where land is so absolutely devoid of vegetable matter (humus) as to be almost incapable of making a crop. In every other case the feed value of the crop should be utilized by some animal. Our correspondent's remark that "cattle eat their heads off in winter" can only be true where the feed is given to miserable scrub animals not worth raising or feeding. Well bred animals of either the beef or milk or butter type can everywhere be fed to profit either directly or indirectly. Thousands of animals are fed some years in England where the profit secured is represented solely by the conversion of the crops of the farm into manure, which enhances the fertility of the land and makes possible the production of heavy yields of grain and other crops without the outlay of a cent in fertilizers. Surely here is a

profit worth considering. As a result of such a utilization of crops an average of 30 bushels of wheat to the acre is made in England as against an average of 12 bushels to the acre in this country. What is needed here is a better type of animals into which to feed the crops. With such stock and the nearness of the great markets of the North and East there can be no doubt but that live stock husbandry can be made profitable in the South, and every crop we grow be made to produce a heavier yield and more profit. We believe firmly that with a larger growth and proper utilization of the leguminous and forage crops which we can so easily grow in the South, that one-half of the money spent in commercial fertilizers each year could be saved and yet heavier crops be produced. We know of farms in the South where not a dollar a year is paid out for commercial fertilizers, and yet where heavy crops are being made and a good profit being realized on the investment in the farm and stock. These farms are heavily stocked with animals of all kinds, and crops are specially grown to be fed to them in addition to the roughage from the small grain and corn crops.

With reference to our correspondent's enquiry as to the relative merits of the different breeds of cattle mentioned, we would say that the Angus is one of the best types of beef making stock, but is of no use for the dairy. The Red Poll is in our opinion the finest dual purpose cow in the world. She is good at the pail and good in the pen. She has done what no other breed of cows has ever done, taken first premium at the Fat Stock show for beef, and first premium at the Dairy Show as a milk and butter producer. She is the true general farmer's cow, ready to make either milk or beef profitably. Whilst she will not give as much milk per year as a good Holstein, nor as much butter per year as a good Jersey, she will give as much of either product as the average cow of these breeds, and will make beef when not milking quicker than either of them, and the beef will be worth much more per hundred than that from either a Holstein or a Jersey. In another article we deal with the subject of the liming of land.

HAIRY VETCH.

When advising the seeding of this crop for an early spring grazing and hay crops we are frequently met with the objection that the seed is very costly, and some of it unreliable in germination. This is no doubt true where it has to be bought, but as we have frequently pointed out, there is no reason whatever why the seed should have to be bought. We can grow it

here as well as it can be grown in Europe, from whence the supply on the market largely comes. We have known an excellent crop of the seed to be grown in Chesterfield county, Va. The Department of Agriculture has conducted some experiments in the production of the seed in Maryland and Ohio, with the following results:

Great difficulty has been experienced in harvesting the seed when grown alone. It ripens very unevenly, and if left until most of the seed is mature it becomes matted on the ground and shells and moulds badly. It was found that by sowing with rye a sufficient support was furnished to keep it off the ground and allow it to be cut easily with a mowing machine. Rye seems best adapted as a supporting crop on account of the time of ripening and the stiff straw.

The best results were obtained with seeding from one-half to three-fourths bushels of vetch and one-half bushel of rye to the acre, sowing from the middle to the last of September.

The crop should be cut about the time the last pods are formed and the vines are getting dry. The cutting is done with an ordinary mowing machine, after which the vines and straw should be put in piles and allowed to dry. The threshing can be done with an ordinary grain threshing machine.

The four acres in Ohio yielded 13 bushels of vetch and 61 bushels of rye. In Maryland the storms knocked the rye down so it did not fill well, but the four acres yielded 18 bushels of vetch and 8 bushels of rye. Reports from Mississippi show a yield of from 5 to 7 bushels per acre in that State.

In many instances hairy vetch has been sown and proved a failure under ordinary cultivation. As it is adapted to a considerable variety of soils and a wide area, it is certain that the failure in most instances is due to the absence of the organism which produces the root tubercles and has the property of fixing the free nitrogen in the air, making it available for plant food. In sowing the areas referred to above the greater part was inoculated with the nitrifying organism, but a strip was left in each case on which none of the inoculating material was used. A vigorous growth of hairy vetch was obtained on the inoculated plots, while on the uninoculated plots in both cases the growth was very scanty and the ground almost bare. This shows the ability of the vetch to make a very satisfactory growth by means of the inoculation on ground where it proves an entire failure under ordinary cultivation.

Unless hairy vetch has already been grown successfully on a piece of ground, it should be inoculated to insure success. Inoculating material will be furnish-

ed by and all inquiries concerning it should be addressed to Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C.

See that a piece of land is seeded with vetch and rye during this month, and thus make certain of an ample supply of seed for next year. It will grow on poorer land than crimson clover and makes an excellent green forage crop and good hay. It should be grown mixed with oats, wheat and rye to make the best yield of feed.

ANOTHER EXPERIMENT IN CURING COW PEA HAY

Editor Southern Planter:

Thinking that making posts, digging holes for them, nailing on cross pieces, placing the hay in between, etc., was a tedious, slow, and expensive process in curing pea hay. I am trying this plan. I put an ordinary fence rail on four small forks, four and a half feet long, the two pairs of forks leaning a little toward each other, suspending a rail on each side by two wires over the rail sustained by the forks and resting against the forks about midway, then placing three tobacco sticks on each side, leaning them against the forks.

On this frame work I build a rick of the pea vines, not having the vines more than two or two and a half feet thick anywhere; the rick being eight or nine feet high will contain six or eight shocks. The ricks have had a severe test of rain intermittently for two days and a night. The hay is cool and drying out. That in shocks is hot and beginning to rot.

I believe I have found the way to cure pea vines, but I cannot yet cry Eureka, because the hay is not yet fully cured, but I write at once as some one else may wish to try this experiment before the season is over.

Brace the framework with an extra fork while you are building on it, after the rick is partly made remove the fork, and the rick will be firm and steady. Have the sides and ends of rick steep. I will let my ricks stand until hay can be safely housed.

Charlotte Co., Va.

H. C. RICE.

NOTES ON THE SEPTEMBER ISSUE.

CHEAT—CASSAVA—LEGUMINOUS CROPS—HOLLOW
HORN—HOLLOW TAIL.

Editor Southern Planter:

You have quite a symposium on the cheat question, and there is hardly any need for more on the subject. If Mr. Roberts, of Washington county, will sow clean

oats on land where there are no cheat seeds he will never have cheat in winter oats. The great difficulty is that farmers fail to recognize the cheat seeds in the oats, for they look exactly like shrivelled oats grains. If they are all blown out, and only heavy and plump oats sown, no cheat will grow unless the soil is already infested with it. Then it takes the freezing of winter that kills oats at times, to germinate the hardy cheat seeds, and when oats are sown in spring all the cheat that has germinated is killed by the plowing, and the result is clean oats. But these clean oats put back in the fall on land infested with cheat will soon be found full of cheat, not because the oats turned to cheat, but because the cheat seed were there, and had the proper conditions for their growth. Whatsoever a man soweth that also shall he reap is as true of cheat as of any other plant. Sow cheat seed and you will get cheat, never oats. Sow only oats in perfectly clean land and you will have oats, and never cheat. I have grown winter oats here, and had them killed down, but never a cheat plant put in an appearance, for the soil has no cheat seed in it, and only perfectly clean oats are sown. But all around the oats turn to cheat, because the cheat seed is there.

Cassava.—I have grown cassava here with success from cuttings planted in the early spring, and have made delicious puddings from the grated roots. We can, on the sandy soils in the eastern part of this State (North Carolina), grow cassava with perfect success. Even on the clay soil here I made an average of half a pound of starch per root. The chief difficulty is in keeping the cuttings over winter. They keep fairly well buried in sand in a warm cellar. The plant is well worth growing as an ornamental plant. Its leaves resemble the castor bean, as it belongs to the same family, but the plant is decidedly more handsome than the castor bean, being more dense in growth, and the leaf stalks being red, form a contrast to the green leaves. For the centre of a sub-tropical flower bed the cassava is a very pretty object.

Hollow Horn and Hollow Tail.—You have struck another old superstition like the cheat, and I expect that you will be getting letters from people who know that cattle have these so-called diseases. Did any one ever find a cow horn that was not hollow or a cow that does not have a soft, boneless place in her tail? Cattle ticks and hollow stomach are generally the cause of the sickness.

Legume Forage.—You are right in what you say to Mr. French. The great advantage we have in the feeding of beef cattle in the South is the great abundance of protein feeds that we can grow. Grass pastures are good, of course, but the South does not need

grass as much as she does legumes, and we can grow most of these to greater perfection than the Northern farmers can. Cow peas, soy beans, velvet beans, vetch, crimson clover, alfalfa, all furnish the costly protein and all can be grown in the South better than elsewhere. With plenty of legume hay we need grass only as permanent pasture, and in the Bermuda grass we have the finest of summer pastures in the country, and can afford to let the meadow grasses go while we produce better hay from plants that improve the soil they grow on.

W. F. MASSEY,

Editor of Practical Farmer.

CLOVER SEEDING.

Editor Southern Planter:

There has been much complaint in recent years in our section of failure in securing a stand of clover. This year, however, the farmers have been more successful. Most of the failures were due to drouths generally in April and May, and sometimes in July and August. We can escape some of these if proper methods in seeding are practiced.

It is our rule here to sow with wheat, and when that plant is making its greatest demand on the soil for moisture, it does not take much of a dry spell in May to kill the young clover plant, if it was sown late. I rarely fail to get a stand in wheat. My practice is to watch for an opportunity in February, when the ground is nicely cracked by freezing and the surface is dry. I regard February 15th as the best time, so that the elements will bury all the seed before there is warmth enough to sprout it. Nature will then bring it up at the proper time and early. It then gets well rooted before spring drouth sets in, then, unless the drouth is very severe, it will pass through it unharmed. By this method of seeding I save much labor in covering it, as has to be done by those who sow late. I have never lost any young clover by freezing, though I have had wheat cut down in March when six inches high by a severe freeze.

This spring there was no favorable time for seeding in February until the last day, when the seeder was brought out and 32 acres was sown. This field produced 800 bushels of wheat and one of the finest stands of clover I have ever had. Have just finished mowing over the stubble and cutting down the rag weed, and will gather some clover seed on parts of the field.

The saving of labor in preparing the land but once and saving one year's time will prevent people taking your advice about sowing clover alone. I have practiced sowing clover alone in small patches for years, and I have never failed to get a stand. This year some seeded that way was cut for hay August 1st, it being 18 inches high. If my neighbor and friend, T. S.

White, had stepped over this way he would have seen your opinion reinforced by my experience.

In this connection may I say to those who imagine that other plants "turn to chess," if they will observe closely in their fall seeding they will see the little chess plant coming up ready to overtop most other crops in the spring. I sowed last fall two and a half acres of corn stubble land in orchard grass and clover. I saw the chess up in it in a few weeks, and when I cut the hay this spring it was nearly all chess. I cut it again August 1st, and it was all orchard grass and clover. It now stands 8 inches high, nice and clean.

T. M. WADE.

Rockbridge Co., Va.

Whilst early seeding of the clover seed on the wheat crop will materially help to secure a stand, yet our experience and observation has been that more of such stands are killed by the hot weather and a drouth after the cutting of the wheat than by spring drouths. The sudden exposure of the tender shaded clover plants to the full glare of the hot sun is most trying to them, and if followed by a dry period almost certainly fatal and especially so when the rag weed is allowed to grow and not mowed off. It sucks out the last vestige of moisture and the clover dies.—ED.

GOOD YIELDS OF WHEAT.

Threshing has been in progress on the Fort Hays Branch Experiment Station, Kansas, and some of the yields are very gratifying. There has been grown there this year 220 varieties of small grain, 105 being fall wheat. The seed grains of these were furnished by the Bureau of Plant Introduction of the Department of Agriculture, and were known to be promising. The surplus seed from these varieties is being sold to wheat growers all over the western part of the State, so that the benefit of the station will be felt immediately.

The following is a list of the varieties and yields that are considerably above the average:

Kansas, No. 4, Kharkov, a Russian winter wheat (bearded), 40.90 bushels per acre.

Kansas, No. 5, Beloglina, a Russian winter wheat (bearded), 32.24 bushels per acre.

Kansas, No. 6, Ulta, a Russian winter wheat (bearded), 36.35 bushels per acre.

Kansas, No. 7, Crimeau, a Russian winter wheat (bearded), 40.61 bushels per acre.

Kansas, No. 8, Chirka, a Russian winter wheat (bald), 36.67 bushels per acre.

Kansas, No. 3, imported Turkey (bearded), 35.82 bushels per acre.

Kansas, No. 33, Kharkov (bearded), 35.28 bushels per acre.

Kansas, No. 35, Crimean importation (bearded), 36.94 bushels per acre.

Kansas, No. 37, Theiss (bearded), 40.97 bushels per acre.

Fort Hays Branch Experiment Station, Hays, Kan.

These varieties ought to be tested in the South. Possibly seed may be had for this purpose from the Department of Agriculture.—ED.

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.

Japan Clover.

Please state in your next issue if "Japan clover" planted in the fall (and what time) will do as well as if sown in the spring? Also, if sown in the mountains where a good deal of shade exists will it grow and make good grazing if thrown broadcast over the leaves? A SUBSCRIBER.

Albemarle county, Va.

Japan clover should be sown in Spring. All through Piedmont, Middle and Southern Virginia Japan clover is found growing under the shade of trees where not too dense. It makes good grazing sown broadcast. There are hundreds of acres of it growing all through the South, where never a seed has been sown by man. Birds, animals and floods have carried the seeds and started the growth, and then it has spread uncared for and untended.—ED.

Hairy Vetch, Winter Vetch.

Which is best adapted to this section, English Winter Vetch or Hairy Winter Vetch? Will either do well sown after cow peas, and what time to sow? The soil is gray. H. T. KIRKMAN.

Guilford Co., N. C.

Either will grow well in your section. The Hairy Vetch should be sown in September whilst the English Winter Vetch may be sown into November, but is better got in October. They will grow after cow peas. Sow either wheat or oats or a mixture of the two, which is better, with the Vetches. Half a bushel of the grain to the acre, with 25 pounds of Hairy Vetch or 1 bushel of English Vetch.—ED.

Lame Horse.

I have a mare about 12 years old, which has been lame in one of her fore feet for nearly eight months, probably caused by being overstrained. First she

became enlarged at the fetlock joints, also a soft, puffy swelling similar to wind galls, but cannot be rubbed away. At the same time she seemed to have pain in her shoulder, which, at times, becomes so severe that she can hardly walk. There also seems to be a wasting away of muscle on her shoulder blade, generally called sweeney. I have tried different remedies without yet having effected a cure.

SIMON ZIRKNITZER.

Lunenburg Co., Va.

This is one of those cases of sprain resulting in shoulder lameness, which are so common and yet so invariably difficult of treatment. The most successful remedy which can be used is *rest*. This may be supplemented by rubbing the joints and shoulder with belladonna or camphor liniment, and possibly blistering may be found of service.—ED.

Texas Fever Ticks.

Please give information how to rid farms of ticks which you say cause fever in cattle.

Albemarle Co., Va.

J. H. GRIFFITH.

Texas fever ticks can be gotten rid of from every farm in Virginia if only farmers would make the necessary effort. What is needed is to keep cattle, horses and mules off a pasture for part of the year. This pasture will then be free from ticks, and will remain free if no cattle infested with ticks are turned on to it. Northern cattle may then be put into it with certainty that they will not have the fever. Before any Southern cattle are turned into it they must be perfectly cleaned of all ticks. The best method of doing this is to use a mixture of one part kerosene oil to three parts of cotton seed oil. This should be rubbed on the cattle all over. Two or three greasings at intervals of a week or ten days apart will do the work effectually. The cattle should then be kept only on the cleaned pasture, and another pasture should be cleaned in the same way, until all the farm is clear of this Southern pest, which has cost the South millions of dollars. The State of Virginia can get rid of it and keep rid of it if the farmers so decide, and it will be worth thousands of dollars to them every year. See article in this issue.—ED.

Inoculating Cattle for Texas Fever.

Will you have Mr. C. A. Williams, of Halifax county, N. C., tell us how he inoculates his cattle, and what he uses to make his cattle tick proof?

Lonoke Co., Ark.

H. J. LEWIS.

Cattle are inoculated against Texas fever by drawing blood from a cow infected with the Texas fever germs, and after the same has been defibrinated injecting the liquid into the body of the animal to be

rendered immune. The operation requires a special inoculating outfit, consisting of a lancet, injection syringe, and measuring glass, so as to secure the proper quantity of fluid. It is usually done by a veterinarian, but there is no reason why a farmer should not learn to do it for himself. He could readily do so by seeing the operation performed at some Experiment Station. It is regularly done at most of the Southern Stations. The important point is to be certain that the animal from which the blood is taken is infected with the germs of the disease. She must have had the disease.—ED.

Grafting.

In your next issue of the *PLANTER* I would thank you to give me directions for grafting fruit trees.

Southampton Co., Va.

J. L. CAMP.

When the season for grafting is nearer at hand we will publish an article on this subject. At present all that can be done is to cut the scions as the wood becomes mature and to pack them away in a cool cellar, but where frost will not hurt them, in damp powdered moss or peat soil. These scions may be cut at any time during the late fall months or even in early spring. They should be carefully labelled with the name when cut, so that no mistake may be made when inserting the graft.—ED.

Tall Meadow Oat Grass.

I have been a reader of your meritorious publication for several years, and have noticed that when giving a list of grass seeds, which you recommend for sowing, you almost invariably include tall meadow oat grass, though I have not noticed an article on its merits since I have been one of your readers. I have been sowing this grass since 1899, and find it worthy of more notice, and compared with orchard grass for hay, I would give the oat grass the preference, as it does not get hard and woody when allowed to get ripe like orchard grass does. I would like to know how the seed is gathered, as the price of seed goes up from year to year, and is now nearly double what it was in 1898. It falls from the plant as it ripens, and if gathered a little green is likely to spoil, and is hard to cure. I have tried stripping by hand, which is slow. Hope you can give some information on the subject, as at present price of seed it would be very profitable to save it, and it may interest many of your readers.

J. H. THOMPSON.

Jefferson Co., W. Va.

Whilst we have not written any special article on the merits of tall meadow oat grass, we have shown our appreciation of its value by constantly recommending it to be sown. We know it to be one of the

most valuable hay grasses that can be sown, and it also makes an excellent addition to a pasture mixture. We believe that the seed is principally grown in the Middle States, and is, we presume, harvested in the same way as orchard grass. The machine is set to cut only the seed stalks of the grass, and the bottom is afterwards cut for hay. Dr. Phares, one of the best authorities on grasses, admits that the seed is rather difficult to save, as it begins to ripen in six to ten days after blooming, and the top seeds ripen first, and at once begin to drop. He advises that as soon as the top seeds ripen sufficiently to drop the whole seed stalk be cut off and dried, when the seeds will all thresh out and be matured. Probably the Division of Agrostology of the Department of Agriculture, Washington, may be able to give you further information on the subject.—ED.

Fall and Winter Plowing.

We have some light land that had wheat on it the past year, and we expect to put it in corn and potatoes next spring. Would it be of any advantage to plow this land in the fall? We also have some stiff upland that we expect to put in peas and beans. This land has been plowed rather shallow heretofore; we hope to plow it deeper this time. Should we plow it now or wait until spring?

SUBSCRIBER.

Charles Co., Md.

We advise the plowing of all land in the fall and winter. It can then, with safety, be plowed deep; and thus the depth of soil be increased. The new soil turned up will be acted upon by the air and sun, and its plant food be made available. It is well when the plowing is done in the fall to seed with some winter cover crop like rye, winter oats or wheat, with crimson clover or vetches. This will conserve and add to the fertility. Fall and winter plowing greatly lessens the pressure of work in spring and land can often be plowed then, which could not be touched until too late in the spring for the best results in the crop.—ED.

Smut on Corn—Grass for Name.

1. What causes smut on corn?
2. Will the smut hurt horses, cattle, sheep or hogs to eat it?
3. Enclosed find sample grass head that grows about here. Tell me the name and value of it, and can I secure it at the seed store?

Catawba Co., N. C.

A. C. EDWARDS.

Smut is caused by a fungus known by the name of *Ustilago zaeae*. It is a fungus of a simple nature, and entirely distinct from the smuts of wheat, barley or oats. It is not like these, conveyed on the seed from

one crop to another, but is usually conveyed to the field and thence spreads to the crop in manure from the barn yard or in rich soil, which has been infected with smut spores from smutted ears or stalks thrown down on the ground. The spores are carried in the air, and these sources of infection grow quickly on touching a moist, tender place on the ear or stalk. The only way to prevent infection or check it is to carefully destroy with fire or bury deeply or scald with boiling water every piece of smutted corn or stalk.

2. Smut is not injurious to animals, indeed it has been found to be nutritious for cattle.

3. The grass sent is *Panicum proliferum*, a weedy annual grass of no particular value as forage. You could not buy the seed of seedsmen.—Ed.

Feed for Young Pigs.

In the absence of milk, what feed do you consider best for young pigs seven or eight weeks old? Would you advise blood meal to produce high class pigs—prize winners?

SUBSCRIBER.

Dinwiddie Co., Va.

Ship stuff with a little fine bran mixed with it and a teaspoonful of blood meal added to each feed mixed in water or kitchen slops. A spoonful of fine bone meal added to the food once a week will also be found beneficial. Let the pigs also have some green food, clover or vetches, and some wood ashes to eat when they desire. These will help to keep their digestive organs and bowels right. We have had some good reports as to the use of blood meal for both pigs and calves.—Ed.

Protecting Peas and Beans from Weevil.

I have some peas and soja beans that I failed to sow this season and wish to carry over for next spring's seeding. Is there any way I can treat them to prevent bugs eating them? If so, please give remedy through the columns of your paper.

Pittsylvania Co., Va.

FARMER.

Place the peas and beans in a tight bin or barrel with a close fitting lid. Procure a can of bisulphide of carbon from a drug store and fill a saucer with the liquid and place it on the top of the seed and close the lid. Leave for 24 hours, when the vapor from the drug will have sunk down through the seed and have killed every living thing in it. This should be repeated two or three times during the winter and spring, as the eggs of insects will hatch at intervals through this time. Be careful to keep all lights away from the carbon, as it is very explosive. The smell of the drug will pass off from the seed in a short time after exposure to the air, and it has no dele-

terior effect on grain of any kind. It is equally effective in destroying animal life of all kinds, therefore do not inhale more of the vapor than can be helped.—Ed.

Cheese Making—Sick Hog.

1. Please inform me whether cheese can be manufactured on a small scale—that is to say, on a farm where about ten cows are kept. If so, what equipments are necessary? What knowledge is required to be able to operate a cheese factory with success; and can such knowledge be obtained in our agricultural institutions? If so, what time is required to gain such knowledge?

2. I also desire to know something regarding my hogs, with which I have some misfortune. I bought a pair of Berkshire pigs from one of your advertisers. They were very fine ones, but one had a severe cough, which I treated in different ways, but with no success, the one affected being a sow. When she had pigs, which were very fine, I noticed that some of the pigs were also affected. I tried giving spirits of turpentine in food, but with no effect. One died. We cut it open and found that the pig was all swelled inside, having lumps on the lungs. I would like to know the disease, and what would be the best cure.

GEORGE SEDIVY.

Dinwiddie Co., Va.

1. Yes; cheese can be made on a small scale on the farm. It was formerly all made in this way, but the cheese factory has now largely supplanted the small home industry. A better quality of cheese is made when larger quantities are handled and larger cheeses made. We believe there is a good opening for cheese factories in the South, as there is a considerable consumption of cheese, and it is all brought from the North. There was a factory operated in Orange county, Va., some years ago, and a good quality of cheese was made, for which a market was readily found, but it was destroyed by fire, and the business not resumed. The equipment required is not very costly either for home or factory work, and can be had from dairy utensil makers in the North. We would not advise the starting of home making, as the difficulty of finding a market for the small cheeses would be great. If the owners of 50 cows would combine together and start a small factory we believe it would be a profitable investment. A course in cheese making would require to be taken at some Northern or Northwestern Agricultural College, or a skilled cheese maker from one of these institutions would have to be engaged. There are several books published on cheese making, from which much could be learned, but a three months' course in a practical school would be best. Wisconsin Agricultural Col-

lege would be the best place to go to for this purpose, as they make the best cheese in that State.

2. The hog probably suffered from chronic bronchitis, which was transmitted to the pig which died and then developed into lung disease. Nitrate of potash in drachm doses given two or three times a week will often relieve this trouble. It is usually caused by exposure to cold drafts or from sleeping in dusty beds.—ED.

Plowing Down Peas.

I planted peas in row in oat stubble as a preparation for cotton. They have fallen down so they cannot be saved for hay, and there is about a half stand of volunteer oats. Would it be better to plow down this fall or leave the oats for a winter cover? If the pea vines are left on top till spring will their nitrogen get into the soil or escape into the air. R.

Lincoln Co., N. C.

The best course to pursue in order to secure all the fertilizing value of the peas is to plow them down now and sow rye, wheat or winter oats on the land to conserve this fertility. If crimson clover or vetches were also sown with the grain this would not only conserve, but add to the fertility. If allowed to lie on the land all winter some of the nitrogen will be lost.—ED.

Calves Dying.

Yesterday (September 14th) I visited my son, who is managing the farm and taking care of mansion formerly occupied by the late Mr. Calvin Jeffers, in Nottoway county, Va. His milch cows have been running, for several months, on a field of from thirty to forty acres, on part of which was wheat and the rest a very poor crop of oats this year. The oats were not worth cutting, and but few were cut. Three of the cows have a calf each with them. These calves have been confined through the day in the enclosure in which the house stands, and at night turned with the cows, with which they remain till morning, in a yard adjoining, in which there is nothing growing but very short grass. In the enclosure in which the calves have stayed through the day are a large variety of ornamental trees and shrubs, which they could eat of at will—for instance, spruce pine, oleander bush, cedars and a box hedge on each side of driveway. On Sunday morning one of the three calves was noticed with its head turned abruptly round, grinding its teeth, frothing at mouth, bellowing, staggering, falling, jumping up, and in thirty minutes from being first seized died. It was four months' old, in good condition, and always appeared perfectly healthy until this took place. Yesterday morning a second one died exactly in the same way

about the same time of morning and died after suffering about the same time. It was about two months old. In skinning them there was noticed an abnormal quantity of nearly black blood about head and neck. What can be the cause? I have been breeding cattle for half a century, but have never met with a case like this. ALFRED STABLES.

Lunenburg Co., Va.

We have very little doubt but that the calves died from poisoning from having eaten some of the ornamental shrubs in the yard. We believe that it is generally recognized that the oleander is poisonous to stock, and most of the ornamental evergreens are so. We have known many cattle to be poisoned by yew, laurestinus and laurel, and we believe also from box.—ED.

Fertilizers for Tobacco, Tomatoes and Wheat.

Please give me the names of all ingredients to make fertilizer of the best kind for growing tobacco on poor land, and also the name of the best seed to sow for marketing purposes; and also the best kind of tomato to sow for canning, and what kind of fertilizer to use for them to make the best yield. Is there much profit on such crops? Also give me the name of the best fertilizers for growing wheat, as I made a failure on my crops.

Northumberland Co., Va. T. L. ASHBURN.

If the writer of this enquiry will read THE PLANTER carefully he will find the question of the best fertilizer to use for these particular crops fully discussed previous to the time for planting the same each year. We do not undertake to recommend any particular make or brand of fertilizer, but tell what the particular crop calls for, and in what form this can be purchased. We have in the past two or three issues discussed the fertilizer required to grow wheat. Phosphoric acid is the element most needed, and this can be supplied by acid phosphate or bone meal, or preferably by a mixture of the two. Probably what the writer most needs is humus in his soil, and this he can get by sowing crimson clover and vetches now.—ED.

Canada Peas—Crops for Hog Pastures—Rape.

1. What time should Canada field peas be planted here in Georgia?
2. Do they make as good hay as the common cow peas?
3. What time in the spring should they be cut for hay? I want to plant a succession of crops for hog pasture for winter and fall grazing. Expect to have about one hundred head of hogs and pigs.
4. What crops do you think would be best for me to plant?

5. When should rape be planted?

Thomas Co., Ga.

W. L. JENKINS.

1. Canada peas should be sowed in Georgia in December or January. Sow at the rate of $1\frac{1}{2}$ bushels to the acre and cover 4 or 5 inches either by plowing them down or by drilling them, and then sow half a bushel of winter oats or wheat and harrow.

2. They make good hay when grown in this mixture, and also good grazing for hogs.

3. They should be cut or grazed before the warm weather sets in or they will be killed by mildew. They are a cold climate crop.

4. The best crops to sow for fall and winter grazing for hogs are cow peas, sorghum, corn, rape and artichokes.

5. Rape is a cold climate crop, and should be sown in Georgia in August or September for fall, winter and spring grazing or in February for spring grazing. Artichokes should be planted in March or April for the hogs in winter. They will root them out except when the land is hard frozen.—Ed.

Hair on Horse's Tail.

Can you give me any remedy for thickening a horse's tail. I have a very handsome horse, but his tail is very thin. Any information along this line will be greatly appreciated.

G. P.

Marion Co., S. C.

We know of nothing better to make hair grow on an animal than to keep the bare or thin spot well greased with vaseline. Grooms in England, when we were a boy, used to mix gunpowder with grease and apply it to make hair grow. Whether this use of gunpowder added anything to the value of the grease we doubt.—Ed.

Fertilizer Requirement of Crops.

A subscriber asks us to give in a general way the special requirements of different crops in the way of fertilizers:

Crops may be divided into the following groups, with their requirements:

Group A.—Wheat, barley, rye, oats, timothy. Require, first, nitrogen; next, phosphoric acid; last, potash.

Group B.—Corn, cotton. Require, first, phosphoric acid; next, potash; last, nitrogen.

Group C.—Peas, beans, clover, hay. Require, first, potash; next, phosphoric acid; last, nitrogen.

The foregoing may be taken as the theoretical requirement of the crops deduced from analysis of their constituents. In practice, this theoretic requirement

is often found not to be the best. This is largely caused by the nature and chemical constituent of the soils on which the crops are grown, and the availability of the plant food in the soil. On most Southern soils the controlling element in heavy yields of the cereal and leguminous crops is usually found to be phosphoric acid. For vegetables and tobacco the controlling elements, potash and nitrogen. The only true way in which to answer this question is to ask it of the soil. Test the different crops on soil of a like character with different combinations of fertilizing elements and with each element separately, and the answer given will be reliable for that soil.—Ed.

Transplanting Trees.

Will you please publish in your next issue the best time for transplanting trees, such as "white oak," etc., and how large could they be transplanted so as to live?

SUBSCRIBER.

Sussex Co., Va.

All trees except evergreen trees can be successfully transplanted in the late fall or early spring. Evergreen trees should be transplanted in the late spring. It is never wise to endeavor to transplant large trees, as even if they live they never make good growth afterwards. We have seen trees from 6 to 9 inches in diameter in the trunk transplanted, but whilst many of them lived they did no more than live for many years. Smaller trees, say half the size, would have made better trees in a few years' time.—Ed.

Hog Husbandry in the South.

1. I have a fine field of corn—worked out clean and level (though land is hilly), and have seeded rye (thin) and German clover on part of it. On balance I sowed wheat and oats thinly and German clover, and at one end I sowed about an acre or more of alfalfa (to stand if successful) twenty pounds of seed. I sowed black peas thinly over the whole piece, to afford shade during the fall after the corn is cut, and I thought they would improve the land, too. My object is to graze with pigs this winter (wrong for alfalfa, is it not?). Then I want to use the pigs on it so that I can get best results as to feed during the spring. Will I be able to let the grains mature and graze them off with hogs and then have time to sow a crop of peas? This is heavy land, and cannot be plowed except we have rain at that season, and there is a risk in that. Will the grain waste if kept for hogs. I suppose they should be put on it when in the milk state. I would thank you for information along this line. My land is good, and produces fine crops. I want to get best results possi-

ble from it. Then will it pay to risk a season for plowing and wait for the small grain, or turn under a green fallow in May and plant peas in drills? I have had no experience in feeding hogs on crops of small grain. They do well in the stubble some years as long as it lasts.

2. I have nearly finished fallowing a nine acre lot of good, heavy land, about half of it was in wheat this year, after peas last year, the other half was in clover cut off this year; not a thick stand. Now, I want to use this field to best advantage in feeding hogs next season. Then shall I sow wheat and oats mixed (and rye, too?) and German clover or vetch? Is there anything better for fall feeding than peas with a sprinkling of corn grown all through it? Or will there be more profit in growing wheat on this land or oats, to be threshed and feed the grain either whole or ground? The land will bring fine crops of either, if fertilized with Charleston phosphate (and the oats do not winter kill, and not likely if drilled in early enough). Best results for hogs is what I want to reach.

3. I want to grow one hundred or more fine hogs annually, and how to use my land to produce the best results for these or a greater number if I can feed them is what I want to do, and I will appreciate an outline for the yearly course of breeding, care of pigs, homes and yards, arranged to feed well, shelter well, and save manure to be easily accessible with manure spreader, and crops and quantity of land required to obtain greatest results at least cost. I think you gave an article nearly a year ago from Breeder's Gazette or some other paper on this subject, but I cannot find it. It would be timely reading again. It was about a hog farm, where, I think, they raised about 200 hogs. I will thank you to refer me to it if you can cross it, and give what other information you can.

4. My corn grows very tall, stalks ranging 12 to 15 feet, and often more, and very large. It would make magnificent ensilage, but I have but few cattle to feed, and I need the grain for team and hogs. I would like very much to grow as fine ears as I do on stalks just half as high. Is there any variety of corn that grows big ears on low stalks? Is there any way of saving the corn and ensilaging the stalk? Dry fodder corn as large as mine represents immense labor to secure feed, only a very small part of which is eaten, and which is considered least valuable for lack of protein. My fodder is in my way, though I cut it up.

C. N. STACY.

Amelia Co., Va.

1. The seedings of rye, wheat and oats and German clover and black peas will make good grazing for your hogs in the fall and spring. The alfalfa should not be grazed. It will not be wise to let the crops stand until the grain matures, but turn the hogs on when in the milk state or a little earlier, and the

greater part of the crop will then be eaten. If allowed to mature the grain the straw will not be eaten. As soon as the crop is fairly eaten down then plow down the residue and sow the peas.

2. We would sow this field with the mixed small grain and German clover and vetch, say 10 pounds clover, 10 pounds vetch and half a bushel of mixed grain, and one or two pounds of rape seed to the acre. This should give you good winter and spring grazing, and then follow with cow peas and corn or sorghum for late summer and fall feeding. We think you will get more feed and better results in the hogs in this way than to sow in wheat or oats and thresh and feed the grain.

3. The article referred to was published in the issue of December, 1902, page 698. It described a successful Illinois hog farm. Eighty acres were divided into four fields of 20 acres each, with a shed located in the centre so as to be accessible from all the fields. The crops grown were oats seeded with clover, clover pasture, soy beans and artichokes and corn. The oats were seeded after corn and sown with clover. Soy beans one part and artichokes on other part follow the clover, and these were followed by corn. Here we can improve on this rotation by using cow peas in the place of the clover, and crimson clover and vetches with oats, wheat and rye for winter and spring grazing in the place of the oats and red clover. Sorghum and corn can be planted in the place of the corn alone, and thus give better early fall feeding. The artichokes should be grown here, as they make the best of winter feed, which the hogs harvest for themselves. Rape also may be grown here for fall, winter and spring grazing. Sow in August and September for fall and winter grazing, and in March for spring grazing.

4. There is no way to prevent corn growing tall on good land in the South. Even if you get a dwarf Northern variety, it will in a couple of years shoot up until as tall as our Southern varieties. Our long growing season causes this. You can save the corn and make ensilage of the stalks and fodder if you will pull the corn as soon as it is glazed and dented, and then cut the stalks and run them through a cutter, or better, a shredder into the silo and wet them well with water as they are packed in the silo. Whilst not so good as silage made from corn grown specially for the silo and cut green, yet this fodder corn silage makes fair feed for stock if some grain be fed with it.—ED.

When corresponding with advertisers, kindly mention the *Southern Planter*.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The gathering, storing and shipping of the apple crop will almost bring to a close the harvesting of the products of the garden and orchard for another year. It is lamentable to see with what a want of care this gathering and disposal of the apple crop is too often done in the South. Instead of carefully picking the fruit from the trees, the apples are too often shaken off or knocked off with poles, and thus so bruised and injured as to make them incapable of being kept for more than a very short time, and absolutely unfits them for shipping to market. Then when picked up from the ground they are, if intended to be sold, dumped into dirty barrels or boxes, or even into slatted crates or barrels and covered only with a piece of sacking, and thus shipped. No care is taken to keep varieties separate or to cull out bruised and diseased specimens. When they reach the market the commission merchant is at a loss what to do with them. No one wants such fruit, and the result is that the grower receives little or nothing for them. The fruit should be carefully picked and the sorts be kept separate, and all undersized, bruised and diseased fruit be kept at home and the large, good fruit, not needed for home use, be put into good, clean barrels and tightly packed and a good head be put on the barrel and pressed down so as to prevent shaking and bruising. Shipped in this way all fruit will find a buyer and at a fair price. There is a demand for apples in nearly every little town, and a large demand in every large city. Where only a few barrels are grown more than needed it will often pay to carry them to the nearest town put up in boxes holding a bushel each and neatly packed. In large cities there is also a demand for these small packages of fruit, and a much better average price could be made if this demand was catered to. There are thousands of people who can buy a bushel of apples who do not want a barrel. This neglect of the small home buyer is responsible for much loss on the products of the orchard and garden all over the country. The large commercial grower has not time to attend to this trade. He picks, packs and ships his fruit in the best manner possible, and then puts it on the wholesale markets of this country and Europe, and gets its full value. The small grower too often gets nothing or next to nothing for his, but this is largely his own fault. We would urge attention to this subject. There is money in it. Do not neglect to store away

a good supply of apples for home consumption. These keep best stored in a cool, dry room or cellar in slatted bins, not holding more than two or three bushels each, and these should be looked over every few weeks and the spotted fruit be picked out and used first. In this way a supply may be kept until the spring.

The late and second crop of Irish potatoes should be dug as soon as they become matured. The sooner they are dug after this period and the better they will keep when stored. Do not let them lay out in the sun after they are dug longer than necessary to dry them so that the soil will leave them clean. Sort as gathered, and store as directed on another page of this issue.

In this issue will be found advice as to digging and storing sweet potatoes.

Carrots, parsnips and salsify will keep safely in the ground where grown, unless the winter be a very severe one. To guard against loss from this, a part of the crop should be pulled and be stored in sand in a cool, frost proof cellar. Beets should be stored in the same way. Turnips will keep in piles out of doors protected with straw. These latter will, however, yet grow much larger; indeed, they will make more weight in November than during any other period of their growth. Do not, therefore, disturb them until severe frost is passed.

Cabbage and lettuce seed may be sowed for plants to set out in early spring. Make the seed beds in a situation where they can be protected easily from severe weather in the winter by being covered with mats, leaves or straw.

Cabbages for the early crop may be set out at the end of the month. They should be got into the fields just soon enough to get hold of the land with their roots before severe weather sets in, but not soon enough to make growth or they will be very apt to be killed by frost, as the young growth is tender. Lay the rows out East and West and set the plants on the South sides of the rows, so that they will be somewhat shielded from the coldest winds and weather. Have the land deeply broken and finely prepared, and do not spare the manure or fertilizer. Cabbages are

gross feeders. Give plenty of phosphoric acid and potash now, and give the nitrogen in the spring when the plants start growing. From 300 to 500 pounds of acid phosphate and from 100 to 150 pounds of muriate of potash should be applied per acre.

Celery should be earthed up a little as it grows to prevent the plants from spreading out on the ground, but it is too early yet to earth it up to blanch it unless it has made good growth and is wanted for an early market. In putting earth to the plant hold the stalks together with one hand and pull the earth around with the other. This keeps the soil out of the heart of the plants. If allowed to get there the plants will canker and the stalks be spoiled.

In dry, warm, light land strawberry plants may be set out this month. If the land is in good fertility and fine order and care be taken in setting out the plants, and the plants be fine, strong ones, they will continue to grow almost as though they had not been moved, and will give a small crop next year. Land that has grown an Irish potato crop and been made rich for that purpose and been kept clean and worked makes an ideal place for this fall planted strawberry crop.

Land may commence to be got ready for the planting of orchard trees, but it is too early yet to set them out. Let the land be well and deeply plowed and be set out in such a way as that the rows of fruit trees can be kept in straight lines and at uniform distances and so as to utilize the space to the fullest advantage.

Clean up and burn all trash, leaves, prunings, weeds and waste in the garden, orchard and vineyard, and thus destroy all insect and fungous pests. Plow and seed all land not carrying any other crop in crimson clover, vetches, wheat, oats and rye. This will conserve fertility and make humus when turned down in spring.

THE SCARCITY OF FRUIT IN EUROPE.

Additional evidence of the scarcity of fruit in Europe is furnished by a recent letter from Thomas Russell, fruit broker, Glasgow, to Mr. W. A. MacKinnon, Chief of the Fruit Division, Ottawa. Mr. Russell writes: "The apple crop in England, Ireland and Scotland is a very poor one, while on the continent there is also a very light crop. Pears and plums are also scarce in England. So far as Glasgow is concerned, we shall have to depend entirely on supplies of apples from America and Canada, and

altogether there is every prospect of a good demand for American and Canadian apples, as there is practically nothing else to come against them this season."—*Farmer's Advocate, Canada.*

NOTICE TO APPLE GROWERS.

Richmond, Va., Sept. 21, 1903.

Editor Southern Planter:

Dear Sir,—As previously brought to your notice, upon the active co-operation of the fruit growers of the State must depend the success or failure, to a large extent, of Virginia's fruit exhibit at the St. Louis World's Fair, so I hope each individual grower will do all that he can to make this exhibit a success. It will be necessary to obtain at least fifty barrels of apples from each of the leading apple counties of the State to enable a continuous exhibit to be made in a creditable manner during the entire period of the Exposition, and if each grower will contribute a barrel or so of apples, each one will get equal individual advertisement and the burden will not bear heavily upon any. Please give me your active support at once, and follow instructions carefully, as I am already receiving apples that through improper selection and handling are valueless for exposition purposes.

DIRECTIONS.

Apples should be carefully picked with the stem left on, must be free from defacement by worms, black ends, scab, cloud or other skin diseases, should be of normal shape and well colored. Great care should be exercised in handling to prevent bruising, and to this end apples, pears, etc., should be picked direct from the tree and each individual apple wrapped in paper, for which purpose newspaper or ordinary wrapping paper will answer. Pack in boxes or barrels, whichever may be most convenient, but in any case use plenty of packing and wrapping material, as a less quantity well cared for is more desired than a large quantity in bad condition. Size must be secondary to the perfect condition of the fruit, as it matters not how large if the specimen has a black end, is scabby or bruised, it cannot be exhibited.

Pears, quinces and nuts, both wild and cultivated, are also desired.

Ship to George E. Murrell, Supt., care The Merchants Cold Storage Co., Richmond, Va., by express.

Yours very truly,

GEORGE E. MURRELL.

We invite the attention of apple growers to the above communication, and would earnestly urge that each individual grower should make it a matter of personal care and a point of honor in the interest of the State to select a barrel of his best fruit and ship

it to Mr. Murrell. If this is done, Virginia can make an exhibit of apples which will be the means of bringing thousands of dollars into the State each year.—ED.

THE VIRGINIA STATE HORTICULTURAL SOCIETY.

Editor Southern Planter:

I promised to send you particulars of arrangements for special railroad and hotel rates for the annual meeting of the Virginia State Horticultural Society, at Pulaski, on December 2d and 3d, but fear I cannot do so until your next issue, as I am still in correspondence with the railroads on the subject. We have met with most gratifying success from firms we have applied to to help us by offering premiums for the exhibits of fruits, vegetables, flowers and seeds. Several of our Virginia firms interested in supplying horticultural implements having shown their desire to encourage a fine exhibit by most liberal offers, among those who have done so are The Implement Co., Richmond, Va., a double hand press cider mill or an improved chilled plow; Hening & Nuckles, Richmond, Va., No. 5 one horse, swing handle Farmer's Friend plow; Watkins & Cottrell Co., of Richmond, Va., set of tools for pruning trees; W. T. Hood & Co., Old Dominion Nurseries, Richmond, Va., 200 apple, 100 peach, and \$10 worth either fruit or ornamentals selected from catalogue; John A. Young, Greensboro, N. C., 50 winter apple trees, for the best seedling winter apple; Sydnor Pump and Well Co., Richmond, Va., bucket spray pump (Fig. 689 of their catalogue); T. W. Wood & Sons, Richmond, \$2.50 worth of garden seeds for the best exhibit of vegetables; Field Force Pump Co., of Elmira, N. Y., one "Empire King" spray pump, mounted on 50 gallon barrel, and fitted with extension rod, hose and nozzles—"to the farmer fruit grower who makes the best exhibit of winter apples gathered from sprayed trees"; Spramotor Co., London, Ont., Canada, any outfit the Society may select from catalogue, price of which does not exceed \$15. Party receiving same may exchange for any pump which is more elaborate by paying difference in cost. We have further offers of premiums which are not yet confirmed. The Society proposes to devote a session to discussion of the subject of advertising our State's resources, with a special view to encouraging an extensive exhibit of fruit for St. Louis Exposition. Governor Montague has expressed his interest in this feature, and promises to attend and give an address on the subject if it is possible to do so. Speakers will open subjects for discussion who are well known to the fruit growing industry both in Virginia and

other States. Our programme with particulars of the fruit exhibit will be published as soon as it is possible to have all the details collected in proper shape.

WALTER WHATELY,
Secretary and Treasurer.

Crozet, Albemarle Co., Va.

ORCHARD AND GARDEN NOTES.

Editor Southern Planter:

Recently I was invited to go with the owner through a large apple orchard. Several things in the orchard impressed me very much. Many of the trees on the lowest land were shedding the foliage from the serious effects of roestelia and phyllosticta fungus diseases. The apple crop on such trees is very apt to be short next season, since the vitality of the trees is being very much lowered. The owner had not followed the advice given in the Spray Calendar published in the PLANTER last spring. The trees on the higher ground were not so badly affected. This is what one might expect. Never plant trees on low, wet land. Those who select orchard land for tree planting this fall should be very careful to get well drained land. There was a large amount of "wormy" and decayed fruit under the trees on the ground. Hogs would have readily consumed this fruit with profit if allowed to do so, and thus would have prevented one source of spreading the codlin moth and bitter rot of the apple. A small herd of my own is doing well on apples and clover. Thousands of bushels of inferior fruit will go to waste this year in Virginia, which had far better been fed into pork.

The time has come when fruits and vegetables should be stored away for winter. Too frequently this work is done carelessly.

As I promised in the PLANTER last spring to discuss harvesting and storing of sweet potato, some of the results of my experiments with this crop will be given here.

An erroneous idea often prevails that frost should not kill the vines before digging. Sweet potatoes dug before or after frost made no difference in their keeping in my experience. There is only one test that I know of by which to tell when the crop is ready to harvest. If when a tuber is broken open it dries up with a white crust-like formation, the crop is ready; but if the broken surface continues to show a watery, greenish appearance, the crop is not ready to be harvested. If taken up then there is great danger of loss from soft rot. The ground should be

dry, the day should be clear and bright, and the tubers should be left to dry a few hours in the sun before gathering begins.

How to harvest the crop is quite important. One of the simplest and easiest ways I have found is to use a large turning plow with a rolling coulter on the beam, hitch two horses to the plow, let one walk on each side of the row, throw open a furrow on each side of the row six inches from the centre. This will cut the vines and throw the dirt away from the potato row. When the field is gone over in this way take off the rolling coulter and throw the potatoes out by running the plow under them.

In gathering, be careful not to bruise the tubers. The baskets or boxes should be lined with cloth. The first grade may be gathered by one party and the second by another. All cut or bruised tubers should go in the second grade, since soft rot is liable to start on these unless handled with extreme care.

The piles should be made very small until the crop cures. Examinations should be made each day for a week or ten days in search of all tubers which may have soft rot. When the tubers cure well all danger of soft rot is over. The crop may then be placed in a suitable potato house. Small quantities may be placed in clean, dry road sand and be kept in a warm place with ease all winter. Mice cannot go through sand to injure the tubers, which is a very important point to remember. Plenty of tubers should be put away for bedding out next season. Not enough of this most important vegetable (both for man and beast) is grown in Virginia. It can be grown on thin sandy soil, where the Irish potato fails.

We have just received from the Virginia Experiment Station bulletins number 5, 6, 7 and 8, on the various phases of cider making. These bulletins constitute, perhaps, the most exhaustive treatise on the subject in the English language. We are sorry the station did not put all four bulletins in one, like the same material was published in bulletin form by the United States Department of Agriculture. Numbers count for nothing. In this form some are apt to become misplaced or lost in the hands of the farmer. The bulletins are dated May, June, July and August, 1902, while the matter in all the bulletins is rather technical, but treat the various subjects also from a commercial standpoint. Now, we would like to see Prof. Alwood try his hand on one for the practical farmer, who has only one or two barrels to make. It could be numbered 9, September, 1903.

R. H. PRICE.

Montgomery Co., Va.

THE GRASS-MULCH METHOD OF APPLE CULTURE.

Experiments in mulching show that a lack of a uniform supply of moisture is responsible for several orchard troubles, which have been attributed to other causes. It is evident, therefore, that in the management of an orchard the aim should be to conserve moisture and at the same time to grow a crop which shall add to the supply of vegetable fiber. The grass-mulch method seems, under certain conditions, to admirably meet the requirements as to vegetable fiber and soil moisture. It would be premature to attempt to say just what the limitations of the method are, but it appears to be widely applicable, and is especially advisable on hilly land—in fact, wherever cultivation is difficult—and on soil which washes and where grass can be made to grow.

To Mr. F. P. Vergon, of Delaware county, O., and to Mr. Grant Hitchings, of Onondago county, N. Y., is due the credit of demonstrating that apples may be successfully grown by this method. Both of these men have worked along essentially the same lines for about fourteen years.

Thus far the method has been unqualifiedly successful, and merits a description; moreover, considerable misconception concerning it has arisen, hence there is not only danger of some going wrong who may attempt it, but many who might adopt it to good advantages may fail to see any good reason for doing so.

Mr. Vergon planted his orchard in a field which had been a bluegrass pasture for about fifty years, and at about the same time Mr. Hitchings began planting a young orchard where an old one had stood in grass for about one hundred years. He has also planted an orchard in a field which had been in cultivation for the same length of time, but had been well cared for, and another in a wornout field. Both of these fields have been in grass from the time of planting. Both of these gentlemen dug large holes for the trees, and both mulched the newly-planted trees. Mr. Vergon made hay of the grass for a few years, but soon decided to take nothing from the orchard but apples. He has mulched the trees with the grass, and has also hauled in various kinds of material for the purpose. Mr. Hitchings mulches his trees until they get well established and then cuts the grass and lets it lie.

The trees in both Mr. Vergon's and Mr. Hitchings's orchards began bearing at an early age, and have given annual crops. It is especially noticeable that the trees are able to carry a crop of fruit and to form fruit-buds at the same time, while the fruit is well colored and hangs on remarkably well. Even in dry seasons there appears to be no bad effects from dry weather on the growth of the trees or upon the size of the fruit. The loss by dropping is insignifi-

cant. All of the results which are supposed to come from good tillage and cover-crops are found in these orchards in a marked degree.—*Professor W. J. Green, in Bulletin No. 137 of the Ohio Experiment Station.*

GERMINATION OF SEEDS.

Following table indicates the length of time which seeds will germinate with profit:

	Years.
Asparagus	4
Beans	5
Beets	5
Cabbage	7
Carrot	5
Cauliflower	7
Celery	8
Corn	2
Cucumber	12
Lettuce	5
Egg plant	7
Melon	7
Onion	2
Peas	4
Parsnips	1
Pumpkin	7
Radish	3
Spinach	3
Squash	7
Tomato	5
Turnips	5

With melons, cucumbers and squashes the older seeds produce luxuriant growth of vine and earlier setting of fruit. All others decrease in vitality with years.

The following table shows the average time of germination from planting of the more common seeds:

	Days.
Beans	5 to 10
Beets	7 to 10
Cabbage	5 to 10
Carrot	12 to 20
Cauliflower	5 to 10
Celery	10 to 20
Corn	5 to 8
Cucumber	5 to 10
Endive	5 to 10
Lettuce	6 to 8
Onions	7 to 10
Parsnips	10 to 20
Peas	6 to 10
Pepper	10 to 14
Radish	3 to 6
Salsify	7 to 12
Tomato	6 to 12
Turnip	4 to 8

The table below gives generally the time from planting to full maturity:

	Days.
Beets	40 to 60
Cabbage	90 to 115
Carrot	90 to 110
Celery	150 to 160
Corn (sweet)	65 to 90
Cucumber	55 to 75
Lettuce	65 to 75
Watermelon	125 to 150
Muskmelon	125 to 150
Squash (winter)	120 to 150
Squash (summer)	90 to 100
Egg Plant	150 to 175
Onions	130 to 150
Parsley	90 to 120
Peas	40 to 90
Pepper	140 to 160
Radish	20 to 30
Spinach	60 to 80
Tomato	110 to 120
Turnip	60 to 75

GEO. H. C. WILLIAMS.

District of Columbia.

FOREIGNERS WANT OUR APPLES.

The outlook for the export trade of American and Canadian apples is unusually bright.

Writing from Edinburgh, James Lindsay & Son say: "Fruit of every description is scarce here, especially apples, of which there are really next to none in Great Britain, and we are of the opinion the crop on the continent is less than they claim. But even though the continental crop turns out more apples than now anticipated, this will not materially interfere with shipments from America, as the quality of European fruit is so much inferior they can only be used for cooking purposes. Our opinion is that if shippers on your side continue to send a good grade of apples, there will be as many wanted here as last season." Henry Levy, fruit auctioneer of Covent Garden, London, reports high prices for fancy autumn apples, and believes Kieffer pears should do well this season, packed in half barrels.

A forceful reason for probable activities the coming six months is the unquestioned shortage of the European fruit crop. The yield of apples and practically all fruits in the United Kingdom is very short. On the continent, moderate to fair crops are reported. Yet the excessively high prices ruling there suggest that the amount available for market is small, after all. The European apple crop, as pointed out from time to time in *American Agriculturist*, is made up mostly of autumn fruit, which is largely out of the way by the time our hard winter varieties are ready for market.—*American Agriculturist.*

Live Stock and Dairy.

TEXAS OR TICK FEVER.

We are glad to know from letters we have received that our remarks in reply to inquiries published in our last issue have aroused attention amongst farmers to this subject. In truth, it is one of the most vital interest for all Southern farmers, and especially for farmers in Virginia, where there is no reason whatever why with proper attention and exertion this serious hindrance to the improvement and extension of our cattle industry should not be wholly removed. We have repeatedly stated, and we so state again with absolute confidence in our opinion, that the whole State of Virginia can be brought out of quarantine and hundreds of thousands of dollars be added to the value of our live stock every year by attention to this subject. North Carolina is moving ahead much faster in this direction than Virginia, and has already secured the exemption of several counties from quarantine. The removal of this hindrance to the free marketing of stock has added from one half to one cent per pound to the value of all stock shipped from those counties, a gain in one county alone of over \$6,000 for one year's shipments. What is being done in North Carolina can be more easily done in Virginia, as we are further north, and our winters help us more in getting rid of the ticks. Once get rid of these, and Texas fever, or it is commonly called, "Murrain," will cease to kill off our cattle. The way to get rid of the ticks is described in the following extract from instructions issued by Dr. Tait Butler, the State Veterinarian of North Carolina, under whose able guidance and careful work great progress has been made in that State:

HOW TO EXTERMINATE THE CATTLE TICK.

"Since it is only with a full knowledge of the habits of the cattle ticks and the manner in which they breed that the proper means for their destruction can be devised and understood, the following facts should be carefully considered:

1. The full-grown female ticks, after filling themselves with blood, drop off the cattle and crawl under leaves, grass or any other material with which the ground may be covered.

2. In two or three days these ticks begin laying eggs and lay from 1,500 to 2,500 during the next two weeks.

3. In real warm weather these eggs may hatch in three weeks, but the hatching may be greatly delayed or prevented entirely by cold weather.

4. The young ticks (seed ticks) although extremely

small, are active, and crawl up the weeds, grass or twigs and wait for cattle to come along and pick them up.

5. Since these young ticks are not able to live longer without food, unless a cow, horse or mule brushes its legs against the object upon which they are waiting, within four or five months they will starve to death.

6. From the time the young ticks get on cattle until they are full grown and ready to drop off is about four weeks, except in cold weather, when they frequently remain on much longer.

7. Neither old nor young ticks crawl far, and a fence with a rail or board on the ground will certainly stop them, but wire fences do not always afford protection.

8. Ticks do not go from one animal to another.

9. Eggs laid before the first of September will hatch the same fall, and unless the young ticks get on cattle, horses or mules they will die of cold or starvation before spring.

10. Eggs laid during the cold weather of late fall and winter do not hatch until the warm days of spring. It is, therefore, the eggs and not the ticks that are able to pass through the winters of the northern and western portions of this State.

With the foregoing facts in mind three methods of destroying the ticks at once suggest themselves:

1. Keep all cattle, horses and mules out of the tick-infested pastures, lanes and lots after September 1st, and all eggs previously laid will hatch before cold weather and the young ticks starve to death before spring.

2. Divide the pasture by a fence with a rail or board tight on the ground, and the first year keep all cattle, horses and mules out of one-half after September 1st. The second year put the cattle on the half left vacant the year previous, and also provide new lanes and lots on ground over which no cattle ran the year before.

3. If practicable, burn the pasture over thoroughly early in the spring. Mix sulphur with the salt given the cattle—one part of sulphur to three parts of salt. Begin not later than April 15th greasing the legs and under parts of all cattle, and repeat it once a week all summer. While greasing the cattle look carefully for any ticks that may have escaped the grease or attached themselves to the upper parts of the body, and if any are found, pick them off and burn. The grease may be one part kerosene and two parts any cheap sort convenient, such as cotton seed oil. If a little sulphur and tar be added the effect will be prolonged and increased. The grease prevents young ticks from getting on the cattle and kills those already

on by plugging the small openings in the body through which they breathe.

If the greasing and hand-picking be done thoroughly and no ticks allowed to drop in the pastures lanes or lots, for four or five months during the warm season, the effort will be successful.

Either of the first two methods, when they can be adopted, is always certain to exteminate the ticks; but the third is not applicable to large herds, and will fail unless it is carefully and thoroughly carried out."

We are in hopes that our State Board of Quarantine will take up this question, and we invite their attention to it, and ask that they secure authority from the Legislature for a vigorous campaign against the ticks, and that the farmers of the State will support them by urging upon the Legislature the appropriation of sufficient money to make the work effective. The co-operation of county authorities will be needed and the Legislature should authorize these to make the necessary expenditure to secure effective quarantine and cleansing of all tick infested cattle and pastures. The passage of a "no fence" law would materially reduce the cost of exterminating ticks and shorten the time required in doing the work. The State Veterinarian should also be authorized and required to inoculate all imported pure bred cattle on the request of the owners, and thus encourage the breeding of a better type of cattle.

PREVENTION OF TEXAS OR TICK FEVER.

Editor Southern Planter:

I see that Mr. C. A. Williams, of Ringwood, N. C., after several trials and much loss, has discovered that by inoculation one may introduce pure bred cattle in the tick belt without much risk, and I am glad to learn it. You might mention in the next issue of the *PLANTER* that there is equally as safe and a much cheaper way to do it—viz., buy a calf not more than two months old, give him to a native cow, and after he has been in the tick country, say two months, let some ticks get on him. He will have the fever lightly, and then I think be immune. I bought a polled Durham calf last May just two months old from Messrs. Humbert Bros., who advertise in the *PLANTER*, and he has just gone through the fever to all appearances all right. THOS. S. NORFLEET.

Person Co., N. C.

Whilst there is no doubt that to proceed with a calf as directed by our correspondent will confer in some cases complete immunity against Texas fever, yet this is not so absolutely certain as to avoid the necessity for inoculation. The position as defined by veterinarians seems to be this. All calves at birth

have a high degree of immunity against the tick fever. This natural immunity is gradually lost as they become older. If when the calf is from 4 to 6 months old it becomes infested with ticks a mild attack of the disease is produced. This attack is usually so mild that it is not noticed at all, but it confers further immunity against the disease. Through repeated tick infestations and repeated mild attacks of the disease a complete immunity is gradually established against the disease. If the calf be inoculated between the ages of nine and fifteen months usually complete immunity against the disease will be established. The attacks of fever before the age of nine months are usually only so mild as not to confer complete immunity. The proper course to take when bringing in cattle to the tick belt is to bring in only calves not more than nine months old. These should be brought South in December, and be inoculated as soon as rested and then in February following be again inoculated and the animals will then be ready to go on the tick infested pastures in April with little fear of future attacks. Older animals are liable to have so severe an attack of the fever after inoculation as to occasion some loss, though this is not usually more than 5 per cent.—ED.

HOLLOW HORN—HOLLOW TAIL.

Editor Southern Planter:

I am a subscriber and a great admirer of the *SOUTHERN PLANTER*. I heartily agree with you on the cheat question, but cannot on "Hollow tail" of cattle. You say there are no such diseases of cattle as "Hollow tail" and "Hollow horn." I have handled hundreds of cattle; have been feeding and caring for them from the time I was large enough, and we usually kept from 50 to 100 head, and if I ever saw one with Hollow horn I didn't know it, though I have had a few men to have cows they said had Hollow horn, and asked me for treatment. I always advised them to bring them to my farm, and I would cure it by dehorning them, which they did, and afterward told me it was a success, but as far as my own experience goes, if any of my cattle ever had Hollow horn I never knew it, and never believed there was such a disease.

But as to Hollow tail, I know that cattle have a disease of the tail, which always proves fatal unless treated, but do not know that a veterinarian would call it Hollow tail. The symptoms are failing appetite, falling off in flesh, hair standing on end, dreamy eyes, not caring to come for feed. On examination you will find the bone about an inch or two from end of tail gone or badly diseased. On taking a sharp knife and splitting the tail you will find little or no

blood, with the bone slick and slimy. For treatment simply split the tail to the bone as far as is diseased. Some say put salt and pepper in it and tie up. I never do anything but split the tail, and I have cured dozens of them. You can see a marked improvement in three days, and in a week they will be improving rapidly. Once I had a valuable lot of yearling steers which kept falling off until very thin. I could not split the tails without help, and had none, so with the steers running, I caught one by the tail and simply cut the tail off about four inches from the end, and he was all O. K. in a few days. I think, however, that nine-tenths of the so-called "Hollow horn" and "Hollow tail" is a lack of care and feed.

J. D. STODGHILL.

Shelby Co., Ky.

No veterinarian recognizes such a disease as "Hollow Tail." There may be some disease affecting cattle of which a diseased tail is a symptom, but it cannot be of a serious character, if simply cutting the tail end off will cure it. Boils on a man indicate a diseased condition of the blood. Poulticing and lancing them will cure the boils, but not the disease, which caused them. Our correspondent is no doubt right in his opinion that want of feed and care are really the true explanation of these so-called diseases. "Hollow stomach" would be a more accurate name for them.—ED.

RIGHT OF OWNER OF PURE BRED CATTLE TO RECOVER DAMAGES FROM OWNER OF SCRUB BULL.

Editor Southern Planter:

The inquiry of J. L. H., in the September issue of the *PLANTER*, has been answered by the Supreme Court of Iowa, in the case of Crawford vs. Williams, 48 Iowa, 247. In that case the court held the measure of damages to be the difference in value of plaintiff's cow for breeding purposes before and after meeting defendant's bull.

In deciding the above case the court uses the following language:

"The intelligent public spirit which employs itself in the improvement of stock ought to be encouraged and protected. It will be found impossible to maintain good breeds of stock if the owners of "scrub" male animals may permit them to run at large with impunity. Much skill and intelligence are requisite upon the part of stock breeders in selecting the most desirable crosses, so as to transmit the best qualities to the progeny. Each stock breeder has the right to make this selection for himself. If he is deprived of the right of making this selection he ought to be

fully compensated for the injury inflicted. The value of thoroughbred stock consists in the probability that the qualities of excellence will be transmitted to the offspring. It is evident that, to a breeder of fine stock a thoroughbred heifer, with a calf to a bull of impure blood, would be of less value than one with calf to a thoroughbred, or not with calf at all. The difference in value of the heifer for the purpose of breeding fine stock, before meeting defendant's bull and afterwards constitutes the proper measure of plaintiff's damages."

I have no doubt the Virginia court would follow the Iowa ruling in such cases.

Marshalltown, Iowa.

HENRY STONE.

FEEDING PIGS AT THE VERMONT STATION.

Sour skim milk has proved practically as good as sweet skim milk in fattening hogs at the Vermont Experiment Station. When there has been any difference at all it has been in favor of the sour milk. In seven years' experiments the value of skim milk for hogs has varied from 15 to 35 cents per 100 pounds and averaged 25 cents. In one experiment pigs on buttermilk gained a little faster and were somewhat more profitable than pigs fed skim milk. The buttermilk in this experiment had a feeding value of 24 cents per 100 pounds. Whey in one test had a feeding value of 11 cents per 100 pounds.

The best proportions of skim milk and corn meal to feed together have been studied in a number of experiments. The use of two ounces of corn meal to each quart of milk yielded pork at the least cost of food, but a more rapid gain was made when a greater proportion of corn meal was fed. In finishing off hogs more rapid and cheaper gains were made when 12 quarts of skim milk were fed in addition to all the corn meal the hogs would eat than when but six quarts were thus fed. The feeding of bulky or water foods was found to conduce to a larger growth of stomach and intestines, and hence greater shrinkage in dressing.

Corn meal in one experiment produced 11 per cent. better gains than wheat middlings with young growing pigs and 23 per cent. better than rice meal with hogs weighing about 140 pounds. The results of two experiments show more rapid gains on ground than on whole corn, the difference being about 10 per cent. The extra cost of hauling and grinding the grain it is thought would probably counterbalance this gain. Wetting corn meal resulted in more profitable gains than feeding it dry. The fertilizing value of the food fed in the various experiments has aver-

aged 56 per cent. of its market value. In nearly all the experiments profitable gains ceased to be made after the pigs had attained a weight of 180 pounds.—C. B. Smith, District of Columbia, in *Breeder's Gazette*.

CATTLE FEEDING EXPERIMENTS AT TENNESSEE EXPERIMENT STATION.

At the present time a large per cent. of the cattle grown in the Middle South are sold in the autumn as long yearlings, because of the general belief that they cannot be profitably winter fed, and it was for the purpose of determining whether these cattle can be stall fed or whether they should be maintained as stockers through the winter to be finished on grass, or whether it would be more advisable for the farmer to sell them in the fall that the investigations, results of which are recorded below, were undertaken. The results presented only cover one year's work, and the following resume is published because it contains information which should be very useful to the farmers generally, as it warrants the conclusion that silage is a very valuable roughness if judiciously fed to beef cattle. It is proposed to repeat these experiments during the winters of 1903-'4-'5, so that the average of three years' trials may be had, and then it would seem that final conclusions might be drawn from the work. During the past winter 32 head of cattle were divided into eight groups of four each and fed 150 days. Sixteen of these cattle received a moderate grain ration and were fed silage as a roughness, the object to finish them as nearly as possible for the spring market. The other sixteen were fed a limited grain ration along with different forms of roughness, the idea being to run them through the winter as cheaply as possible and finish them on grass the following spring and summer. Group 11, receiving silage, cotton seed meal and corn and cob meal, made an average gain of 2.40 pounds per day, or 1,442 pounds for the period. Group 12, receiving silage and cotton seed meal, gained 2.15 pounds per day, or 1,287 pounds for the period. Group 13, receiving silage, cotton seed meal, corn and cob meal and clover hay, gained 2.18 pounds per day, or 1,305 pounds for the period. Group 14, receiving silage, cotton seed meal and clover hay, gained 2.19 pounds per day, or 1,313 pounds for the whole period. The cotton seed meal and corn and cob meal were fed in the early part of the period in the ratio of 2 to 1, the proportions being reversed toward the close of the experiment. An average of about 10 pounds of meal were consumed at one time by group 12, the average ranging close to 10 pounds, though these animals were fed

at one time as much as 12 pounds per head per day. This is a little more than they could consume to the best advantage and it would have probably been better if not more than 10 pounds had been used at any time. These animals were in good condition, and, as the reader will observe, made an excellent gain throughout the period, which is the best answer to those who doubt the feeding value of cotton seed meal or who say it cannot be fed. The trouble is not so much with the cotton seed meal as with the method of feeding the same.—A. M. Soule, *Tennessee Experiment Station*.

CORN ENSILAGE FOR STEERS.

During the past winter (October 10, 1902, to June 8, 1903,) the Kansas Experiment Station fed a lot of ten steers on corn ensilage, chopped alfalfa hay, and a grain mixture of equal parts ground corn and Kafir corn in comparison with another lot of twenty steers of the same average weight and quality fed exactly the same feed except ensilage. The results are shown by the following figures:

Lot.	No. of Steers.	Total gain of lot, pounds.	Grain consumed per 100 lbs. gain pounds.	Roughness consumed per 100 pounds gain.	
				Ensilage, pounds.	Chopped Alfalfa, pounds.
With Ensilage...	10	4468	715	471	327
Without Ensilage.	20	8359	733		453

From the above figures it will be seen that for every 100 pounds of gain the 471 pounds of ensilage saved 18 pounds of grain and 156 pounds of alfalfa. At the market prices of these feeds (54 cents per cwt. for grain and 27½ cents per cwt. for alfalfa), the 471 pounds of ensilage made a saving of 52.62 cents.

The steers were shipped to Kansas City and sold at the stock yards June 23d, at the following prices:

Lot with Ensilage.....\$4.95 per cwt.

Lot without Ensilage..... 4.70 per cwt.

Here is a gain of 25 cents per cwt. in the selling price in favor of the ensilage steers. Adding this to the 52.62 cents already saved it makes the 471 pounds of ensilage worth 77.62 cents, or at the rate of \$3.29 per ton.

Making the above comparison on the basis of roughness alone, the 471 pounds of ensilage plus the 329 pounds of alfalfa in the ensilage lot is equivalent to the 485 pounds of alfalfa in the lot without ensilage. This shows that the 471 pounds of ensilage was equivalent to 156 pounds of alfalfa. At this rate, 3.02 tons of corn ensilage is equivalent to one ton of alfalfa hay.

When sold the ensilage lot were pronounced excellent cattle and fat enough for the ordinary trade.

D. H. OTIS.

Manhattan, Kan.

The Poultry Yard.

BUILDING A HEN HOUSE.

A subscriber asks us to give him advice as to building a hen house. It is rather a difficult matter to do this without knowing something of what is intended to be done—that is to say, whether it is simply desired to keep a few fowls for supplying the family needs, to keep a large number of fowls for supplying eggs for sale, or to run a regular poultry farm supplying eggs and chickens for market. Each different branch of work requires a special outfit to meet its special needs. We will, however, assume that what is needed is a house in which to keep a limited number of hens under ordinary farm conditions, permitting them to make their run over the farm, and thus not necessitating the provision of scratching sheds or enclosed runs. In providing such a house as we assume to be asked for, the first consideration should be the location. This should be, if possible, in a situation sheltered from the north, northeast and northwest winds, and on dry ground. The next point is the size required. To arrive at this allow a space of 10 square feet of floor for each fowl to be kept. Then let the height be 6 feet at the lowest part of the roof, rising sufficiently to give good fall to the rain, so as to have quickly a dry roof. The house may, if it complies with these requirements as to air space, be either square or longer than wide. We prefer to have it longer than wide, and to let this long side face to the South. This gives space for more windows and thus enables the house to be kept warmer in winter with the aid of the sun and cooler in summer by substituting wire screens for the windows at that time. Let the sills be laid on brick or concrete foundations a foot or 18 inches in the ground, and rising to a foot above it, so as to keep out rats and other vermin. Weather board the outside and line inside first with building paper on the studding, and then with plain boards. Let the door be at one end of the house nearer to the side, rather than in the middle. In the south side place at least one, or better, two windows. Let these be fixed so that they can be opened. The roof may be either hipped or fall all one way, as suits the convenience of the builder or the materials to be used, and may be covered with either shingles or other roofing material. If shingled, the rafters should be first lined with building paper. Let the floor be the natural clay beaten down solid, and then well covered with loose fine dust. The roost poles should run lengthwise of the building at the back and have beneath them a sloping board to carry the droppings down to a trough, from which they can be

raked out with a hoe. The nest boxes should be placed in the front of the building under the window or windows, and be covered with a sloping board, say a foot above them. Let both nest boxes and roosts be so fixed as to be easily removed for cleaning. Have the house well limewashed before the hens are put in. Have one or two holes cut in the front of the building near the ground so that the hens can have access whilst the door of the house can be kept locked.

PICKING A GOOD LAYER.

An old country poultryman makes the following suggestions as a help in selecting good layers:

There are certain individual characteristics, one of which is the shape of the bird. If a straight line be drawn from the back of the head to the toes, the hen which is likely to be a good layer will usually have the hinder half of her body largest, whilst a hen which may be suspected of being a poor layer will show more in the front; the reason being that a poor layer makes a better table bird, and has a larger, longer breast, whilst a good layer makes a poor table bird, and has a comparatively small breast, whilst the egg organs are more fully developed. Birds which are good layers are usually very active. They always look healthy, and in most cases their combs are usually fully developed, particularly if they belong to the long-combed varieties, which are reputed to be the best layers. A hen with a long comb may usually be regarded as a good layer, and if she is not there must be some special reason for the contrary.

PLUCKING CHICKENS.

In getting chickens ready for market, nearly every one has experienced a difficulty in securing a uniform appearance of skin and a uniformly clean plucking. In many instances the trouble is due to the manner of scalding. Over-scalding invariably causes the yellow bloom of the skin to rub off. For best results the water for scalding should be just at the boiling point, but not actually boiling.

To scald the birds, immerse them in the water three or four times, and immediately after scalding remove the feathers, being careful not to break the skin. Poultry so treated should then be dipped in hot water for two or three seconds, and then placed in cold water for about twenty minutes. When the birds are to be packed in ice it is best to lower the temperature of their bodies by immersing in water of gradually lowering temperature down to freezing, when they will be ready to pack.

The Horse.

NOTES.

World's records, both among harness horses and runners, have fallen with amazing rapidity this season, and the doings of the present month may furnish further sensations still. Dan Patch, the brown pacing stallion, 6, by Joe Patchen, 2:01 $\frac{1}{4}$, dam Zelica, by Wilkesberry, lowered the record for lateral gaited performers at Brighton Beach, N. Y., on August 19th to 1:59, thereby displacing Star Pointer, 1:59 $\frac{1}{4}$, who was the first harness horse to reach the two minute mark. This performance was greeted with wide satisfaction, but when Lou Dillon, the chestnut mare, 6, by Sidney Dillon, dam Lou Milton, by Milton Medium, displaced Creseus, 2:02 $\frac{1}{4}$, with her mile in two minutes flat at Readville, Mass., on August 24th. Enthusiasm knew no bounds. But even now another champion is in sight in Major Delmar, the bay gelding, 6, by Delmar, dam Authoress, by Antograph, who trotted to a record of 2:00 $\frac{1}{4}$ at Syracuse, N. Y., on the 9th of September, and with favorable conditions is likely to beat two minutes before the season closes. Not only has Lou Dillon reached the two minute mark, but hooked to high wheel sulky at Cleveland, Ohio, on September 12th, she displaced the 2:08 $\frac{3}{4}$ of Maud S., made eighteen years ago, by trotting a mile in 2:05.

(Since our correspondent handed in the above, Prince Alert, the pacing hero of a hundred races and the champion of a score of half mile tracks, went against the world's pacing record of 1:59, held by Dan Patch, and beat it most decisively by clipping off two seconds, making the mile in 1:57 flat at the Empire City track in New York city.—Ed.)

Prospects were never brighter for the third annual exhibition of the Richmond Horse Show Association, the dates of which are October 13th-17th, when Richmond will be the Mecca at which many thousands from various sections will gather. There will be five exhibitions at night, and a matinee on Saturday afternoon. Over \$8,000 will be distributed in prizes, and many of the most noted show horses in the country will gather on the tan bark and be paraded before packed houses. Both president J. T. Anderson and Secretary W. O. Warthen have exerted themselves to the utmost to make the affair a success, and all signs seem to point to a show of the most brilliant description. The Marine Band of Washington, with fifty performers, will furnish music, and this will be an attraction of prime importance.

North Carolina's circuit of fairs and race meetings begins this month, and will furnish sport and pleasure galore for many thousand throughout the "Old

North State." The circuit begins on the 6th instant and lasts throughout the entire month. Dates have been assigned six places, and at each of them with favorable weather conditions prevailing a record breaking attendance may be confidently expected. The same dates were assigned Winston and Burlington, but these towns are so situated geographically that the conflict is likely to make no serious difference, while the same applies to Charlotte and Fayetteville. The oldest, best known and most important point in this circuit is, of course, Raleigh, where for generations past the fairs and race meetings of the North Carolina State Agricultural Society have been held, but the events fixed for other places along the line have assumed more or less importance, and each place has of itself a large following. The dates follow: Winston, October 6th, 7th, 8th and 9th; Burlington, October 6th, 7th, 8th and 9th; Greensboro, October 13th, 14th, 15th and 16th; Raleigh, October 20th, 21st, 22d, and 23d; Charlotte, October 27th, 28th, 29th and 30th; Fayetteville, October 27th, 28th, 29th and 30th.

* * *

The brown pacing mare, Skyland Girl, who was campaigned with success on Maryland, Virginia and North Carolina tracks for several seasons prior to the present one by George F. Dyer, who then trained at Winston and Greensboro, N. C., but later shifted operations to Roanoke and Lynchburg, Va., is in good form again this year, and made a new record of 2:15 $\frac{1}{4}$ in a winning race of four heats at Goshen, N. Y., last month. Skyland Girl was bred by the estate of the late W. H. Wilson, Cynthiana, Ky., but was foaled the property of the wealthy tobacconist, R. J. Reynolds, of Winston, N. C. She was sired by Simmons, a great son of George Wilkes, dam the once famous trotting mare, Mamie Woods, 2:20, by Woods' Hambletonian. Mamie Woods was purchased in Kentucky by Mr. Reynolds while carrying Skyland Girl in utero and after the latter was dropped the roan mare was bred to Baronet, 2:11 $\frac{1}{4}$, and other sires of more or less note.

* * *

The bay mare Lady Olga, 5, 15:1, by Fesler, owned by Secretary L. S. Ricketts, of the Orange Horse Show Association, Orange, Va., was a frequent winner both at the Orange and Charlottesville Horse Shows. She was shown in the ladies' park saddle, the park saddle, and combined saddle and harness horse classes, and captured several blue ribbons.

* * *

One of the best bred and young stallions owned in North Carolina is the bay colt Agnel, three years old, in the stud of Ben. W. Southerland, of Mt. Olive.

This colt was bred by L. E. Tarlton, of Lexington, Ky., and sired by Guardsman, dam the great brood mare Zeta, dam of Miss Duke, 2:13, etc., by Red Wilkes. Agnel is of fine size and promises to make not only a trotter, but a show horse as well. Mr. Southerland will have his speed developed and later retire him to the stud, where he should prove a success and accomplish much toward improving the stock in the section to which he has been taken.



The well known Virginian, General William T. Townes, whose headquarters are with the American Tobacco Company, New York city, but who spends most of his leisure time at his stud farm, near Charlottesville, Va., has recently purchased the Bradford place, near Culpeper, Va., where he intends keeping his thoroughbred horses. For years past General Townes has been quietly collecting a band of brood mares, and now owns some of the choicest specimens in the State, which, during several seasons past, have been bred to sires of note in Kentucky and Virginia. A recent addition to the General's stud is the chestnut mare Amulet, purchased from Harry C. Beattie, of Richmond, Va. Amulet was sired by King Bolt, dam Ecliptic, by imp. Eclipse, and she out of the famous Nina, by Boston.



Captain R. F. Landon, who has a fine farm near Cobb's Creek, Mathews county, Va., is the largest breeder of trotters and pacers in his section. He owns a select band of brood mares, and for a couple of seasons past has bred to the good sire Letcher, 2:18 $\frac{3}{4}$, by Director, 2:17 $\frac{1}{4}$, the famous son of Dictator. Some of the choicest youngsters on the Landon farm are by Letcher. Among the well bred matrons in this stud is a mare by Pretender. Her first, second and third dams are producers, and right back of them comes the noted Waterwitch, dam of five in the list, by Pilot, Jr.



The Virginia bred trotter, Gold Bur, 2:13 $\frac{1}{4}$, by Bursar, 2:17 $\frac{1}{2}$, dam Bertie, dam of Lamp Girl, 2:09, by Signet, is highly thought of by his owner, W. H. Essery, of New York city, for whom he has shown a trial in 2:10 $\frac{1}{4}$ this season. Mr. Essery expects to campaign this handsome chestnut gelding in 1904, and looks for him to trot to a record of 2:10 or better.



Harry C. Beattie, vice-president of the Richmond Horse Show Association, M. F. H. of the Deep Run Hunt Club, and equally well known as owner, breeder and horse show exhibitor, has quite a stable of hunters, jumpers and high-stepping harness horses at Bloomingdale Farm. One of the best known members of the Bloomingdale stable is the chestnut gelding Buck, by Rover, the son of Abd El Kader. In the most select company this horse has been a winner

at Boston, New York, Philadelphia, Atlantic City, Richmond and other big shows. In the class for ladies' hunters at Richmond in 1901 this unsexed son of Rover captured the blue ribbon with Mrs. Allen Potts up and did some sensational work. Other members of this string that promise to develop into performers of real class are Blizzard, chestnut gelding, 4, by Blitzen, the "Iron Horse," a couple of unnamed geldings, both heavy weights, one being a chestnut, 6, by Abd El Kader, Jr., and the other a bay, 6, by Heimdal, dam by John Happy, and a toppy looking bay mare, 4, by Blitzen. The thoroughbred division includes North Anna, chestnut mare, 5, by Blitzen, dam Gloriana, by Bend Or, her full sister, an unnamed chestnut filly, 4, a chestnut colt, 2, by Blitzen, dam Amulet, by dam Bolt, and the bay colt, 2, full brother to North Anna.



A Virginia bred horse deserving of more than passing mention as a sire of hunters and jumpers is the chestnut stallion Abd El Kader, Jr., who was formerly known and raced under the name of Aeronaut, and sired by Abd El Kader, the thoroughbred son of imp. Australian. His dam was Nina, by Senator, second dam by Richmond, third dam by Bethune, thus making him probably three-quarters thoroughbred at least. Abd El Kader, Jr., was bred by Geo. Turner, of King William county, Va., and foaled 1882, hence the chestnut stallion has reached the sere and yellow, but is remarkably well preserved and yet vigorous. At four years old he passed to James R. Branch and Branch Cunningham, both of this city, and later to Fred. W. Scott, now of the banking house of Scott and Stringfellow. From Mr. Scott the son of Abd El Kader went to Edmund Ruffin, whose stud in Hanover county he ruled as premier for years. Since then the horse has been owned by N. J. Crull, of this city, from whom he passed to Thomas Winston, of Louisa county, and from him to his present owners, J. B. McComb and Brother, of the Glen Cove Farm, Somerset, Va. In his prime Abd El Kader, Jr., was a horse of remarkable beauty and finish, while he could take up weight and run fast both on the flat and across country. In the stud his work has been of a most satisfactory nature, because he has sired some of the best hunters and jumpers ever sent out from Virginia, and as he is still vigorous and likely to be for years yet, I look for others of this sort to spring from his loins. Meeting with James B. McComb, one of his owners, at Charlottesville, he informed me that Abd El Kader carried him through a stiff hunt in January last, and that the old stallion finished strong, certainly a remarkable exhibition of stamina and courage in a horse of his age, but the Abd El Kaders are a long lived tribe, and this scion of the family ably supports its claims to longevity.

BROAD ROCK.

Miscellaneous.

SELECTING SEED.

Editor Southern Planter:

The old maxim, "As the seed, so will the harvest be," is perhaps nowhere so clearly demonstrated as in farm crops. As a rule, farmers pay entirely too little attention to this, one of the most important steps in farm production.

Not one of us would think of breeding our animals without some particular object in view, and to obtain this object we would select with care, for breeding purposes, the animals which would likely reproduce the type we desired. We would consider the size, shape, symmetry of build, rate of growth, capacity for producing beef, milk or pork, as the case might be, and any other features we may wish to see reproduced. Then after breeding we would expect the offspring to represent that which we beheld in our mind's eye.

Now, what is true in raising animals, is also true in raising the ordinary farm crops. By carefully selecting the seed, keeping always in mind the type of plant and kernel which will give a large yield, we may greatly improve the quality and quantity of our crops. This fact is forcibly illustrated in the production of sugar from beets. The Germans have, by seed selection, increased the average yield of sugar from five per cent. to an average of eighteen per cent. At Kleinwanzleben, the great sugar beet seed plantation of Germany, the selection of beets for the production of seed receives the minutest attention. This selection begins in the field. The tops must conform to a certain type of development, then the beets themselves pass under the eye of an inspector, and those not perfect in size and shape are discarded. Those which come up to the standard in this selection are then taken to the laboratory and a core is withdrawn from each beet and analyzed. Again the ones which do not contain a certain per cent. of sugar are thrown out. Thus the seed are produced from absolutely perfect beets, and, consequently, the increase in yield of sugar is more than three times.

Any farmer in the State may, at almost no expense and very little inconvenience, bring his cereal crops to a high state of perfection.

Well selected seed from a crop on the farm will have the advantage of similar environment year after year. The soil, climate and treatment will be about the same, and then the farmer has the opportunity to adapt the type and quality to his special needs and

uses, besides the educational value of watching his crops and the pleasure of seeing the improvement from one year to the next cannot be estimated. Then every farmer will be his own seed grower, making a specialty of the strains best adapted to his own purposes.

In order to do this successfully, one must have in his mind a standard type of high quality, and plant no seed which does not come up to this standard.

Let us take, for example, corn, a very easy crop to improve both in yield and quality. The selection of seed should begin in the field. Here the general growth of stalk can be taken into consideration, height, size, amount of fodder, position of ear on stalk, or better, if there are two ears, and maturity. In other words, the plant must conform to your standard type of growth. After husking, the ears are subjected to a critical examination. First select a perfect ear as a type for comparison. This applies to the size, shape and color of ear and kernel; the arrangement, number and space between the rows; the indentation of the kernel; the filling out at butt and the tip; color and size of cob.

The cylindrical form of ear is preferable to the tapering, since the tapering, if it have much taper, results from the dropping of a row or more of kernels, and means, of course, a smaller proportion of corn to cob. The closer we keep to the cylindrical ear the greater the amount of corn the ear will carry.

The shape of kernel has much to do with the amount of grain a given size cob will carry. The preferable shape is the long or medium wedge. The circumference of the ear being two or three times the circumference of the cob, it is obvious that the wedge shaped kernel is the only kernel that will shell the maximum amount of corn.

Number of rows on the ear and the furrows between the rows should be taken into consideration in the selection of seed. A perfect ear of corn has not only a goodly number of rows made up of wedge shaped kernels of good length, but these rows, crowding the shank at the butt, should run parallel with the cob well to the tip, covering entirely the point of the cob. Ears containing short or imperfect rows, or which do not conform to the standard type, should be discarded.

By this steady method of improvement Illinois farmers have increased the average yield per acre of corn during the ten years between 1890 and 1900, 22.8 per cent. over the average yield between 1880

and 1890. In Indiana the increase in yield during the last decade over the preceding one was 12.8 per cent. per acre.

Why cannot Virginia farmers do as well, even better? Here corn has been given as an illustration, but the other crops grown on the farm can be improved just as well as corn. The time has come when labor and other conditions are such that it will pay us to attend to these important features of production.

MEADE FERGUSON.

Experiment Station, Blacksburg, Va.

BULLETINS FROM THE VIRGINIA EXPERIMENT STATION.

Editor Southern Planter:

I have long believed that some of the bulletins issued by this Experiment Station might have been very much better, and consequently of more decided benefit to the Virginia farmer. Of course, the same might be said of bulletins from some other stations. While it is no desirable thing to be considered a critic, still a few friendly comments and suggestions on these bulletins in a State agricultural journal may not be out of place. After being in charge of some experiments at an experiment station for ten years, and writing eleven bulletins, I am familiar with many of the trials and difficulties with which an experimenter has often to contend. I am firmly convinced that one of the greatest difficulties the average Station officer has to encounter in the United States is that of trying to fill two offices and carry on experiments at the same time. Each line of work is widely different from the other, and it is almost impossible for one man to be a good college man and a good station man at the same time. I long to see the day when station work will be separated from college work, as far as possible, to be consistent with the organic law. When a college professor is crowded with teaching he sometimes feels forced to write an essay on some farm topic, publish it in pamphlet form, and call it bulletin No. 100. Almost any intelligent farmer could buy a book for \$1.00 and write fifty such so-called bulletins. Such bulletins injure experiment station influence. A few bulletins issued by the Virginia Experiment Station are wholly exempt from such criticism, and I am glad to note have given entire satisfaction.

I would like to see each bulletin issued be made as nearly complete on each subject as possible. The farmers will think more of them and take better care of them. *Numbers* count for nothing. Four good

bulletins a year are all a station should be expected to publish.

I notice Bulletin No. 132, dated January, 1902, which was written April 28, 1903. In other words, the idea might be conveyed to the farmer that the station was publishing bulletins more than a year before they were written. The value of that bulletin to the public is injured by dating it back in order to keep up with "monthly bulletins." I would like to see the excellent series of bulletins on "Orchard Studies" now being published in small pamphlet form, be put in one volume, and with a good paper binding. The farmer could easily file them away in his library then for "ready reference."

Bulletin No. 131 is a valuable number on "Remedial Measures Against San Jose Scale." All orchardists and nurserymen who desire information on this subject should send for this bulletin, and be prepared to fight this insect during the coming winter.

Bulletin No. 145 gives some results of experiments with forage plants. Among the number are tests of a few cow peas in reference to their yield. I would like to see the Agricultural Department broaden its work with leguminous plants, especially with reference to their value as improvers of much of the worn-out soil of the State. Include the various clovers, peas and beans. Make various tests with soil inoculation with the bacteria peculiar to each legume. Study the plants in reference to their habits, soils, yield, seedage, etc.

Bulletin No. 144 deals with stock and poultry powders, or condimental foods. This is a most timely subject for the Agricultural Department to take up, and the bulletin is interesting as far as it goes. I would like to see the station make some actual tests with these different foods to bring out their value or lack of value more forcibly before the public. The sale of these foods is increasing in the State.

Bulletin No. 121 is on steer feeding. Results of tests with hay, corn, corn meal, silage, cotton seed meal and bran are given; both singly and in combination. Two steers in each lot were fed. I would like also to see this work broadened. Would like to see at least four steers in each lot, and after the feeding tests have the animals slaughtered and the beef passed on by an expert. Some good illustrations would help the bulletin immensely.

The conclusions of this bulletin are interesting, and are here given:

1. A combination of foods, both grain and roughage, is best from every standpoint.

2. Ground corn better than whole corn after it has become hard.

3. A mixture of corn meal and bran gave greatest gain, and with least expense per pound.

4. Cotton seed meal was not, in these experiments, used with success, due, at least in part, to the fact that in former years the steers had not become accustomed to it.

5. Silage was a very economical addition to the roughage.

6. Stover gave bad showing when used without other roughage.

I may add that in this county steers are often wintered (frequently not economically) by feeding either hay or dry corn fodder, and letting the cattle have access to a blue grass sod. Sometimes whole corn and fodder are fed, and hogs gather up what is left by the cattle.

During last winter I fed ten steers on dry corn fodder for two months, and then fed good timothy hay for two months. The steers had access to a blue grass sod. I was surprised to note that they did better while eating the fodder. R. H. PRICE.

Montgomery Co., Va.

MOTORS AND METHODS OF MOVING FARM PRODUCTS.

Editor Southern Planter:

The farmers of the United States, in different portions thereof, make use of five separate and distinct motors in transporting the products of the farm to market. Here they are—viz:

Air,
Tide,
Horse,
Steam,
Electricity.

If there are other methods than the above, I shall be glad to hear of the same, and revise the list accordingly.

The *air* is used when produce is sent from farm to market in little sailing vessels. The *tide*, where the tidal current is used to float the farm produce down to a central point or market in boats built for that purpose. The *tide*, in this case, being the only motor used.

The *wind* and the *tide* are the cheapest motors in existence. The farmers of Eastern Virginia use both these motors extensively. They are the oldest motors in existence, because long before man was, the air and tide were both in existence.

Eastern Virginia is a network of "arms of the

sea"—salt water filled with fish and oysters, and on these "arms"—aggregating in length thousands of miles of water transportation, the little sailing vessels are used for fish, oysters, clams and crabs in their season, and for farm products the rest of the year.

The third motor in the list—the *horse*—is in general use throughout the United States. More than ninety-five per cent. of the farmers of the United States depend upon the horse to get their farm products to local markets.

At the local market, *steam*, the fourth power on the list, takes up the work, and the "long haul" to market is by steam railway. In other words, ninety-five per cent. of the farmers of the United States depend upon *horse* power and *steam* power to get their produce from producer to consumer.

Eastern Virginia farmers, while using the *wind* and *tide* as "motors," also use the *horse*; hauling millions of dollars' worth of soil products by horse power to market over at least eleven of the finest turnpikes (shell roads) in the world; said turnpikes centering in this harbor and penetrating all portions of the trucking belt of Eastern Virginia.

We may therefore say that nearly all the farmers use the horse and also steam power in moving their farm products to market; they use one or the other or both.

Then comes *electricity*, the fifth and crowning "motor" of the age. Only a few sections as yet are so favorably located as to be able to use the electric "motor" in sending their farm products to market.

Eastern Virginia is one section thus favored, and no less than nine electric lines of railway are pushing out into the "trucking belt" around this city in all directions.

So the Norfolk section is using all these motors—air, tide, horse, steam and electricity. Then, too, the Norfolk section has still another point in its favor. Steam is used in two ways to transport the soil products of Eastern Virginia to nearly ten million consumers—the *steamboat* and the *steam railway*.

The boats and railways are in healthy competition, which keeps freight rates down to a very reasonable and favorable point, favorable to the producer.

The freight rate here is lower than is enjoyed by the farmers of any other portion of the United States.

In the struggle for existence eventually to come, caused by over-production or under-consumption (either or both) the "fittest will survive." The sections best fitted by nature, having the best soil and climate, the cheapest access to the best and largest markets, will stand the strain and "continue to do business at the old stand."

"Motors" are important, especially important matters for the farmer. Roads and motors are important factors in the farming world. The "motors" are all right, but the roads of most sections can be greatly improved.

A. JEFFERS.

Norfolk, Va., August 17, 1903.

SEED WHEAT.

Editor Southern Planter:

Every provident farmer has provided for clean wheat of the kind best adapted to his land. But as usual, careless farmers have not. The condition of their grain is not fit for seed, and barely will pass for "merchantable" on the market. Complaint is made by that class of the price of wheat. They fail to observe that their "filthy wheat" has in its measure about one-fifth per cent. of "vile stuff" unfit for bread, and hence are offered 20 per cent. less than the price of pure wheat. Now is the time to prevent a recurrence of that heavy loss on the crop of next harvest. Why continue this miserable folly, not to say insanity? While the business farmer is, with a pleasant face, receiving \$1 for his pure seed wheat; the drowsy fellow stands picking his finger nails demurely considering his "hard lot." He has neglected the truth: "Whatsoever a man soweth that shall he reap."

All the social combines will not help the sloven farmer. Associations have been formed to advantage, but they require everything to be of good quality and order, which is to be sold under their supervision. The careless or dishonest packer cannot enter the associations. Gentlemen, let us turn over a new leaf. Be good farmers or not at all. Do not disgrace the occupation. Elevate the standard.

Augusta Co., Va.

OLD MAN.

COW PEAS IN TIDEWATER, VA.

Editor Southern Planter:

Recently a friend sent to our office two cow pea pods, one of which was *thirty-three inches* long, and contained twenty peas. He reported that he had had pods *thirty-six inches* long, just a yard long, or three feet in length.

Surely Virginia is great on the "legumes," or we may say "*long*" on pea pods. But what does nature mean anyhow in forming and developing a great long fine looking pod three feet or so in length, and then putting only twenty peas in it, when there is room enough for forty or more?

What does nature mean in creating a great big six foot, broad shouldered man, and omitting to fill him with good thoughts, words and deeds? Why does

nature allow, encourage or permit such a great big show, such a big blow and bluff and blarney just to cover and to hide or to develop a very few mean "measley" words, ideas, thoughts and deeds?

Why so much pod, why so few peas? We were surprised at a pea pod thirty-three inches long, but we were sadly disappointed at the small number of peas therein. It is always thus. The man with few ideas (peas) in his head (pod), but who dresses well, puts on style, and has plenty of cheek, is always over-estimated and apparently very highly appreciated, but when we come to shuck him we find too much of empty show, too much empty pod, and too few ideas (peas).

Nature starts out well with some, makes a great big show, a great big pod, and then fails to properly fill the pod with peas, the head with ideas.

Who can report a pea pod longer than three feet? Who can show a single pod with more than twenty peas in it? Who can tell us how to grow forty peas in a three foot pod instead of twenty? Who can make two blades of grass grow where but one grew before?

A. JEFFERS.

Norfolk, Va.

FALL PLANTING OF IRISH POTATOES.

For several years past experiments have been made in the Eastern and Southern parts of this State and in the Eastern sections of North and South Carolina in planting Irish potatoes in late November and in December, and we have reports from a number of these which go to show that the crop can be successfully grown in this way if the sets are properly planted. As it is desirable to lessen the pressure of work in the spring by any means which can be successfully adopted, we describe the method followed in planting these potatoes, and suggest that growers in the sections named should give the plan a trial. Select a piece of dry, sandy loam land and lay off the rows three feet apart after breaking the land deep and working it fine. Run the plow twice in each row, thus throwing out the soil to a good depth. Scatter a good potato fertilizer in the bottom of the furrow and run the cultivator through it to mix it with the soil. Then drop the sets the usual distance apart and cover lightly with soil. On the top of the soil put a good covering of farm yard manure and plow onto this a furrow from each side, thus making a ridge over the sets. Early in the spring run a harrow over the rows to level down the ridges somewhat. If the potatoes should push through before danger of hard frost is past, plow a light furrow onto them as soon as they are seen.

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Southern Planter

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J. F. JACKSON,
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B. MORGAN SHEPHERD,
BUSINESS MANAGER.

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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.

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DETAIL INDEX TO ENQUIRER'S
COLUMN.

Japan Clover	627
Hairy Vetch, Winter Vetch.....	627
Lame Horse	627
Texas Fever Ticks	627
Inoculating Cattle for Texas Fever.	627
Grafting	628
Tall Meadow Oat Grass.....	628
Fall and Winter Plowing.....	628
Smut on Corn—Grass for Name..	628
Feed for Young Pigs.....	629
Protecting Peas and Beans from Weevil	629
Cheese-Making—Sick Hog	629
Plowing Down Peas	630
Calves Dying	630
Fertilizers for Tobacco, Tomatoes and Wheat	630
Canada Peas—Crops for Bog Pastures—Rape	630
Hair on Horse's Tails	631
Fertilizer Requirements of Crops.	631
Transplanting Trees	631
Hog Husbandry in the South.....	631

PUBLISHER'S NOTES.
TO ADVERTISERS.

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month. Please bear this in mind.

Advertisers' Experience.

A couple of our advertisers met in our office the other day and swelled our heads enormously about the great results they get from their advertising with us. Mr. W. G. Owens, a Duroc-Jersey and Poland China man, and Mr. J. T. Oliver, a Berkshire breeder, were the parties. The way Mr. Owens talked about just refusing \$45 for a Duroc sow, and the ease and rapidity with which Mr. Oliver disposes of his 3 and 4 weeks' old pigs for \$5, made us want to get back in the business in a hurry. Both of these gentlemen have fine stock, all pure bred, and we do not blame our readers for keeping them sold down so closely.

Along in the mails the same day came letters from Judge Matthews, of Big Stone Gap; Dr. French, of Washington, and E. M. Gillet & Son, of Glencoe, Md., all praising the SOUTHERN PLANTER as an advertising medium in the highest terms. The first says: "I received very good returns from my advertisement"; the second writes: "Your journal still leads all others I am using in producing results, and I can honestly recommend it as a tip-top advertising medium." Friend Gillet gives a list of recent sales and adds: "The SOUTHERN PLANTER has the credit of the Hereford sales."

Five such rattling good testimonials in one day is a record of which we are very proud. We take great pleasure in asking the attention of some "doubtful advertising Thomases" to this brief note.

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

Wood's Seeds

FOR FALL SOWING.

Farmers and Gardeners who desire the latest and fullest information about

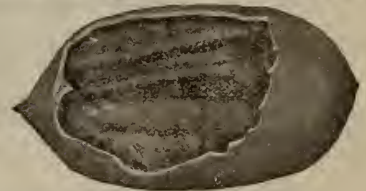
Vegetable and Farm Seeds

should write for Wood's New Fall Catalogue. It tells all about the fall planting of Lettuce, Cabbage and other Vegetable crops which are proving so profitable to southern growers. Also about

Crimson Clover, Vetches, Grasses and Clovers, Seed Oats, Wheat, Rye, Barley, etc.

Wood's New Fall Catalogue mailed free on request. Write for it.

T. W. WOOD & SONS, Seedsmen, - Richmond, Va.



"How to Grow Paper-Shell Pecans,"

FREE. Best varieties in U S. True to variety. Cions cut from bearing trees by member of firm. Full descriptive Catalogue of ALL FRUIT trees, free

B. W. STONE & CO., Thomasville, Ga.

Virginia Polytechnic Institute
STATE AGRICULTURAL AND MECHANICAL COLLEGE
at Blacksburg, Va.,

A SOUTHERN INSTITUTE OF TECHNOLOGY.

Forty-five instructors. Thoroughly equipped shops, laboratories and infirmary. Farm of four hundred 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, medical attendance, etc., about \$195. Cost to State students about \$165. Session began September 21, 1903. For catalogue and other information, apply to

J. M. McBRIDE, Ph. D., LL. D., President.

Alfalfa Bacteria Infected Soil

Can be obtained from Ewell Farm Experimental Plot A perfect stand three years of age, abundantly supplied with root nodules. Price \$1.00 per 2 bus. burlap bag, weight about 150 lbs., f o. b. Ewell's Station, Tenn.

GEO. CAMPBELL BROWN,
Spring Hill Tenn.

DEAFNESS CANNOT BE CURED

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give one hundred dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's atarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.
Hall's Family Pills are the best.

Liberal Subscription Offer.

To induce non-readers of the SOUTHERN PLANTER to become subscribers, we beg to announce that all new subscriptions received between this time and December 1st will be given the remaining numbers of this year free. In other words, 50 cents will pay for a subscription from now until December 31, 1904.

Our regular subscribers, upon whom we have called so many times, will confer a favor, which will be reciprocated at any time, if they will bring this offer to the notice of their friends who are not subscribers to the SOUTHERN PLANTER.

WITH THE ADVERTISERS.

A. G. W. wants an industrious farm manager. His farm is in Chesterfield county.

The Davis E. Foutz Co., makers of Horse and Cattle Powders, starts the season's advertising with this number.

Some bargains in the standard breeds of poultry are offered by the Oakland Poultry Farm.

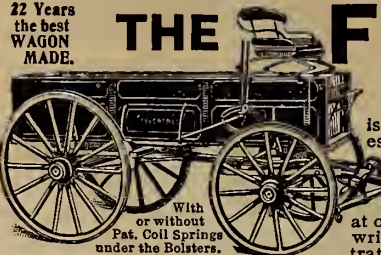
Red Poll Cattle are offered by Messrs. Pierson Bros. They have been breeding them for a number of years, and have good stock.

J. M. Garnett is offering some of his fine "Garnett Layers." Look up his ad.

Dr. Haas has something interesting to say to hog raisers in his ad. Look

22 Years
the best
WAGON
MADE.

THE FLORENCE FARM WAGON



With
or without
Pat. Coil Springs
under the Bolsters.

The Western Farmer's Favorite.

is **FULLY GUARANTEED** to be the very best, strongest and lightest draft wagon for all farm purposes. Neat, handsome, substantially constructed from best grade seasoned timber, well ironed, it possesses every quality that makes it desirable. See the **FLORENCE** at our nearest agency. If there is no agency near, write us direct and we will send you free our illustrated Catalogue, our attractive periodical "The Florence Waggin' Tongue," and make you an offer to supply you with a **FLORENCE WAGON** on liberal terms and at a low price.

Write today to Dept. C. **FLORENCE WAGON WORKS, Florence, Alabama.**

LEE'S PREPARED LIME

AGRICULTURAL LIME

**The Old Reliable for WHEAT, OATS,
CLOVER and OTHER GRASSES; has
stood the test for twenty-five years,
being composed principally of Hydrate
of Lime, Sulphate of Lime and Potash.**

OUR SPECIAL WHEAT FERTILIZER.

We put this brand on the market only a few years ago, and have had very flattering results. The best farmers say that they get better **STAND** and **GROWTH** of **GRASS** and **CLOVER** from it than from other fertilizers. This we can confidently recommend for **CORN-LAND** or any other land of fair fertility.

FRUIT TREES.

Maj G. A. Barksdale of Richmond, Va, has used our **PREPARED LIME** on his fruit trees, and says it has made wonderful improvement, both in the condition of the trees and quality of the fruit.

PLAIN SHELL LIME

Constantly on hand at lowest prices.

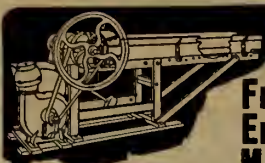
No. 1 WOOD-BURNT LIME

In car lots at lowest market price from kilns.

If you wish to **IMPROVE** your land, use a ton to four acres for **WHEAT** and **CLOVER**, or if you wish to seed it for other **GRASSES** where the land is in good condition, use the same quantity and it will give you a good **STAND** and **GROWTH** of **GRASS**. For reclaiming **POOR** land, where there is little or no **VEGETATION**, **COVER** naked places with litter from the barnyard or forest, using the same quantity, and sow winter **OATS** and **CLOVER**.

SEND FOR CIRCULAR AND PRICES.

A. S. LEE & SON,
102 S. 13th Street, -:- Richmond, Virginia.



Freeman Ensilage Machinery

represents the modern idea. Illustration shows typical cutter with blower attachment. 11 sizes, hand cutting to belt power, with capacity ranging from 5 to 24 tons per hour. Traveling force feed reduces labor of feeding. Each machine easily and quickly fitted with shredder attachment.

Also make Wind Mills, Corn Shellers, Wood Saws, etc. Write for free catalogues 110.

S. FREEMAN & SONS MFG. CO., Racine, Wis.




You Try It.

It costs nothing. Return at our expense if this mill fails to grind shelled corn, ear corn, all grains or mixed feed stuffs, easier, faster and better than any other.

New Holland Mills

are the practical, every day mills for every day wants. No other good mill at so low a price. Made in 3 sizes. Adapted to any kind of power. Don't fail to get our free catalogue before buying.

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



HEEBNER'S FEED CUTTERS.

Feed all your fodder. By using Heebner's cutters with shredder attachment the whole of the nutritious stock is cut, crushed and shredded, and rendered edible. No waste. Animals eat it greedily and thrive. Shredder attachment costs \$5.00. The metal ensilage cutter. Also make Tread Powers, Lever Powers, Little Giant and Penna. Thrashers, Wood Saws, Feed Mills, etc. Catalog free.

HEEBNER & SONS, 25 Broad St., Lansdale, Pa.

MEAL OR FEED

Fine meal for family use. Ear corn crusher and grinder, corn cracker, all round feed maker for every farm need.

Monarch Mills

attrition or genuine imported French burr styles. Thousands in use. Meet every house or barn purpose. Sold on 15 days free trial. Get Monarch catalog before buying.

Sprout Waldron & Co
Box 202, Muncy, Pa.

The "Weber Junior" Pumper

Is all complete, ready to attach to pump. Equals 80 men pumping water. Use but little gasoline. Is shipped completely erected, all connections made. Easy to start, any one can operate it. Every one guaranteed. Other sizes up to 60 H. P. Send for catalog. Weber Gas & Gasoline Engine Co., Box 123 Kansas City, Mo.

STOP THAT RATTLING, TIGHTEN YOUR OWN BUGGY TIRES. No heating; does not mar the paint; any one can operate. Machine complete with 100 washers sent on receipt of \$2.00. Guaranteed to do the work. Your money back if not as represented. **RAPID TIRE TIGHTENER CO., Station F., Toledo, Ohio.**

it up and send for his free book, "Hogology."

Kitselman Bros., old advertisers, resume their advertising in this issue. Lots of our readers already know about their Fence Machine, which is sent out on trial.

A useful Cream Separator is offered by The Superior Fence Machine Co., Detroit.

Foxhall Farm wants to buy some Angora Goats. Take notice ye Angora men.

The Coiled Spring Fence Co. has a couple of ads. in this issue, to which we invite the attention of our readers.

The Folding Sawing Machine Co. offers a very handy and useful device in the shape of a folding hand saw. Look up their ad.

Stonehurst Fruit and Stock Farm has some nice registered Herefords for sale.

Sprout, Waldron & Co. are advertising their Feed Mills again this year. You can have one of these mills on 30 days free trial.

Anybody wanting some nice colts had better correspond with Mr. I. L. Amberg, who has an ad. in another column.

Squab raisers or those contemplating going into the business had better read the ad. of E. C. Johnson.

The Glen Rock Woolen Mills have a card in another column, which will surely interest numbers of our readers. Look it up.

African Geese can be had of Miss A. Worthington, Ivy, Va.

Milne Mfg. Co. are advertising their celebrated Hawkeye Stump Puller again this season.

"W." wants to buy a lot of young cattle from the quarantine district. He prefers Shorthorns or other good grades.

The New Holland Machine Co. is a new advertiser in this issue. This company has a good feed mill in which it would like to interest our readers.

Wertz Nursery makes its usual fall offering in this issue. Look up the ad.

H. D. Coleman wants to trade Newport News property for a farm.

The Continental Plant Co. is advertising strawberry plants and nursery stock.

Mr. J. F. Durette doubles his ad in this issue. Poland-Chinas and Short-horns are his offering.

Mr. Murray Boocock, owner of the Castalia Herefords, wants to buy some registered Hereford heifers. See his ad.

Sydnor Pump & Well Co. has an attractive ad. in another column. If it's pumps you want, write this company.

Strawberry plants are offered by Mr. John Lightfoot.

International Stock Food Co. has a large ad. on another page. Look it up and send for their handsome free stock book.



Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog, describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



ELECTRIC



WE LEAD THE WORLD

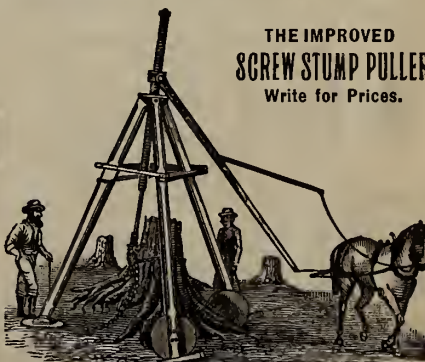
We are the largest manufacturers of Grooved and Plain Tire Steel Farm Wagon Wheels in America. We guarantee our patent Grooved Tire Wheels to be the best made by anybody anywhere. Write us.

HAVANA METAL WHEEL CO.
HAVANA, ILL.



WE'LL PAY THE FREIGHT


and send 4 Buggy Wheels, Steel Tire on, - \$7.25
With Rubber Tires, \$15.00. 1 mfg. wheels 3/4 to 4 in. tread. Top Buggies, \$28.75; Harness, \$3.60. Write for catalogue. Learn how to buy vehicles and parts direct Wagon Umbrella FREE. **W. V. BOOB, Cincinnati, O.**



THE IMPROVED SCREW STUMP PULLER

Write for Prices.

Chamberlin Mfg. Co., Olean, N. Y., U. S. A.



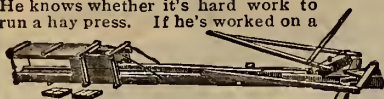
HERCULES STUMP PULLER

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.

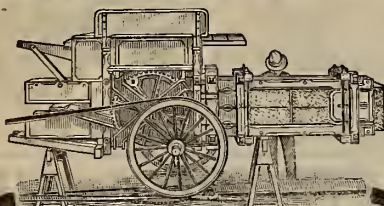
Just Ask the Horse.

He knows whether it's hard work to run a hay press. If he's worked on a



RED RIPPER Hay Press

he will tell you that it is the lightest running press in the market. A lever gives the compression, and the power increases with the resistance, but the horse doesn't know that. He knows that it is just as easy at the end of the stroke as it is at the beginning. The Red Ripper has an easy capacity 20 bales per hour. It is a low priced, in fact, the lowest priced hay press in the market, and so strong and simple it never gets out of repair. It can be loaded on a farm wagon. Our 24 page Catalogue No. 433 tells you more and contains many testimonials we have received from Red Ripper purchasers. Distributing points, Baltimore, Memphis, Cincinnati. Address **SIKES MFG. CO., Helena, Georgia.**



The man who intelligently buys baling machinery will investigate the features of economy and practical utility which have made

Dederick's Baling Presses

world-famed. Our catalogue contains the latest and largest variety made. We want you to have a copy. After reading it your knowledge won't permit of mistake when you buy. We send it free. Write for a copy at once. **P. K. DEDERICK'S SONS, 76 Tivoli St., Albany, N. Y.**

The Hay Baler

which is in a class by itself.



"ELI" PRESSES bale fastest and best for shipping and market. Largest Feed Openings. horse and steam powers, 38 styles and sizes. Many featured machines, standard of the world. Get the free Eli catalogue. **Collins Plow Co., 1185 Hampshire St., Quincy, Ill.**

WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write to us if you mean business.

Loomis Machine Co., Tiffin, Ohio.



WARRINER'S CHAIN HANGING STANCHION. CLEAN, SAFE, COMFORTABLE.

MFG. BY **W.B. CRUMB, Forestville, Conn.**



GET ALL THE CREAM,

—BY USING—

The **SUPERIOR CREAM SEPARATOR.**

Does not mix water with the milk. It is the best Separator made. A trial convinces, and every Separator is guaranteed. Write today for Catalogue to the **SUPERIOR FENCE MACHINE CO., 291 Grande River Ave., Detroit, Michigan.**

MAGAZINES.

The Review of Reviews is the best magazine for any one to take who wants to keep posted on all that is going on the world over. The editor's review of the leading subjects occupying the attention of the master minds of the world and of all the current passing events is always well worth reading. In addition to this there are always a number of articles on matters occupying public attention in the leading countries of the world by those most qualified to deal with them from special knowledge or practical acquaintance with the subjects. What is being said in other magazines on all subjects of popular interest can also be found in this magazine.

The Cosmopolitan is one of the best of the cheaper magazines. It is most liberally illustrated with beautifully produced pictures.

The October Century has an attractive cover by Leyendecker of a mounted hunter and dogs, which gives a clue to the prevailing character of its contents, for it is a "sportsman's number," containing, with much other matter, a group of articles on field sports relating to France, Great Britain and America. The democratic tradition in France is represented by an article, "When the French President Goes Hunting," written and illustrated by Andre Castaigne. The aristocratic tradition is represented by Sterling Heilig's narrative, "With the Hounds of the Duchesse D'Uzes." J. M. Gleason, the artist, writes of "Two British Game Parks," Powerscourt in Ireland and Drummond Castle in Scotland, and supplies pictures of both. But the most practical and acceptable article to American sportsmen, will be a review of "Field Sports of To-Day," by Dwight W. Huntington, the well-known writer on this subject. Mr. Huntington is also an artist, as witness his illustrations for his own article, including four in color, one of which, "The New and the Old Type of Sportsman," is the frontispiece or the number. There are three striking full-page pictures of big game by Arthur Wardle, the English painter, and "The Wild Bird by a New Approach," by Francis H. Herrick, who shows how birds may be slyly shot by the camera without in any way injuring the bird. Three articles of much variety by officers of the United States government deal in a popular way with topics of solid interest. Gen. Greely writes of "The Signal Corps in War Time," which may be called a piece of secret history; Hon. W. R. Merriam, director of the last census, of "The Census of Foreign Countries," and Dr. L. O. Howard, entomologist of the Department of Agriculture, gives the first full account of the recent experiments which determined the relation between yellow fever and the mosquito, experiments involving much personal sacrifice on the part of those concerned.

UNION LOCK POULTRY FENCING



HAS BEEN FULLY TESTED AND FOUND SUPERIOR TO ALL OTHERS.

Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of

high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has fine mesh at the bottom for small chicks. We also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight and satisfy every one or no sale. Can ship from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

CASE BROS., Box 340, Colchester, Conn.



PAGE

1,500 FEET OF WIRE

from the Page Fence that stopped the big runaway racing auto at the Zanerville, O., fair, was cut up into short pieces and carried away as souvenirs by the people who saw the tragic accident in which so many were killed or injured.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



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.



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.**



SENT ON TRIAL

A Fence Machine that will make over 100 Styles of Fence and from 50 to 70 rods a day **AT ACTUAL COST OF WIRE** Horse-high, Bull-strong, Pig and Chicken-tight, Wire at Wholesale Prices. Catalogue Free. **Kitselman Bros., Box 165, Muncie, Ind.**



FENCE! STRONGEST MADE.

Bull-strong, Chicken-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free. **COILED SPRING FENCE CO., Box 53, Winchester, Indiana, U. S. A.**

9 CORDS IN 10 HOURS



BY ONE MAN, with the FOLDING SAWING MACHINE. It saws down trees. Folds like a pocketknife. Saws any kind of timber on any kind of ground. One man can saw MORE timber with it than 2 men in any other way, and do it EASIER, 239,000 in use. Send for FREE illustrated catalog, showing latest IMPROVEMENTS and testimonials from thousands. First order secures agency. Address **FOLDING SAWING MACHINE CO., 85-87-89 No. Jefferson St., CHICAGO, ILL.**

A Steel Stanchion beats anything you ever saw for tying cattle. Lighter, stronger, neater. Swings on chains. Not in the way when lying down. Agents wanted. Write for special terms and prices. **Jas. Boyle, Mfr., Salem, O.**

Mention the *Southern Planter* when corresponding with advertisers.

ELMWOOD NURSERIES.

ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 10'0 for 2 mos. for BARR'S, PALMETTO, CONOVER.

APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

Splendid Assortment of Ornamental, Shade and Fruit Trees.

EGGS from B. P. Rocks, Light Brahmas, Brown Leghorns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hallsboro Va

..RELIABLE SEEDS..
For Fall Sowing.

Crimson Clover, Vetches, Rape, Rye, Barley, Seed Oats, White Pearl and other Onion Sets, Cabbage, Lettuce, Radish and Turnip Seed and all varieties of Grain, Grass and Garden Seeds.

Write us for prices.

DIGGS & BEADLES, Seedsmen,
1711 E. Franklin St., Richmond, Va.

EMPORIA NURSERIES

Offer a line of Nursery Stock, mostly APPLE TREES, 4 to 5 feet, and PEACH TREES, 3 to 4 feet, at reduced prices to clear land. All Stock healthy and free from Crown Gall, Aphis, San Jose Scale, or any other disease, and WILL BE FUMIGATED BEFORE shipped.

Send for reduced price list. Good No. 1 Agents for 1904 wanted.
C. S. LINDLEY, Prop., Emporia, Va.

Also agents for Universal and Gardner's Dust Sprayers; far ahead of any other and cost of power is very small. Send for price and description.

ROOFING TIN

Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.

HARRIS HARDWARE CO.,
409 F. Broad, Rich'm'd, Va.

An account of Alonzo Clark Robinson of "The Destruction of Philæ" sets forth the damage apparently done to this great historical ruin by the construction of the great Nile dam; there is an entertaining article on "The New Woman in Turkey," by Anna Bowman Dodd, and a budget of read-aloudable "Anecdotes of Leschetizky," by his sister-in-law, the Comtesse Angele Potocka. The fiction includes "The Old Dragon," a "Pa Gladden" story by Elizabeth Cherry Waltz; "The Object Lesson," by Edith Elmer Wood; "The Way of the Engineers," a story of the upper Mississippi, by Willis Gibson; "Sandy McKiver, Hero," by Herbert D. Ward, and the conclusion of "The Yellow Van," Richard Whiteing's novel of English life. In the editorial department are plain-spoken words concerning the increase of lynching and other unfortunate national tendencies, and a discussion of "The Cant About 'Hard Work'."

The novel in Lippincott's October number comes from Frederic Reddall's popular pen. Its title is "An Heir to Millions," and it deals with a fortune made in the California gold fields and inherited by a New York clerk with simple tastes. He begins in no very novel way to spend the money, but when he learns that it is his through trickery he shows his mettle by refusing to buy the silence of a rascal and stands ready to take the consequences. In his prosperity he has a little neglected his sweetheart of humbler days, but things come around her way in the end. "The Return," by Beulah Marie Dix, is a touching and powerful episode, with a thrilling psychological thread. From an author who has done excellent work in many magazines, this is unquestionably the best thing she has produced. Phæbe Lyle contributes "The Adventuress of Amaryliss," a sweet romance of picturesque Charleston, where a straight-laced little New England school teacher goes to recuperate after sickness and has the time of her life. The name "George Jones" is so palpably ungeniune that the reader feels more than a passing wonder as to the real author of the human little sketch called "The Day's Disdain." A racing story by Alfred Stoddart is called "The Lightweight Saddle Class," and contains love-interest as well as that of sport. Algernon Boyesen's original treatment of the divorce theme in his story, "The Prison House," arrests attention. A wife, having become fascinated by the leader of "new ethics," desires to leave her husband. His arguments prove vain, and he is inspired to suggest a test of the genuineness of the "leader's" views on platonic friendship. This works to perfection. But the tale must be read to be appreciated. With the servant question so much in evidence everywhere Karl Edwin Harriman's humorous sketch on the subject must make many friends. It is called "The Cook at Conley's." When Agnes Repplier talks on paper people are eager listeners. Her long residence abroad

Peach and Apple Trees,

BONAVISTA NURSERIES, Greenwood, Va.

We offer a fine lot of choice trees for Fall and Spring planting

Our apple trees are the best—Wine Sap, Mammoth Black Twig, York Imperial and Albemarle Pippin, all perfect and well grown trees.

Our peach trees are the standard sorts, Stump, Elberta, Bilyeu's (Comet,) Wonderful Champion, Globe, Picquet's Late, Albright's Winter, Crawford E. & L., etc.

We send out none but good trees and have never had a complaint made by any purchaser of our stock. Order soon, especially Peach-s, as good trees will be very scarce this season.

CHAS. F. HACKETT, Manager.

1000 Per Cent.
Profit in..
Wealth and Health

In fresh, luscious, home grown

STRAWBERRIES

allowed to ripen thoroughly on the vines. We sell the plants packed to carry fresh anywhere in the United States. Our 120 page manual (free to buyers) makes growing for pleasure or profit plain to all. Plant now. Also save half on

FRUIT TREES

by buying direct from us, saving agents' profits. Write for free Catalogue, mentioning this paper.

CONTINENTAL PLANT CO.
KITTRELL, N. C.

TREES! TREES!!

I offer a fine lot of whole root trees.

Apples, Pe a r s, Peaches,
Cherries, P l u m s, Grape
Vines. Raspberries, Etc.

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

CATALOGUE FREE.

All Stock Inspected and Fumigated.

WERTZ'S NURSERY, Salem, Va.

Strawberry Plants,

All grown in fresh rich ground, healthy, well-rooted plants that will please you; over 30 kinds to offer Raspberry plants and Peach trees also; see us before you buy. Our stock has been thoroughly inspected and found free from any disease.

Address JOHN LIGHTFOOT,
Sherman Heights Tenn.

PATENT YOUR IDEAS

\$100,000 offered for one invention; \$5,500 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.



FINE FARM FOR SALE.

I offer for sale a fine farm located twelve miles from Fredericksburg, Va., on the R., F. & P. R. R., and about one mile from the station. Contains 250 acres; suitable for cattle raising, corn, wheat and tobacco. About 100 acres cultivated. Has a 10 room dwelling, large barn, two floors, small barn, cattle shed, tenant house, and other out-buildings. Farm well watered and enclosed with wire fencing. 100 acres in timber. Healthy location, magnificent view of surrounding country. Price, \$5,000, on easy terms. Address

JOHN P. SIMONTON,
1124 S St., N. W., Washington, D. C.

HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.
C & O Main St. Depot Richmond, Va.

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.

BEARING APPLE ORCHARD in "Piedmont" Va. Rich black loam, typical "pippin" land. Suitable Albemarle pippins, and other highest grade apples 1,000 trees planted nine years; good crop this season. Coves side high mountain; but remarkably smooth; admirably adapted orchard work, and spraying, Wagons run all over. Large commercial orchards adjoin. Two bold mountain streams Four miles from depot; good road. Drive city two hours. Picturesque; good socially. 4 room house; \$2,500; half cash. Very desirable. For details, address
SOUTHERN FARM AGENCY, Lynchburg, Va.

WE HAVE A LARGE LIST OF
FRUIT, POULTRY and TRUCK FARMS
Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also

GRAIN AND STOCK FARMS
From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.
J. R. HOCKADAY, Manager.

2 GOOD DAIRY FARMS,

Vicinity of Washington FOR SALE.
Electric railway through one and near the other. For particulars, address
L. E. WALT, 745 7th St., S E,
Washington, D. C.

moves her to write about "The Tourist" in her notably keen and witty manner. She covers all nationalities in her comparisons and has evidently given much thought to her subject. The series of literary talks by George Moore, begun in the September number and entitled "Avowals," is continued this month. In speaking of Balzac, he says: "There is more vitality in a house described by Balzac than there is in many an English novel."

The October St. Nicholas really should be issued on a Saturday morning and not in the middle of the week, for the girl or boy who once takes it up will find it hard to lay aside the tempting magazine till every page is read. There is a frontispiece that is both pretty and clever, "A Musical Genius—the Pride of the Family." The leading story is just as good for girls as for boys, and is well worth reading aloud in the family. "That Deer," an exciting California story by Marian Warner Wildman. "Dandy Dash and How He Gave the Alarm," is the true story of a dog by Grace Weld Soper; and "Boxer and the Goslings" is another good dog tale. "Poh-Hlaik the Cave Boy," told by Chas. F. Lummis, is the thrilling story of a little New Mexican hero of five hundred years ago. In this number, too, Howard Pyle writes farewell to readers of "The Story of King Arthur and His Knights," which has been the strong fiction attraction of St. Nicholas the past year. "If so be," runs Mr. Pyle's farewell, "they make you think it is worth while to live a brave and true and virtuous life, doing good to those about you, and denying yourselves all those desires which would be ill for others and for yourselves for to yield to, then that which I have written hath not been written amis." But the October St. Nicholas has plenty of reading more substantial and equally entertaining. Rosalind Richards tells about "The Great Clock of Wells," nearly the oldest and certainly one of the most interesting clocks in existence. Of interest to grown-ups as well as to younger readers is Joseph Henry Adams' account, illustrated by the author, of "A Trip Through the New York Assay Office." W. T. Hornaday tells his remembrance of Chico, the largest chimpanzee ever seen on this side of the Atlantic; and the pictures are interesting, though necessarily ugly. "Counting," some of the simplest helps to correct counting, the most striking applications of machinery to the purpose, is the topic discussed by C. K. Wead. Annie Kuiper's interesting account of "Queen Wilhelmina's Lessons" is written from particulars obtained by the author directly from one of the queen's former teachers.

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

IF YOU WISH TO SELL —OR BUY— VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.
R. B. CHAFFIN & CO., Inc.,
No. 1 N 10th St., Richmond, Va

I Can Sell Your Farm

or other real estate, no matter where it is or what it is worth. Send description, state price, and learn my wonderfully successful plan. W. M. OSTRANDER,
376 North American Building, Philadelphia

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.

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

For Sale or Exchange
FOR FARM OR TIMBER LAND, residence and business property in City of Newport News. H. D. COLEMAN,
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"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.

VIRGINIA FARMS
All prices and sizes. Free list on application.
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BLUE GRASS FARMS and MINERAL LANDS.
Send for Free Real Estate Bulletin.
Southwestern Va. Land Agency, Wytheville, Va.

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

WANTED—FOR SMALL FARM IN Chesterfield County, an industrious man who understands farming, address A. G. W., P. O. Box 947, Richmond, Va.

MARK YOUR STOCK.
.....USE THE.....
KENTUCKY ALUMINUM EAR LABEL
Made by F. H. JACKSON & Co., Winchester, Ky
Write to them for free samples.

FARMS FOR SALE!

Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

No. 10.

This farm contains 100 acres—40 acres in white oak, chestnut and pine; 60 acres in a high state of cultivation. In lots of from 8 to 12 acres in a field; well fenced. Especially adapted to fruit and wheat and clover. Has a nice 8-room house, two porches, new barn, double grainary, wagon drive and cow sheds. A good 4-room tenant house. Situated 2½ miles from station on main line of Southern railroad; 5 miles from county seat of Fairfax county. Price, \$20 per acre.

No. 11.

Contains 315 acres in high state of improvement. Large frame dwelling, 10 rooms, 2 large cattle barns, and all necessary farm buildings in good repair. Land watered by spring branches. Situated in aristocratic neighborhood. Convenient to depot and to Washington market. Price, \$50 per acre.

No. 15.

An excellent dairy farm of 144 acres situated in upper Fairfax county, 3 miles from railroad station; about 100 acres under cultivation, balance in white oak and hickory timber. This is a model, up-to-date dairy farm, with all necessary appliances and machinery for a first class dairy. The owner is now shipping about \$10 worth of milk and cream per day. Write for description and price.

W. E. MILLER,
Herndon, Va.

REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Farmers Bulletin No. 178. Insects Injurious in Cranberry Culture.
- Illinois Experiment Station, Urbana, Ill. Bulletin 87. The Structure of the Corn Kernel and the Composition of its Different Parts.
- Bulletin 88. Soil Treatment for Wheat in Rotations, with Special Reference to Southern Illinois Soils.
- Iowa Experiment Station, Ames, Iowa. Bulletin 69. The Chicken Mite.
- Bulletin 70. Some Weeds of Iowa.
- Bulletin 71. The Keeping Quality of Butter.
- Hatch Experiment Station, Amherst, Mass. Bulletin 91. Injuries to Shade Trees from Electricity.
- Nebraska Experiment Station, Lincoln, Neb. Experiments in the Culture of the Sugar Beet.
- Ohio Experiment Station, Wooster, O. The Maintenance of Fertility.
- Rhode Island Experiment Station, Kingston, R. I. Bulletin 93. Commercial Fertilizers.
- Virginia Weather Bureau, Richmond, Va. Report for August, 1903.
- West Virginia Experiment Station, Morgantown, W. Va. Bulletin 86. Cranberries in West Virginia.
- Bulletin 87. Greenhouses.
- Imperial Department of Agriculture, West Indies Agricultural News, News, August 15th and 29th, 1903.

CATALOGUES.

- Peter Henderson & Co., 35 and 37 Cortlandt street, New York Autumn Catalogue.
- Peter Henderson & Co., 35 and 37 Cortlandt street, New York. Agricultural Seeds for Fall Sowing.
- Florida Nut Nurseries. J. T. Jones & Son, Proprs., Monticello, Fla.
- John Lightfoot, Sherman Heights, Tenn., Catalogue of Strawberry and Raspberry Plants, etc.

LIVE WILD GAME WANTED.

Dr. Cecil French is advertising in another column for all kinds of live wild game. He wants particularly wild turkeys, quail, pheasants, grey squirrels, bear cubs, deer, raccoons, foxes and the like. As the open game season is now upon us, our readers should be on the look out for some of the above, as Dr. French is ready to turn it into the coin of the realm for them.

SALES AT BACON HALL.

Messrs. E. M. Gillet & Son write us as follows: "We take pleasure in reporting the following recent sales: Herefords, Mr. D. L. Flory, of Virginia, picked "Goodenough," a very good son of "Gold Standard," out of "Lovely."

Berkshires: Mr. S. H. Anderson, of Virginia, writes: "I am very much pleased with the 3 sows and 1 boar I got from you." Mr. W. P. Husband, of Maryland, bought 1 bred sow and gave me 2 orders. R. T. Owen, of Pennsylvania, got 1 boar pig. Satisfaction or no pay is the motto of "Bacon Hall."

If your lamp-chimneys break, say **MACBETH** to your grocer—loud!

He knows.

You need to know how to manage your lamps to have comfort with them at small cost. Better read my Index; I send it free.

MACBETH, Pittsburgh.

FREE SAMPLE

OF "THE STORY OF MY LIFE AND WORK," By Booker T. Washington.



Send us your name and address. We want you to have a copy of this autobiography of the greatest living Negro for the purpose of introducing it in your community. It is a remarkable seller, big profit; agents are making from \$4 to \$10 per day. Will you introduce it by selling or getting us an agent? If so, send at once for a sample.

J. L. NICHOLS & CO.,
Atlanta, Ga.

Selling Price \$1.00. 915 Austell Building.

DO YOU OWN STOCK?

If so, do you know how to care for it when sick? Our Stock Book tells you all about animals and their diseases. Write for terms. Agents wanted everywhere. Most liberal terms. Outfit free.

B. M. ANDERSON & CO.,
Box 533. - Richmond, Va.

Consulting Entomologist

A. Arsene Girault,
CARE ALLEGHANY ORCHARD CO.,
Paw Paw, W. Va.

Answering in detail, accompanying, where possible with specimens and explanatory notes; life-history a specialty; charges low. Not a bureau of information. Write at once and worry me.

NO SEWING OUR TISSUE REPAIRS FABRICS of all kinds; package, 10c. with instructions. ZONEE MFG. CO., 2010 Cleveland, Ave., Phila.

"Glen Rock" All Wool Clothing Direct from Mill.

Men's, Boys' and Children's Clothing at a saving of 50 per cent. We have the largest mill in the country selling clothing direct from the mill to the wearer and making the wools from the raw wool under the same roof. Our goods are handsomely made of all wool and trimmed. The cloth is made from fine selected wools. Every garment bears our label and is guaranteed for one year. If not wearing satisfactorily, may be returned and another will be sent free of all expense.

Our made-to-measure men's suits for \$7.50 or \$10.00 would cost \$18.00 to \$25 at your tailor's. Handsome line of Fall and Winter Overcoats at an equal saving.

**Hand-shrunk Collars,
Hand-made Button Holes,
Padded Shoulders.**

We sell either tailor-made or ready-made clothing. Men's all wool and worsted trouser's \$2., \$2.50 and \$3., handsomely made and trimmed. We have the cheapest, *strongest* and best all wool boys' clothing. Also cloth by the yard or piece, and ladies' suitings and skirtings. Write to-day for samples, etc.

**GLEN ROCK WOOLEN MILLS,
Somerville, N. J.**

HOW... MONEY GROWS

It is what you save and what your money earns, not what you earn, that makes wealth. Saving is easy, but knowing how, when and where to safely invest your earnings and

GET LARGE PROFITS From Small Investments

is the key to wealth. After all, money making is like horticulture—a matter of growth—Plant the seed at the proper time in good soil, and your harvest is certain. He who makes two stalks of corn to grow where but one grew before, increases his income by doubling his harvest. So a few dollars invested at the right time in a good, dividend-paying enterprise will bear fruit a hundred fold.

Send for Free Booklet, "Guide for Investors" which shows how to make an absolutely safe and profitable investment. It may save you a loss or

MAKE YOUR FORTUNE

**STOCK GUARANTY & SURETY CO.,
Dept. B. 1122 Market St., San Francisco, Cal.
Agents Wanted in every city and town.**

CABINET PHOTOS FREE. Write for combination offer of one dozen copied from any picture. **CRAMER NOVELTY CO., Grenloch, N. J.**

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

SWEET POTATOES.

A pamphlet, "Cultivation and Storage of Sweet Potatoes," gives, as is believed, a more practical plan for keeping potatoes than any other that has heretofore been placed before the people. Important and valuable information that is not contained in any other known publication is here given. Potatoes can thus easily be kept in good condition 12 months or longer. The pamphlet is worth, even to life-long potato growers, much more than the price asked.

A. F. Funderburg, Dudley, S. C., in speaking of this pamphlet, says: "I would not take ten times its cost for it."

The pamphlet has been introduced into 19 States and 3 Territories. The plans are simple and easily understood. They can be made available for old style potato houses, or for new ones, specially built, preferably the latter. Order now. Do not delay.

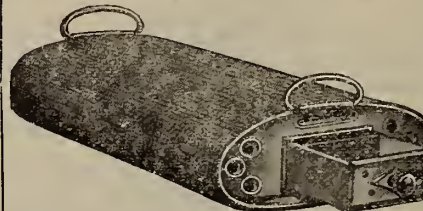
Price, 50 cents, postpaid. Address
**BRYAN TYSON,
Carthage, N. C.**

I have a few copies of a formula for excluding moth from beehives that will be sent, as long as they last, without charge, to those who request it.

B. T.

LEHMAN HEATER.

One of the most striking advertisements in this issue is that of Messrs. Lehman Bros., setting forth the merits of their carriage and wagon heater.



The accompanying illustration will give you an excellent idea of this useful device. It is simple, neat, durable and very handy. Its makers claim that it will make a vehicle absolutely comfortable in the coldest weather; that it gives continuous heat for 15 hours at a cost of one-half cent per hour; that danger from fire is impossible; that it is unbreakable and will last a lifetime. The fact that 200,000 are now in use would seem to confirm the makers' claim. Refer to the ad. and send for catalogue.

THE WARRINER STANCHION.

This patent chain hanging cattle stanchion is advertised in this issue by Mr. W. B. Crumb, of Forestville, Conn. From glancing through his catalogue we find that numbers of prominent dairymen and Agricultural Stations as well, sing its praises. Better send for the booklet, if interested, or send for it and you will probably get interested.

Mention the Southern Planter in writing.

Full Sacks

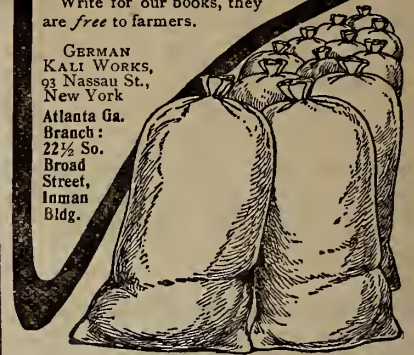
of plump, rich grain are obtained by the use of a fertilizer containing not less than 6% actual

Potash

For Wheat, Rye, Oats, and all other grains, Potash is most essential.

Write for our books, they are free to farmers.

**GERMAN
KALI WORKS,
93 Nassau St.,
New York
Atlanta Ga.
Branch:
22 1/2 So.
Broad
Street,
Inman
Bldg.**



SAN JOSE SCALE and other insects can be controlled by using

GOOD'S CAUSTIC POTASH WHALE OIL SOAP. No. 3.

It also prevents Cur! Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 3 1/2 c. per lb.; barrels, 425 lbs., at 3 1/2 c. Large quantities, special rates. Send for circular.

939—41 N. Front St.,

**JAMES GOOD,
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.

"Feeds and Feeding"

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

Delivered anywhere for \$2.00
With the SOUTHERN PLANTER, .252

THE KEELEY INSTITUTE GREENSBORO, N.C.

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

**STOCK LICK IT
STOCK LIKE IT**




**BLACKMAN'S
MEDICATED
SALT BRICK**

The only guaranteed Tonic, Blood Purifier, Kidney and Liver Regulator and aider of Digestion for all stock. A sure hit on worms. Ticks cannot live. No dosing, no drenching, and no waste of feed. Your horse his own doctor. Endorsed by thousands. **Special Offer** of four bricks sent prepaid to any address on receipt of one dollar. Money refunded if not satisfied. For full descriptive circulars, testimonials, etc. address

Blackman Stock Remedy Co.
820 Highland Park, Chattanooga, Tenn.

150 Jacks, Jennets and Mules.
Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell 2 Percheron Stallions at close figures.



BAKER'S JACK FARM.
Lawrence, Ind.

Knight & Jetton,
Breeders of and Dealers in Jacks, Jennets, Stallions. Durham and Hereford YEARLINGS. Send stamp for Catalogue. Murfreesboro, Tenn.



Jacks, Jennets and Stallions
FOR SALE. FINE JACKS A SPECIALTY. When writing state exactly what you want or come and see our stock.
W. E. KNIGHT & CO.,
Route 5. Nashville, Tenn.



A nice, smooth **BLACK JACK** for sale foaled in 1900; also pure bred **Fox Hound Pups** of the celebrated Maupin & Walker strain, apply to
SNOW HILL KENNELS, Woolsey, Va

Sale or Exchange

2 BEAUTIFUL JACKS, for pure-bred Red Polled cattle, good draft or coach stallions. **W. S. MOTT, Dixondale, Va.**

WANTED!

ALL KINDS OF
LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Etc.

CECIL FRENCH,
718 Twelfth St. N. W., Washington.

Thirty-six years of continuous success. Just think what that means. Thirty-six long years in business, each year more successful than the previous one, with never a backward movement, always growing larger, ever increasing in popular favor. How many that were doing business 36 years ago are even in existence to-day? Very, very few. In this age of development and fierce competition, a concern must do business right, treats its customers right, and sell what is right, to even hold its own, much less advance. To do otherwise means that the concern of to-day is likely to be out of the running to-morrow. The grave-yard of business failures is full to overflowing. But thirty-six years of continuous success and still growing. Think of it! How has it been accomplished? In just one way. By selling absolutely pure whiskey, direct from our own distillery to the consumer, saving him the enormous profits of the dealers, and carrying out to the letter every statement or offer we make, thereby creating a confidence with our over a quarter of a million satisfied customers that cannot be broken. Read our offer elsewhere in this paper. The Hayner Distilling Company.

IMPORTED "BRITISHER."


We are certainly very much obliged to Messrs. Giltner Bros., proprietors of the Kentucky Herefords, for a handsome lithograph of their splendid herd bull, Britisher, 145096. It immediately found its way to our walls. This splendid bull is certainly entitled to be called the "Record Breaking Champion," as he was champion over all beef breeds in England, and also won the sweepstakes championship in Herefords at the International Show at Chicago in 1902. Look up this firm's ad. and send for a neat little catalogue.

OUR NATIONAL SHAME.

It cannot be denied that of late the soberest-minded men among us have been filled with a solicitude amounting to anxiety in noting the momentum of certain dangerous tendencies in American life. The trend toward mob law in various sections of the country; the increased violence of the aggressions upon the right of workingmen to labor unmolested; the revelations of public and private corruption, and especially of the buying and selling of legislation and franchises; the growth of the gambling mania among women as well as men; the vulgar rush for social prominence; the widespread system of "graft" and blackmail which has grown up in all classes in the haste to be rich—these familiar phenomena are crowding upon our attention, straining our optimism and shaming our national pride at the very time when we are called upon to exult in the commercial greatness of the country and its peculiar qualifications for redeeming the benighted regions of the world. —From an Editorial in the October Century.

**Horse Owners! Use
GOMBAULT'S
Caustic
Balsam**

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland O.



USE
**FOUTZ'S
HORSE
AND
CATTLE
POWDER**

A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore Lost Appetite, expel Worms and cure Chronic Cough, Heaves, Influenza, Distemper, Hide-bound, Indigestion, Constipation, Flatulency and all Stomach and Bowel trouble. The finest of all animal vitalizers and tonics and the only one which increases the coefficient of digestibility of protein.

Get the Genuine or send to us. Pamphlet No. 1 Free. Sold by All Dealers.

**DAVID E. FOUTZ
BALTIMORE, MD.**

PRICE
25¢ PER PACKAGE
5 PKGS. \$1.00
12 PKGS. \$2.00
CHARGES PAID.

DEATH TO HEAVES
Guaranteed



NEWTON'S Heave, Cough, Distemper and Indigestion Cure.
A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can. Dealers. Mail or Ex. paid.
Newton Horse Remedy Co., Toledo, Ohio.

PERCHERON COLTS.

I offer 3 pure bred last spring foals (2 stallions, 1 filly), sired by *Brilliant Monarch, Jr.* Wt. 1,800 pounds. Also

"POLAND CHINA

Pigs, both sexes, 5 mos. old, sired by a son of Chief Tecumseh 2d, and a grandson of Chief Perfection 2d. Both colts and pigs are choice stock and eligible to registry. Write me.

THOS. R. SMITH,
Lincoln, Loudoun Co., Va.

8 HORSE COLTS

FOR SALE. 3 are 2 years old past; 5 are 1 year old past. All are sired by the fine registered saddle horses, **OLD MAC** and **GENTRY D.** As I am unprepared to handle them this year, will sell any 3 or the 8 at a prime bargain. Correspondence or visit solicited.

I. L. AMBERG, Fletcher, N. C.
(12 miles below Asheville, Southern R'y.)

FOR SALE.

**Large English Berkshire Hogs,
Barred Plymouth Rock Chickens**

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. EGGS IN SEASON.
JOHN P. FOSTER, Noreek, Ohio Co., Ky.

Little Chicks

thrive when fed on our

BABY CHICK FOOD.

CA perfect balanced food. Send for free sample and our large illustrated catalog of POULTRY SUPPLIES.

INCUBATORS, and

BROODERS.

FANCIERS' SUPPLY CO.,
517-519 West Broad St.,
Richmond, Va.

EVERYTHING FOR THE FANCIER.

FINE TURKEYS. "BREED FOR BREEDERS."

Last year my Mammoth Bronze turkeys were very fine, but this year the best I ever saw. They are the S. B. Johnston stock, derived from prize winners. SPECIAL RATES to those sending money before Nov. 1st., and the most select birds to first orders. I also have a few VERY FINE thoroughbred Barred Plymouth Rock cockerels for sale. Rates reasonable on all. Write for circulars.

PIEDMONT POULTRY PLACF,
Miss E. Callie Giles, Prop. - - - Whittle's Depot, Va.

BROWN LEGHORNS.

Young stock for sale in

Fall. Prices reasonable.

White Plymouth Rocks.

R. W. HAW, Jr., - - - Centralia, Va.

PIT GAMES:

Black Devils and Red Horses.

These cocks won 90 per cent of battles fought in 1901 and 1902 and have never lost a battle when gameness and cutting qualities could win. Choice lot of young and old stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

32 Varieties Best Poultry

in either old or young stock.

Reduced price on eggs bal. of season. Get my fine catalog, is free for stamp. Many breeding birds to offer, I can please you

JNO. E. HEATWOLE, Harrisonburg, Va.

.... GARNETT'S LAYERS

S. C. Black Minorca's & S. C. White Leghorns
of the Best Strain's Extant.

This is the month to order your cockerels have a nice lot for sale, \$1.00 each; no pullets for sale.

J. MILTON GARNETT, Mitchell's, Va.

FIRST CLASS FOWLS

—FOR SALE, CHEAP.—

Barred, Buff and White Plymouth Rocks, White Wyandottes, Light Brahmans, Buff and Partridge Cochins, Black Minorcas, Black Langshans, Brown and White Leghorns.

Now is the time to secure bargains.

OAKLAND POULTRY FARM,

C. J. WARINER, Mgr., RUFFIN, N. C.

With this issue the season's advertising of the familiar Monarch French Burr and Attrition Feed Mills starts. Old readers remember the advertisements from past seasons. These mills have found their way into the feed barns of many who read this paper. If there had been any note of dissatisfaction we should be sure to know it. These Monarch Mills are admirably adapted to the feeder's purposes. We have no hesitation in recommending them unreservedly. But an intending buyer need not buy on faith. Note the liberal time given to try before consummating the purchase. It shows the serene confidence the manufacturers have in their product. Catalogue with full description can be obtained by writing the manufacturers, Sprout, Waldron & Co., Box 202, Muncy, Pa.

DISCONTENT WITH WORK.

That there is much discontent with work among the so-called middle class in America is due in large part to the pampering of children, to the supplying of their natural and artificial wants and to the sentimental idea that "their day of toil will come soon enough." In general, work is not a curse, but a blessing—a positive means of grace. One can hardly begin too early to impress upon children lessons of self-help by tasks appropriate to their age and forces, and to beget in them scorn of idleness and of dependence on others. To do this is to make them happy through the self-respect that comes with the realization of power, and thus to approximate Tennyson's goal of man: "Self-reverence, self-knowledge, self-control."—From an Editorial in the *October Century*.

RAISE MORE MULES.

Baker's Jack Farm, which has long been advertising with us, sends us a little folder giving 20 reasons why farmers should raise more mules. We suggest that all interested parties send for it. Here are the first four:

I. They can be raised cheaper than any other stock.

II. Will go into the market sooner than horses.

III. They are marketable any time from weaning time (four months old) until incapacitated by old age.

IV. Are less liable to contract diseases than the horse.

OLDEST CLOCK IN THE WORLD.

The great clock of Wells Cathedral, in Somersetshire, England, is very nearly the oldest and certainly one of the most interesting of clocks in existence. It was built in 1322, by Peter Lightfoot, one of the monks of Glastonbury Abbey, six miles from Wells, where it ran for 250 years, until the abbey was dissolved by Henry VIII., and its last abbot hanged over his own gateway. The clock was then removed to Wells, where it has been running ever since."—From "The Great Clock of Wells" in *October St. Nicholas*.

White Wyandottes, Buff Leghorns, Bronze Turkeys.

I can supply a few trios of White Wyandotte Cockerels and Pullets. Immediate delivery. Fine layers.

Buff Leghorn Cockerels of extra fine laying strain ready for delivery in November.

Bronze Turkeys in pairs or trios. All at reasonable prices.

One U. S. Separator in perfect repair. Capacity 350 pounds milk per hour. Cost \$125. Price, \$50.

A. R. VENABLE, JR.,
Milnwood Dairy Farm.

P. O. Box 147, Farmville, Va.

Barred and White PLYMOUTH ROCKS

Single and R. C. B. Leghorn, S. L. Wyandottes, Light Brahma and B. Minorca Cockerels for sale. \$1 per single bird; a trio for \$3.

J. B. JOHNSON, Clover Hill Farm,
Manassas, Va.

\$1.00 each during October only.

B. P. R. chicks bred from Hawkins, Thompson & Bradley Bros. prize winners.

Protection Duroc Jersey pigs and Perfection Poland-China pigs.

Only the best is bred at "The Cedars." Fancier's stock, farmers prices.

THE CEDARS W. G. OWENS,
P. and S. FARM. Midlothian, Va.

Genuine B. Plymouth Rock chickens, M. Bronze turkeys, Toulouse geese, Guineas, Pea fowls.

Eggs in season from chickens and turkeys.

MRS. W. F. JACKSON, OLGA P. O.,
Amelia Co., Va.

Barred Plymouth Rocks, EXCLUSIVELY...

FOR SALE; strong, healthy, vigorous farm-raised pullets—bred for laying.

WM. B. LEWIS, IRBY, Nottoway Co., Va.

300 White Leghorn

Pullets (¾ bred) wanted. Write me, stating how many you can sell and at what price. F. E. WILLIAMS, M. D.

Capron, Va.

AFRICAN GEESE.—Pure-bred African

geese. A few pairs for sale, also Bro-

ken Haired Bassett hound pups. Miss

A. WORTHINGTON, Ivy Depot, Va.

FOR SALE—Trio Toulouse Geese;

1901 hatch, or will exchange for trio

good M. Bronze Turkeys.

DAVID W. LEARY, Mattoax, Va.

Market Toppers for Sale, Low.



Lot fine Reg. Angus bull calves, five to six mos., \$75.

Lot $\frac{3}{4}$ grade Angus heifers coming 2 years. Safe in calf by Reg. Angus bull. Price, 6 $\frac{1}{2}$ c. per pound.

1 Bull Calf coming 4 mos., out of fine Hereford cow, by Reg. Angus bull. \$40

Lot $\frac{1}{2}$ grade Angus heifers, coming 1 year. Price, 6c. per pound.

One 12 mos. old Reg. Angus heifer. \$100.

One first class black mare mule, 7 years old; wgt. 1,200. Very quick and active. \$150. Cheap at \$200.

One fine Dorset-Shropshire ram lamb, five mos., wgt. 75 pounds. \$8.

Pure white Plymouth Rock Cockerels, each \$1.

Pure Silver Lace Wyandotte Cockerels, each \$1.

W. M. WATKINS & SONS,
Charlotte county. Randolph, Va.

ANGUS BULL CALVES

Sired by the

Champion Bull BARON IDA.

These calves are choice individuals.

ENGLISH SETTER PUPS.

Sire and dam prize winners.

WARREN RICE, Winchester, Va.

5 finely bred registered

Aberdeen Angus Heifers

For sale at a bargain. 2 are 17 mos. old; 2 are 6 mos. old, and 1 is 8 mos. old.

C. F. & J. BUTTON,

Walker's Ford, Va.

LAUREL HILL FARM.

Splendid Registered

ANGUS BULL

Age 17 mos., thoroughly tick proof (immune), for sale. Price, \$250. Also a beautiful 5 mos. ANGUS HEIFER. No kin to bull, for \$50. Write for breeding, etc. C. A. WILLIAMS,
Ringwood, N. C.

Montebello Herd

Aberdeen Angus Cattle

Reg. bull calves; also first class BERKSHIRE PIGS of Biltmore strain, for sale by L. H. GRAY, Lock box 58, Orange, Va.

A NOTE IN PASSING.

"Yes," said the bandmaster, "we do have troubles with our musicians sometimes.

"Once we were engaged to play at a funeral. Our notice was very short, so we had no rehearsal. We reached the cemetery without any mishap, but there something happened. We were to play a solemn measure while the body was being lowered into the grave. Only a few instruments were needed. I was slowly and solemnly swinging my baton, the spectators were silently weeping, when suddenly the trombone gave a loud, long blast, enough to wake the dead. Some of the mourners fainted, the players stopped in consternation, and I jumped over chairs and racks to where the trombonist, a dull, heavy German, sat, stolidly gazing at his music.

"What the devil did you mean by bursting out that way?" I shouted.

"He raised his eyes slowly to mine.

"Vell, I vas vatching de music, und just den a horse-fly got on de paper. I t'ought he vos a note, und I blayed him. Dat was all, ain't it?"—*October Lippincott's*.

PRINCE RUPERT.

Mr. E. G. Butler, of Anfield Farms, breeder of Herefords and Berkshires, sends us a handsome lithograph of his celebrated stock bull, Prince Rupert. Mr. Butler has every reason to be proud of this bull, not only for his past record, but for his present performances. Look up his advertisements elsewhere in this issue and send for a photo of Prince Rupert.

NONE ON HAND.

"Dock" Squires was a queer old "yarb" doctor of decidedly limited education who flourished in New England a good many years ago. One day some one said to him:

"See here, Dock, have you any diploma?"

"Wal, no; I ain't got none on hand just now, but I'm going to dig some soon as the ground thaws out in the spring."—*October Lippincott's*.

DE LAVAL SEPARATORS.

We are in receipt of a very neat brochure, printed in colors, giving descriptions and prices of the De Laval Separator. There is no advertisement of the De Laval Separator in this issue, but if any are interested in Cream Separators, it might be well for them to write the above company, in New York city.

THE QUIT EVEN.

A red-headed man met a bald-headed man on the street one day. The red-headed man said to the bald-headed man:

"Huh! there don't seem to have been much hair where you came from."

"Oh, yes," replied the bald-headed man, "there was plenty of hair, but it was all red, and I wouldn't have it."—*October Lippincott's*.

Kentucky Herefords

Headed by the famous

IMPORTED BRITISHER

No. 145096 Champion Bull over all breeds in England and Grand Sweepstakes Champion at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they wish from the FANCIEST THAT CAN BE BRED to the cheaper class usually desired by the beginner. Write us before buying. Glad to answer inquiries.

Giltner Bros., Eminence, Ky.

V. P. I. Farm Bulletin

We are now offering some choice young Bulls of the following breeds:

Shorthorn, Hereford, Aberdeen-Angus.

Write at once for pedigrees and prices.

D. O. NOURSE, Prof. of Agr.
Blacksburg, Va.

HAYFIELDS STOCK FARM HAS FOR SALE

Seven Registered HEREFORD BULLS 8 months old to 2 $\frac{1}{2}$ years. Two Registered HEREFORD HEIFERS 8 months old and 1 year. Six OXFORD OWN BUCK LAMBS.

WM. D. MERRYMAN,
Cockeysville, Md.

DORSETS AND HEREFORDS.

Some Exceptionally Rare Bargains to Quick Buyers.

My herd bull, bull calves and Dorset bucks. Registered stock.

H. ARMSTRONG, LANTZ MILLS, VA.

A few fine ENGLISH SETTER puppies for sale at very reasonable prices.

JOHN A. CLARK,
Malvern Hill, Va.

Scotch Collie Pups

—AND—

Berkshire Pigs,

For sale, 1 boar ready for service. Satisfaction guaranteed.

E. M. BALL, Emory, Va.

● COLLIE PUPS ●

By Imported Sires. Sable and white and tri-colors. Prices, \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents: FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

Mention the Southern Planter in writing.

RED POLLED CATTLE —FOR SALE—

One extra fine, pure-bred Bull calf, 5 mos. old, out of 18082 Constance, by that grand sire, Flotilla 6225.

Also, one 9 mos., $\frac{3}{4}$ grade bull, a fine animal, excellent for grading up, and will knock the horns off every time, address

PIERSON BROS., SUMMIT,
Spotsylvania Co., Va.

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 10 to 12 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.

FOR SALE.—A NO. 1 REG. HEREFORD BULL, 7 months old, well marked, weighing over 500 lbs.

Address WM. C. STUBBS,
Sassafras P. O., Gloucester Co., Va

ST. OMER HERD

Offers young bulls fit for service, out of tested dams with good yearly records. Strong in Exile of St. L., King of St. L. and Stoke Pogis of Prospect. Reasonable prices.

JOS. T. HOOPES, Bynum, Md.

Ayrshires, Berkshires and Oxford-Downs.

Ayrshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale.

MELROSE CASTLE FARM,
Enos H. Hess, Manager, Casanova, Va.

ANGORA GOATS

WANTED. We desire to purchase 25 to 50 does, also the same number of does with kids by their sides. Write us stating lowest cash price.

FOXHALL FARM, Norfolk, Va

Purebred ANGORA BUCK

2 years old, for sale. Price \$20 f. o. b. Howardsville, Va.

C. H. NOLTING, Medlock, Va.

FOR SALE.—MY REG. ANGORA

"Gilbert of Aganaw" 4 years old, and as good as anybody's goat. Must sell to avoid inbreeding. Price \$25.00 f. o. b., South Boston, Va.

W. W. STOCKWELL, South Boston, Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Bldg Clifty, Ky.

POULTRY FENCE.

New advertisers in this issue are Chase Bros., of Colchester, Ct. They make a specialty of M. M. S. and Union Lock Poultry Fence. Look up their advertisement and send for interesting circulars. etc.

A LIMIT TO ALL THINGS.

He had been away on a long journey, and upon his return his wife was detailing to him a number of reforms and improvements which she had successfully engineered during his absence.

"And you know," she said, "that closet that was locked for over a month and which you said couldn't be opened except by a locksmith? Well,"—triumphantly—"I opened it."

"Well, well, how in the world did you do it?"

"With a hairpin."

"And the furnace door," she continued, "has been stopping around on one hinge for ever so long just because you were too lazy to fix it, but it's all right now."

"Well, I'm glad you had it fixed."

"Had it fixed! I fixed it myself—with a hairpin."

"And then there's that crayon portrait of mother that stood in the corner for almost six solid weeks because you never would bring me any picture hooks—"

"Well, I intended to, but—"

"Oh, but! Well, it don't make any difference now; I got it up with a hook I made myself—out of a hairpin."

"Ye gods!" he said.

"And there's Willie; you've been coaxing him and bribing him for a year, trying to break him of biting his nails, and I broke him in a week."

"With a hairpin?" he inquired weakly.

"No!" she snapped, "don't be a goose! With a *hair brush!*"—*Truman Roberts Andrews, in October Lippincott's.*

JACKS AND JENNETS.

Our friends, W. E. Knight & Co., of Nashville, Tenn., start up the season's advertising with this issue. Jacks and Jennets are their specialty, and any one interested should send for circulars giving description of their offerings.

CASTALIA HEREFORDS.

Mr. Murray Boocock, owner of the Castalia Herefords, writes us regarding his present offering as follows: "I have a very choice lot of bulls for sale, from 18 to 20 months old, ready for service, at prices which cattlemen can afford to pay because the return on the money investment is quick and sure. I am offering these bulls at only a little over calf prices to meet the demand for Registered Hereford yearling bulls at a low price. The present offering is one of the most useful lots I ever had. They are all rugged, thrifty, blocky fellows, and backed by the best of breeding."

WARE VIEW FARM,

GLOUCESTER, VA.

== OFFERS FOR SALE ==

3 large Berkshire Boars:

BEAU OF BILTMORE,
COLUMBIANA'S MASON, and
BOB LOOMIS, JR.

Will be priced low, also about 100 head of extra fine Boar and Sow pigs by the above Boars and out of the best Sows. Entitled to registry. Price, \$12 each, or 3 for \$30. Send stamp for reply.

R. S. CAMERON & SON, Props.

BERKSHIRES

ANNEFIELD HERD
Represents the

Finest Blood Lines

in England or America.

Stock for sale at all times.

Correspondence Solicited.
Inspection Invited.

EDW. G. BUTLER, Annefield Farms,
Briggs, Clarke Co., Va.

CHOICE YOUNG

BERKSHIRES

of Both Sexes, for Sale.

By Highclere Topper of Biltmore II, out of Imported Harlene.

Miniborya Farm, Box 901, Richmond, Va.

Southdown and Hampshiredown

Sheep and Lambs
FOR SALE; also ESSEX pigs. For
prices, apply to L. G. JONES,
Bethania, N. C.

BERKSHIRES

We offer some extra choice young boars, entitled to registry. These are particularly nice pigs, in fact, they are "tops," and we sell only "TOPS." Let me have your inquiries and orders.

HAWKSLEY.. J. T. OLIVER,
STOCK FARM, Allen's Level, Va.

Poland Chinas, Chester Whites and Mammoth Bronze Turkeys at Farmers prices

S. M. WISECARVER,
Rustburg, Va.

—6 Scotch Topped—

SHORT HORN BULL CALVES

6 Scotch Topped SHORT HORN Bull Calves 3 to 15 months old; reds and roans; sired by Verbena's Champion No. 129831, and Royal Chief No. 185432, and he by Imp. Royal Stamp No. 146662. Poland China Spring pigs, good ones, sired by Coler's Perfection No. 56105. Pedigrees furnished with all stock sold. Come or write your wants.

WM, T. THRASHER, Springwood, Va.

ELLERSLIE FARM**Thoroughbred Horses****AND SHORTHORN CATTLE,****Pure Southdown Sheep
and Berkshire Pigs.**

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



COOK'S CREEK HERD
Scotch-Topped
Shorthorns

Herd Headed by Governor Tyler, 1585 48. Young Bulls for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

Quietude**SHORTHORNS
FOR SALE.**

1 yearling bull, 3 bull calves 2 two-year-old heifers bred to a pure Scotch bull, 3 yearling heifers and a few cows. This stock is first class and in excellent condition. Write to or come to see T. J. THOMPSON, Swoope, Va

PURE BRED**Short Horn Calves**

from fine Stock. Also

Yorkshire Pigs

of very Prolific Breed.

JAS. M. HOGE, Hamilton, Va.

Only a Few of My**Reg. SHROPSHIRE**

left, and they MUST go by Jan. 1st, as I am discontinuing farming

I offer 1 yearling ram, 1 2-yr. old ram, 2 ram lambs, 2 ewes aged 4 and 5 yrs. at a bargain.

Write at once. H. R. GRAHAM, Barclay, Md.

**O. I. C. PIGS**

FROM REG. STOCK.

FOR SALE. PRICES RIGHT.

F. S. MICHIE, Charlottesville, Va.

Registered P. Chinas
Berkshire,
C. Whites. Fine large
strains. All ages, mated
not a in, 8 week, pigs.
Bred sows. Service boars
and Poultry. Write for prices and free circular.
P. F. HAMILTON, Cochranville, Chester Co., Pa.

**HOG REMEDY.**

All readers of this paper are familiar at least with the advertisement of the Haas Hog Remedy, by Dr. Joseph Haas, of Indianapolis. Among them are very many who have regularly for many years relied upon it to ward off and cure the swine plague. It is enough to say of it that Dr. Haas' remedy has been on constant trial for twenty-seven years by the hog raisers of this country. It would long ago have passed out of mind if it had not proven effective. Readers should note the striking difference between Dr. Haas' guarantee and those ordinarily given. The common form is a promise to refund the money paid if not satisfactory. Dr. Haas goes further. The remedy not only costs nothing, but where his plan of treatment is followed, he agrees to pay the market price for all hogs that may die. This guarantee, coming from a man financially responsible, amounts to something to hog raisers, whose chief hazard is the dreaded cholera. The book "Hogology" mentioned in the advertisement elsewhere develops fully the Haas plan. A copy will be mailed free to all of our readers who request it.

TOO SMALL FOR ITS AGE.

A gentleman who had employed an old colored carpenter to do a piece of rather delicate cabinet work for him was pleased beyond his expectations with the result.

Wishing to show his satisfaction, he—after paying the price the old man asked—took from the sideboard a bottle of extraordinary fine whiskey that had just been sent him and poured a little into a glass.

"Uncle," he inquired, "have you ever tasted any whiskey fifty years old?"

"No, sah, I never has," replied the old dinky, his voice trembling with anticipation.

"Well, try that, then," said his employer, handing him the glass, "and tell me what you think of it."

The old fellow received it reverently, took one sip, and raised his eyes in ecstasy.

"Oh, sah! dat am sho'ly de fines' bevrage ris chile evah taste. But," with an anxious glance at the very slight quantity in the glass, "don't you tink, sah, it am jus' a little small for its age!"

It is, perhaps, needless to add that this gentle criticism had the desired effect.—*October Lippincott's.*

A FAMILY NAME.

The teacher of a county school asked his pupils, one day, if any of them could tell him who Joan of Arc was.

The question was followed by profound silence. Some of the pupils stared at the teacher, and some turned and stared at one another, as if seeking the information in the faces around them.

Finally a boy burst out with: "O, yes, I know—she was Noah's wife."—*October Lippincott's.*

WANTED TO BUY A FEW HEAD YOUNG CATTLE, south of James river and east of Roanoke, Shorthorns or grades preferred, will also buy a few Angora goats. Address "W" care of this office.

RAISE SQUABS;
more profitable than poultry. The famous P. R strain. Prices of breeders on application. E. C. JOHNSON,
Manassas, Va.

WOODLAND DORSETS.

ONE of our customers writes: "My sales of grade Dorset winter lambs run this year: first 87 head brought \$870; then prices declined somewhat. I am looking for another good Dorset ram." Woodland Dorsets are standard in excellence.

J. E. WING & BROS., Mechanicsburg, Ohio.

**"Crop Growing
and Crop Feeding."**

BY PROF. W. F. MASSEY.

383 Pp. Cloth, \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth

Bound Volume, \$1.25.

Southern Planter and Paper

Bound Volume, 90c.

Old or new subscriptions.

**The RICHMOND, FREDERICKSBURG
and POTOMAC R. R.
and WASHINGTON SOUTHERN R'Y**

Form the Link connecting the

Atlantic Coast Line R. R.,

Baltimore and Ohio R. R.,

Chesapeake and Ohio R'y.

Pennsylvania R. R.,

Seaboard Air Line R'y

and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

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

Mention the *Southern Planter* when corresponding with advertisers.

EMILY'S CHARGE.
(A Serial Tale by Mary Washington.)
CHAPTER IV.

Emily now began to turn her attention to their "landed estate," as she called the little tract of land bequeathed by her Aunt Melissa. At first she had thought of selling it, but on second thought it flashed over her mind, "Why should we be wanderers and homeless when we have even this little foothold to serve us as a home?" The more she thought of it the more she liked the idea of living in their own little cottage, among the grand mountains, green meadows and clear streams of a pastoral country, and she finally resolved that if she could see any reasonable prospect of maintaining herself and the children, she would make her home there. But she determined to go there first herself and thoroughly examine the surroundings and prospects, for though her relatives called her Quixotic, she was by no means rash. She found the cottage occupied by a respectable couple, who had been living there for several years to take care of the place. The cottage was quite tasteful and comfortable, containing four rooms, and having a porch overrun by honey suckle and climbing roses. There was also a good building in the yard, containing two comfortable rooms, intended for a kitchen and servants' room. There were twenty acres attached to the cottage, of which ten were in cultivation, and the remainder consisted of wood land. There was a nice little orchard of peach and pear trees, as well as several rows of choice grape vines, for Aunt Melissa had a talent for making herself and friends comfortable, and had planted out such fruit as would bear during the season she was there. Mr. and Mrs. Wheeler, the couple in charge of the place, had kept it in good order. They were plain people, but practical, industrious and kind hearted. Mr. Wheeler owned a small tract of land adjoining the cottage tract, and by tilling this, he made a frugal living. They seemed, providentially placed where they were for the help and protection of the orphans. Emily hastened to engage them to remain, arranging for them to move into the outbuilding when she was ready to occupy the cottage. Finding that Mr. Wheeler understood the culture of vegetables, she proposed that he should raise these on her land and market them to the neighboring watering place, together with the fruit from the little orchard her aunt had so providentially planted. The watering place afforded a very good market for such products from June to September.

But although her path seemed to grow a little clearer before her, Emily knew it would not do to depend entirely on the prospect of a little marketing during four months of the year, so before making her final decision to settle at the cottage, she set to work to ascertain what were her prospects for getting a school in that neighborhood the ensuing session.

ON WINTRY DAYS



THE FOUR MONTHS OUTLINED IN THE ILLUSTRATION,
Are the ones mostly feared for intense cold. Why not prepare for same and purchase a LEHMAN CARRIAGE AND SLEIGH HEATER? They will keep you comfortably warm at a cost of 2 cents per day, burning LEHMAN COAL, from which there is no smoke, smell nor danger. The fact that 200,000 of our heaters are in use, plainly show that they are FULLY as REPRESENTED, and they are guaranteed to be the BEST HEATER money and skilled labor can put together. They are known everywhere as the STANDARD, and are in use by the LEADING HORSEMEN, who highly recommend them.

Write for circular with price list. Your local carriage, harness or hardware dealer sells our goods.

LEHMAN BROS., MFRS., J. W. ERRINGER, Gen. W. Sales Agt.,
10 Bond St., New York. 45 E. Congress St., Chicago.

Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

DORSET SHEEP

B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

WE OFFER a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

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

When corresponding with our advertisers always mention the
Southern Planter.

Those proving favorable, she made up her mind to try living at the cottage for one year at least, and if she could not sustain herself there, to sell it and make such other arrangements as the emergency seemed to call for. She then returned to her old neighborhood for the winter, thinking it best to wait until spring before making a move. All their friends and neighbors opened their doors to the orphans with whole-souled hospitality, and under the roof of kind entertainers, they lingered a few months longer, in sight of their old home. Mr. Crawford, the creditor into whose hands "Soldiers' Joy" had passed, was not a stranger to Emily, he and his family having frequently visited in the neighborhood in her childhood. His son, Allan Crawford, to whom he intended giving the place, had been a playmate of hers, and she had a pleasant recollection of the frank, manly boy. He called to renew their acquaintance a few days after taking possession of "Soldiers' Joy," and seemed greatly embarrassed. His kindly nature was pained at the idea of turning a young woman out of her home, and this chivalrous feeling was strengthened when he saw into what a lovely and charming young woman his former playmate had developed. Emily, on her part, took much pleasure in renewing the friendship of childish years, and he brightened up the quiet winter by many acts of kindness and attention to herself and the young ones under her charge.

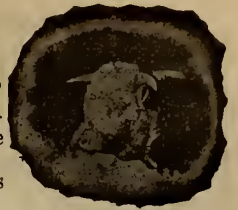
When the spring fairly opened Emily began to prepare for their departure. Her friends all tried to dissuade her, begging her to remain and divide her time amongst them, but her resolution to go was unalterable. While the rest were voluble in expersing their regrets, Allen alone was so silent and constrained as to appear almost unfriendly. A few days before their departure, one sweet April evening, when all nature had awakened, after the cold and snows of winter, with a new, lovely and serene life, Emily strolling on the lawn, saw Allan approach her. He held in his hand a bouquet of spring flowers, hyacinths, lilies of the valley, and white violets gathered from the flower beds of her dear old home. They brought so many memories rushing over her that it was several moments before she could speak. Allan, too, seemed equally agitated.

"Dear Emily," said he, "I have come to beg you to return to these flowers, and to the old home. It seems so hard and cruel and unnatural for you to go away from them. I feel like an interloper, taking possession of these things, and you going away to buffet and struggle with the world."

"But, my friend," replied Emily, "you are too chivalrous and tender hearted. It is morbid in you to blame yourself, or feel badly about our old home having passed into your possession."

"I do not ask you to return for this reason," cried he, passionately, "but because I love you, and want you to be

REGISTERED HEREFORD CATTLE.



Service Bulls; Imported Salisbury 76059 (19083), a grandson of the famous Grove 3d 2490, and a descendant of the world renowned Lord Wilton 4057 from the 4th generation.

Snowball, the dam of Salisbury, is now in the herd of His Majesty King Edward VII.

Lars, Jr., is by Lars of Western fame and his dam is Judy out of a Sir Richard 2nd cow This makes a great combination of the Grove 3d, Lord Wilton, Anxiety, Peerless Wilton and Sir Richard 2nd strains. No better breeding in the world today.

FOR SALE—Yearling bulls by above sires. WANTED—Reg. Hereford heifers, 18 to 24 months old, not bred; will exchange bulls for heifers of equal quality.

Write your needs or call and make your own selection.

MURRAY BOOCOCK, Owner, Keswick, Alb. Co., Va. KESWICK is on the C. & O. Ry., near Charlottesville, Virginia.

Bacon Hall Farm.

Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

E. M. GILLET & SON, = Glencoe, Maryland.

VIRGINIA HEREFORDS,

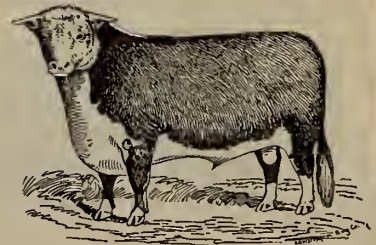
Herd headed by the Champion

PRINCE RUPERT, 79539.

Correspondence Solicited. Inspection Invited.

EDWARD G. BUTLER,

Annefield Farms. BRIGGS, Clarke Co., Va.



PRINCE RUPERT. 79,539

BARGAINS IN HEREFORDS.

To reduce our herd, we are offering a goodly number of registered bulls and heifers; not akin— at reasonable prices. (Telephone connection.)

STONEHURST FRUIT & STOCK FARM,

Fluvanna Co.

Union Mills, Va.



ROSEMONT HEREFORDS!

HEADED BY THE FAMOUS ACROBAT 68460,

Assisted by MARQUIS OF SALISBURY 16TH 138894, the best son of Imported Salisbury. Correspondence solicited. Visitors welcome.

C. E. CLAPP, Berryville, Clarke Co., Va.



ACROBAT 68460.

When corresponding with our advertisers always mention the Southern Planter.

my wife."

Emily was startled beyond the power of replying at first. It had never occurred to her to look on Allan as even a possible lover. With eloquent pleadings he continued to lay his suit before her, not forgetting to assure her that he would provide for her brother and sister, as if they were his own.

Blushing, trembling and confused, Emily hardly knew what to say, or even what to think at first, but at length she told him that while she had a warm friendship for him, she could not return the friendship he expressed.

He refused, however, to take this as a final answer, especially after drawing from her the avowal that there was no other attachment in the way, and at length she agreed to defer giving her final answer for three days. Those three days were momentous ones to them both. There were many considerations that pleaded strongly in Allan's favor. He was a man she esteemed. He had no bad habits, no ignoble traits. From a worldly point of view it was a desirable match, one which would cut short the perplexities and struggles of her existence. Then his brotherly spirit towards Walter and Alice, and his generous offer to provide for them, exerted a strong feeling of gratitude in her mind. Again, the idea of returning to her old home was a strong inducement. In short, there was everything to plead for him except one, and that was the voice of her heart—that unruly member which can neither be persuaded nor forced. She liked Allen, but with the liking any one might have for any friend, not with the sense of thorough companionship, the deep and subtle sympathy, the exquisite tenderness that a woman feels towards a man whom she loves with the strongest and deepest love in human life. Allan was not the fortunate prince who had succeeded in breaking through the thorn hedge, penetrating to the palace of the sleeping beauty and awakening her. Emily's heart was slumbering yet. She did not love Allan, and she felt that she could never accord him more than a quiet, friendly regard, and she felt that she would do him an injustice to marry him, and let him lavish his devotion on her, when she could only make so inadequate a return. On the day appointed for her final answer Allan, after a long interview with Emily, went away sadly, pain and disappointment stamped on his frank, manly face. I will anticipate the course of my narrative by telling my readers that he did not here relinquish his suit, but twice in the course of the next few years wrote and renewed his offer to Emily. As her answer, however, did not vary from her first one, he gradually settled down into a steadfast friendship for his old playmate, a fact which spoke well for them both.

It seemed Emily's fate to be always making decisions and taking steps that other people regarded as Quixotic, and the last seemed to cap the climax. With an alternate sign and

ARMOUR'S BLOOD MEAL Cures Scours in Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

PREVENTS weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

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Closely related to such noted hogs as *Anderson's Model*, *Ideal Sunshine* and *W. B. Tecumseh*.

Choice pigs, boars and bred sows. SHORTHORN bull and heifer calves. Choice stock at farmer's prices.

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J. F. DURRETTE, Birdwood, Albemarle Co., Va.

POLAND- CHINAS.



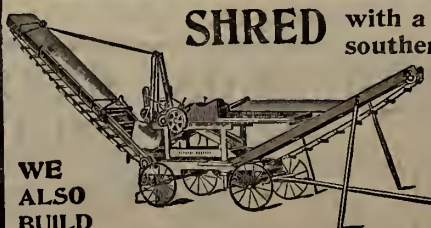
I have a limited number of pigs by my fine boars Gray's Big Chief, 57077;

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

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Hog raisers take absolutely no risk when they use Haas' Hog Remedy, as in case of loss the Remedy not only costs nothing, but I pay for all hogs that die at the highest market prices. Write for full particulars. Twenty-seven years' unprecedented success. Don't waste time and money experimenting with cheap "stock foods" which are made almost entirely of the food stuffs raised on every farm, and contain no medicinal properties whatever. The hog needs a medicine and the cheapest and most effective is Haas' Hog Remedy. Unequaled as a preventive of disease, conditioner and growth promoter and the biggest money maker for hog raisers known.

Prices: 25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; pkgs., \$2.50, \$1.25 and 50 cents each. None genuine without my signature on package or can label.

== HOG BOOK FREE ==

"HOG LOGY," my book about hogs, will be sent FREE to any one who mentions Southern Planter when asking for it. One hundred pages, fully illustrated, practical and complete. Invaluable to every swine raiser desiring the largest possible profits from hog raising.

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



TRADE MARK.

smile, Emily reflected on the coincidence of this kind that had occurred since her mother's death, and wondered if it would be always so, if whenever anything that the world called advantageous presented itself, there would be some internal barrier that forbade her to avail herself of it. These barriers seemed unreal, shadowy and fanciful to most people, but to her they were so real and strong as to be simply insurmountable.

(To be Continued.)

GOOD HOUSEKEEPING.

TO PUT UP CORN IN THE SHUCK.

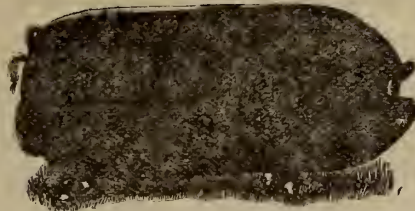
When there is danger of an early frost and you have a good supply of corn in the garden or field, a quick and easy way of preserving it for use is valuable. I have tried this one repeatedly, and with success always. Gather the ears before they are at all hard, and take off the shuck, leaving one layer to protect the grains. Pack these closely in a clean, water tight cask, until they are within a few inches of the top, then weight it all down with a piece of plank and a stone. Pour over this a brine that will float an egg, shut it up and use just as you do the new corn. If the brine weakens, you can add a little salt.

TO CAN CORN.

Cut the grains from the ears with a sharp knife, being careful to select only the soft tender ears. Weigh and put it into a kettle with enough water to cover it. Boil ten minutes and then mix into every ten pounds one ounce of tartaric acid, fill your glass jars very full and screw on the top while it is boiling hot. When you cook this take it out of the can at least two hours before you need it and cover it with fresh water, letting it soak that long; then pour off the water and use in any way that you use other kinds of canned corn. You will never lose a can if you use the acid, and it is perfectly harmless if the directions are followed.

APPLE FLOAT.

Select for this kind of float large, acid apples. Wash them and put them into a new pan with a small quantity of water, and let them bake thoroughly. Then scoop out the pulp, being careful



BERKSHIRES.

Mr. H. F. Stratton of Erin, Houston Co., Tenn., writes me on Aug. 15th 1903:

"The little pig just received is a beauty, I am delighted with him—wouldn't take twice twenty dollars for him. He is thoroughly patrician. I expect great things from him at the head of my herd of Royal Berkshires."

So send to Thos. S. White for patrician pigs rather than buy plebeians for a little less, do not be "penny wise and pound foolish," and especially in thoroughbreds. I have had 13 sows to farrow in past few days with over 20 more nearly due, order promptly for fall shipments, I never have enough to go round.

Short Horn (Durham Cattle) for sale. Write for particulars.

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

Hill Top Stock Farm.

BERKSHIRE HOGS and SOUTHDOWN SHEEP

== A Specialty. ==

S. Brown Allen, who succeeds H. A. S. Hamilton & Co in the ownership and management of this celebrated Stock Farm, with increased facilities, will make a specialty of breeding Berkshire Hogs and Southdown Sheep, without regard to cost, from the purest and most royal strains of imported blood.

SOUTHDOWN BUCKS.

I have a few Southdown Bucks that cannot be excelled in this country, for sale. We have swept premiums on this stock for fifteen years over all competitors at Fairs in this and adjoining States

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co)

We Are Still in the Business....

"HILL TOP" Stock at Shadwell, Va.

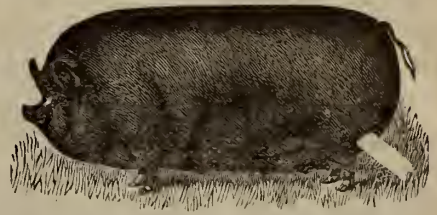
Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

Jersey Cattle, Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship after September. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.



not to carry any of the seed or core with it, and to a quart of this put one full cup of sugar, a little nutmeg and let it get very cold. Now beat very light the whites of four eggs, and have on the stove a large pan of boiling water. Slip the eggs on this and let them stay for five minutes. They will cook through without falling, and you can take them up with a skim, and beat them into the apples with no trouble, and you can make your float in the morning and it will be just as good as if made later and is far better than that made with stewed apples and raw eggs. I always serve float with cream seasoned with a teaspoon of vanilla and sweetened a very little bit.

BAKED APPLE DUMPLING.

Peel the apples and cut them from the core, then put them into a tray and chop them fine with the meat chopper, sweeten and season with nutmeg or grated lemon peel. Make a dough of one quart of flour, two-thirds of a cup of lard, one teaspoon of baking powder, and enough milk to make a stiff dough. Roll this out and cut into pieces about the size of saucer. Put in a large spoon of the apples and gather the edges of the piece together, pinching to make them stay. Arrange the dumplings in a pan and fill it half full of water, springling sugar and nutmeg over them and boil them for about an hour. Serve hot with a hard sauce.

SAUCE.—Cream one cup of butter until light, then stir in gradually three cups of white sugar, season highly with nutmeg and vanilla; beat it hard for a few minutes, and set it in the ice box.

CARAMEL PUDDING.

Two cups of damson preserves, one cup of sugar, half cup of butter. The yolks of three eggs, a little nutmeg, half cup of milk, and a teaspoon of corn starch. Beat the eggs very light and stir in the other ingredients. Bake this on a crust, and when done spread over it a meringue made with the three whites and six tablespoons of sugar, seasoned with vanilla.

GINGER CAKE.

Two and a half cups of sugar. Two and a half cups of syrup—molasses will do. Five eggs, beaten into the molasses. One and three-fourths cups of butter, or half butter and half lard. Five tablespoons of ginger, one of cinnamon. Two and a half cups of buttermilk, with two and a half teaspoons of soda stirred into it. Ten cups of flour. Bake in sheets, and it is well to set one pan into another to prevent burning, as everything with molasses in it burns easily. Eat hot with sauce, or let it get cold for tea.

GINGER SAUCE.

Three cups of sugar, three cups of water, boil hard for twenty minutes. One tablespoon of ginger and teaspoon of cinnamon and a half dozen cloves. Cream a large tablespoon of butter with a tablespoon of corn starch, and

JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs.** of milk per day. Also—

LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

BOWMONT FARMS, SALEM, VIRGINIA.

CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.

SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

Baron Roseboy, 57666, by the great Gay Blackbird, dam by Eulalies Eric, 2d prize yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing of good or bad qualities through several generations. The animals comprising this herd are direct descendants of the greatest prize-winners of the breed for the past twenty-five years. Does this mean anything to you, who are interested in an animal of this the **GREATEST BEEF BREED**? If so, come and see the best lot of calves we ever bred, or write.

A. L. FRENCH, Proprietor, R. F. D. 2, Byrdville, Va.

(Note change of P. O. address),

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y, 24 miles southwest of Danville, 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.



THE OAKS

Has for sale, the grand Shorthorn bull, "ROCK HILL ABBOTTSBURN" 155113, a grandson of Mary Abbottsburn 7th; also a nice lot of CALVES, BULLS and HEIFERS; 2 Reg. MORGAN COLTS at a bargain.

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Southern Planter.

stir it into the sauce just before you take it off. This is one of the best cold day desserts I know of.

CARAVEN.

DOMESTIC RECIPES.

Mrs. N. K. Guthrie.

PICKLES—HYDEN SALAD.

One gallon chopped cabbage, half gallon of green tomatoes, one quart of onions, chopped, four tablespoons of ground mustard, two of salt, two of cinnamon, two of celery seed, and one of black pepper, and one of cloves. Add half gallon good cider vinegar and two pounds sugar, and boil for half an hour.

TO CAN GREEN CORN.

Gather corn as for present use. Cut from cob, and to every thirteen measures of corn add same measure of salt (one cup of salt to 13 cups of corn). Cover with water and boil thirty minutes and can as any other vegetable or fruit. When you wish to use the corn, pour off salt water that may be in can and soak corn one-half an hour in hot water, and then serve as you would in summer, for puddings, soup, stews, etc. This recipe for canning corn is the only one that I have found satisfactory, and I have tried many in the past thirty years.

PICKLED PEPPERS.

Take green peppers and cut a slit the length of one side and remove all the seeds. Soak in salt water for a week, remove and wash in fresh water and fill with a mixtures of chopped stuff, as follows: Cabbage, green tomatoes, string beans, young cucumbers, and season the stuffing with cloves, cinnamon and celery seed, and sew up the slit. Cover with good vinegar and cook for twenty-five or thirty minutes.

PICKLED MANGOES.

Take young canteloupes (just before frost) about the size of a pint bowl, cut out a lobe and remove all seeds and soak in salt water for six weeks. Then freshen for one night in water and fill with the following mixture: One race of ginger mashed, white mustard seed, celery seed, small quantity of black pepper, one nutmeg grated, onions and cabbage chopped fine. Stuff each melon, put the lobes in place, and tie with a string. Place in a jar and fill with vinegar, then pour off vinegar and add to vinegar cracked allspice, cloves and ginger, and one cup of grated horse radish and one ounce turmeric and two pounds sugar. Bring to a boil and pour over mangoes. For one gallon jar. The cataloupe pickle will keep for years, and grows better with age. I make beautiful and delightful wine from garden and wild grapes, but recipes may not be in season. One I add for apple wine that is fine. To one gallon of sweet cider add three pounds of sugar. Put in open vessel and allow to ferment, then strain and put in a corked vessel (jugs or bottles, and in three months you have a splendid drink.

This cut is not the machine but simply shows the manner of fastening the steel rope to the stump. We cannot tell you all about it here. Our catalogue shows Full Line of Stump Pullers testimonials, prices, etc. It will surprise and interest you.



PULLS Yellow Pine Stumps or Trees.

Our new 2-Horse

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is built for that purpose and does it rapidly and cheaply. A machine that will pull yellow pine stumps will pull almost anything else. It is being used by many planters and most of the leading R. R. and levee contractors. It has 3 times the power of our machines for ordinary work and pulls 8 acres at a setting. **Milne Mfg. Co.,** 834 Eighth St., Monmouth, Ill.

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BERKSHIRE PIGS

of choice breeding, and to make them more desirable, they are fine individuals, properly fed; therefore they develop well. Write

Forest Home Farm,
Purcellville, - - Virginia.

NOW IS THE TIME to buy HOLSTEINS from the Ury Farm Herd.

Ury Alwina Count Paul De Kol; De Kol 2nd Butter Boy 3rd No. 2, and Lord Harford De Kol head our herd. You know their official backing. There is nothing better. 15 bull calves at bargain prices. Their dams are of the De Kol, Aaggie, Netherland, Pietertje and Clothide strains and are of the producing kind. The best bulls are sold young; also a few cows and helpers. Choice ENGLISH BERKSHIRE pigs of the best strains. Before buying, correspond with or visit

THOS. FASSITT & SONS, Sylmar, Md.

Prof. JOHN SPENCER, Veterinarian, Virginia Agricultural Experiment Station, says:

Chloro-Naphtholeum Dip

"Insures the Destructions of Mites. Outbreaks which have come under our notice have been thoroughly stamped out by dipping in a 2 per cent solution of Chloro Naphtholeum Dip." If you've tried it you know how good it is, if you haven't, try it now. One Gallon sent prepaid upon receipt of \$1.50, money order or check. Booklet free. It can make money for you. **F. V. GUNN & CO.,** Richmond, Va., Agts. Va. & N. C. ● **The WEST DISINFECTING CO., Inc.,** Mfrs.

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.**

IT STANDS FOR BIG CROPS.

For uniform drilling of grains, any kind and any amount per acre for grass seed sowing and even distribution of lumpy, damp or dry fertilizers, nothing equals the

SPANGLER Low-Down Drill

Grain and Fertilizer. Positive force feed for fertilizer, grain and grass seed. Drills any depth, perfect regulation, low steel or wood frame, high wheels with broad tires. Easy to fill and operate. Light draft. Investigate before buying. Write for free catalogue.

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THE "WE" THAT WINS.

A young man employed in a responsible position by a great corporation was recently discharged to make room for another. Surprised and mortified, he sought an explanation from the manager of his department. "Will you kindly tell me why you do not want me any longer?" he asked.

"Certainly," was the reply; "it is because you always said 'you' instead of 'we.'"

"What do you mean?"

"I mean just that! You never said, 'We' should do so and so; or 'WE' ought to follow out such-and-such a policy. It was always 'YOU' in referring to this company, of which you were a part. In speaking to a fellow-employee about our business, you would say 'THEY' (meaning this company), instead of 'WE.' This lack of a live personal interest in the success of the concern was expressed in your actions, no less than by your words. I should advise you to seek employment with some company to which you can refer as 'WE.'"

A common criticism of an ambitious young man is: "He acts as if he owned the concern, and he's only a clerk." It is the young man who works as if he did own the concern who often becomes the owner in time.

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But it is necessary to think WE and act WE every hour of every day, as well as to say WE. WE means US, union, solidity, co-operative enthusiasm. YOU means the other fellows. It's the WE that wins!

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No more courteous judge ever presided at a trial than the venerable Chief Justice of the New York Court of Common Pleas, Charles P. Daly. The story is still told among our New York lawyers how, on one occasion, a young attorney, while trying a case, indulged in considerable vituperation of his opponent's witnesses, finally going so far as to answer the court very sharply when requested to modify his language.

Knowing that Judge Daly was somewhat of a stickler for the dignity of the judiciary, lawyers and court attendants gazed at the offending attorney in amazement.

There was a long interval of silence. Finally the judge leaned over the bench and said, with an ironical smile:

"My young friend, before you are as old as I am you will have learned that it is about as well to read Chesterfield as Blackstone."—*Success.*

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MENTION THIS JOURNAL.

This Cut 

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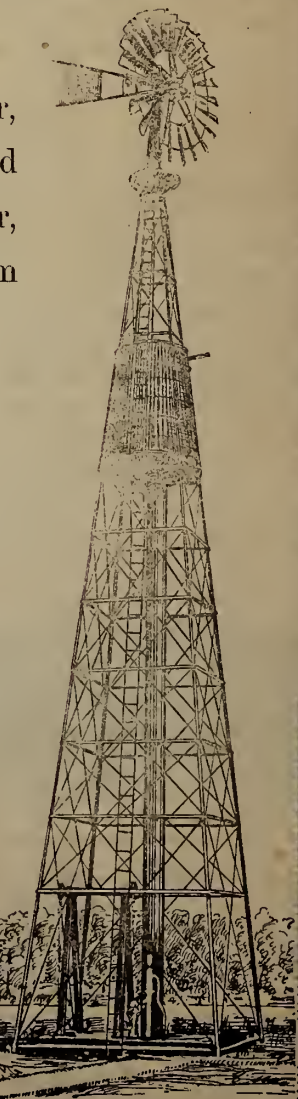


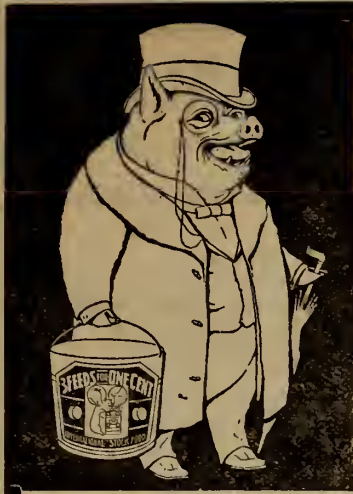
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International Stock Food Co., Minneapolis, Minn.

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Yours truly, M. C. JERBY.

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We own "International Stock Food Farm," which is located 12 miles from Minneapolis and contains 650 acres. We feed "International Stock Food" every day to all of our World Champion Stallions, Dan Patch 1:59 1/2, and Dan Patch 2:05 1/2 to our Young Stallions, Brood Mares, Colts, Work Horses, Cattle and Hogs. "INTERNATIONAL STOCK FOOD" FEEDS FOR ONE CENT is Prepared from Roots, Herbs, Seeds, and Barks and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fattening stock because it increases the appetite and Aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Colts, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your Own food at every meal. Salt is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary

an addition to the regular food of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your Own food at every meal. Salt is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary

WHAT PEOPLE SAY ABOUT THIS BOOK.

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EAU CLAIRE, WIS.

Dear Sirs:—I received your "International Stock Book" and was more than pleased with it. It is worth more than \$10.00 to me.

Very truly yours,
RICHARD J. MORRISSEY.

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Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish.

Respectfully,
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IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

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THE REAL THING.

Virginia Rosamond Josephine, our pretty colored maid from the South, is the proud possessor of a rhinestone belt buckle which her mistress brought her home from Paris not long since. Teddy asked her the other day: "Are they real diamonds, 'Ginny?" "No, indeedy," she replied, with a toss of her woolly pompadour. "Dey's real grindstones. Missy fetched 'em to me from Paradise!"—October Lippincott's.

SOME PROVERBS.

Without sterling honesty of purpose, life is a sham.
When thinking of your future never use "if," use "when."
Fortune favors the brave.
Tact and diplomacy is the oil of civilization.
Early to bed, early to rise, makes a man healthy, wealthy and wise.
Solitude is the nurse of wisdom.
He that will thrive must rise at five, he that hath thriven may lie till seven.

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;

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FORMS THE MOST DIRECT ROUTE.

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The largest geyser in the world is the Excelsior Geyser, in Yellowstone Park. Its basin is full of boiling water, from which clouds of steam are constantly ascending. At long intervals water is spouted into the air to a height of from 50 to 300 feet.

The largest crater in the world is that of Haleakala, in the Sandwich Islands. The circumference of the crater is about 20 miles; its depth, in places, being 2,000 feet. If the interior were cleared of its debris, New York city could be placed on the black lava floor, and from three to five other big cities put over it before their spires would protrude at the top.

The most magnificent work of architecture is deemed to be the palace Temple of Karnak, occupying an area of nine acres, or twice that of St. Peter's at Rome. The temple space is a poet's dream of gigantic columns, beautiful courts and wondrous avenues of sphinxes.

The largest library in the world is the National Library of Paris, which contains 40 miles of shelves, holding 1,400,000 books. There are also 175,000 manuscripts, 300,000 maps and charts, and 150,000 coins and medals.

The finest gardens in the world are the Royal Gardens at Kew, England. They cover an area of about 270 acres, and are visited by about 1,500,000 persons a year. The gardens contain the finest collection of exotic plants in the world, a palm house, a winter garden, a museum, an observatory, and a school for gardeners.

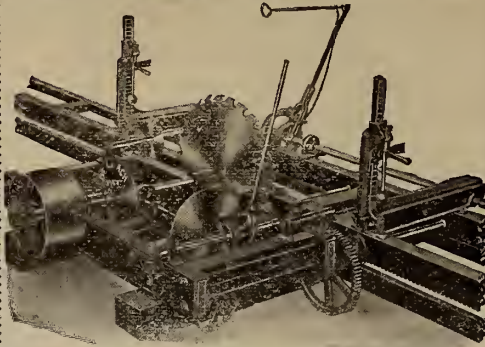
The largest cask in the world is the Blatner Cask of Nuremberg. It is 105 feet in diameter and 51 feet deep, and its completion a few years ago was celebrated by a ball, at which over 500 persons were on the floor of the cask, excluding musicians, waiters and assistants.

The reporter was interviewing the Western millionaire. "Is it true that you are going to endow a chair in that university?" "Endow a chair?" he thundered: "why, b'gosh, I can give a whole set o' furniture, an' I'll do it, too. Say that in your paper! There ain't nothing cheap about me."

"Jenkins is an artist in his line." "So?" "Yes; he drew a glass of beer so natural that a patron came in and drank it." "Well, who is Jenkins, anyway?" "Well, he's a bartender, of course."

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Big Ones and Little Ones!**

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OVER 10,000 DELOACH PATENT SAW MILLS IN USE.



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will interest you. It illustrates and tells all about the famous DeLoach Patent Variable Friction Feed Saw Mills, Shingle Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Bolters, Cord Wood and Drag Saws, Corn and Buhr Mills, Water Wheels, Mill Gearing, Pulleys, Shafting, Etc.

Please mention the SOUTHERN PLANTER when writing us. We will appreciate it.

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You can scrape the mail out with your mittens on. **PRICE**
A square box is bothersome. **\$1.00.**



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FINE HOLSTEIN BULL, 3 years old, eligible to registry, for sale. \$40.

ONE GRADE HEREFORD COW, with first calf, sired by registered Hereford bull. \$40.

ONE GRADE HEREFORD HEIFER, crossed on Shorthorn, a model of beauty. \$40. Address

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PIGS, entitled to registration. Some ready for service. Also grade Herefords, both sexes, for sale at farmer's prices, by

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Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❄ ❄ ❄

GOLDEN LAD'S SUCCESSOR. First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

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Is now booking orders for Eggs from the best strains and careful matings of

Barred, Buff and White Plymouth Rocks,

Silver=Laced and White Wyandottes,

S. C. B. Leghorns and Mammoth Pekin Ducks,

AT \$1.00 PER SITTING.

EGGS FROM BLACK DEVIL PIT GAMES.

Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

P. H. HEYDENREICH, - Staunton, Va.

DOMESTIC ECONOMY.

To remove blood stains, use clear, cold water at first, then soap and water.

It is just the right thing to have an embroidered bag to put one's night dress in.

Use a pancake lifter to place cookies on the tin, and to remove them when they are baked.

Cold boiled potatoes are more appetizing if a little flour is sprinkled over them while frying.

If your washtub leaks, turn the bottom side up and fill the leaky place with good hard soap.

When making soups or broths, put the meat or bones into cold water to draw out the juices.

Leather goods can be freshed up by rubbing them well with a piece of cloth dipped in the white of an egg.

To keep irons from sticking to starched pieces, lay a little fine salt on a flat surface and rub them well over it.

When acid of any kind gets on clothing, spirits of ammonia will kill it. Chloroform applied will restore the color.

To remove grass stains, allow the spots to remain saturated with alcohol for a little time, then wash in clear water.

When darning woollen hose, make the threads one way of stout thread, with the cross threads of woollen yarn. The result is a firm, smooth darn, which looks and wears well.

To remove fresh tea and coffee stains place the stained linen over a large bowl and pour through it boiling water from the tea kettle, held at a height to ensure force.

Paint spots on glass can be removed by moistening with a strong solution of soda—the common kitchen variety. This will soften them, when they can be rubbed off, and the glass should then be rubbed with alcohol.

To prevent wooden bowls from cracking, immerse them in cold water, then set over the fire, bring to the boiling point, and let boil for an hour, and don't take them out until the water has gradually cooled.

A soothing drink for a sore throat that is recommended, is made of a pint of barley water brought to a boil over a hot fire, to which is added, while stirring until dissolved, one ounce of the best gum arabic. Sweeten to taste.

To clean the ivory handles of knives, mix ammonia and olive oil in equal parts, and add enough prepared chalk to make a paste. Rub the ivory with this, and let it dry before brushing off. Several applications may be necessary.

Your money back

if you are not satisfied

DO YOU SUPPOSE that a company with a capital of \$500,000.00, paid in full, and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter?

DO YOU SUPPOSE we would jeopardize our standing with the public and our chances of still greater success by failing to fulfil any promise we make?

DO YOU SUPPOSE we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

WE KNOW we can please you and save you money, for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

Direct from our distillery to **YOU**
Saves Dealers' Profits! Prevents Adulteration!

HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

4 FULL \$3.20 EXPRESS
QUARTS 3.20 PREPAID

We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? 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.

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ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.
156 DISTILLERY, TROY, O. ESTABLISHED 1866.

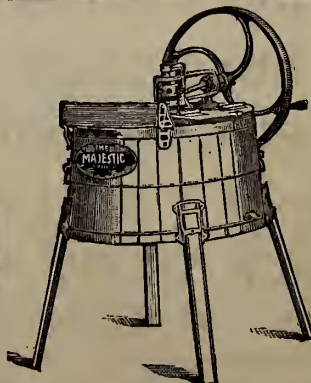


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THE MAJESTIC ROTARY WASHER

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of wood-ware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

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LIGHTNING HAY PRESSES WILL BALE MORE HAY IN LESS TIME, MAKE SMOOTHER AND MORE COMPACT BALES, AND ARE EASIER DRAFT.

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Read carefully below our low prices on best Groceries, Feed and Liquors.

SPECIAL ATTENTION GIVEN TO OUT OF TOWN ORDERS.

Levering Coffee, per lb.....	9½	Fresh Mixed Cakes, per lb.....	8	CHOICE WINES AND LIQUORS.		
Granulated Sugar, per lb.....	5	6 bars Colgate's Octagon Soap....	25	Moore's Crown, fine, per gal.....	\$3.00	
Light Brown Sugar, per lb.....	4½	7 bars Octagon Shape Soap, 10-oz.	25	Moore's Excelsior, fine, per gal....	2.00	
Lion Coffee, per lb., Daisy	10	cakes for.....	25	Moore's Keystone, 3 years old, per	gal.	2.50
Arbuckle's Coffee, per lb.....	9½	10 bars Moon Soap, 8-ounce cakes.	25	Moore's Old Capital, 2 years old,	per gal.	1.50
Best Green Tea, per lb.....	75	12 bars Hustler Soap, 8-oz cakes..	25	Pure Va. Apple Brandy, gallon...	3.00	
Choice Green Tea, per lb.....	60	Small California Hams, per lb....	9	Maryland Apple Brandy, gallon..	2.25	
Good Green Tea, per lb.....	40 & 50	Good Salmon, can, 9c.; 3 cans....	25	Imported Sherry Wine, gallon ..	3.00	
Black Tea, Best, per lb.....	50	Large Mackerel, each.....	10	Good Gin, per gallon.....	2.00	
Good Black Tea, per lb.....	40	Large cans Good Tomatoes, can..	8	Best Gin, gallon.....	2.50	
Mixed Tea, per lb.....	30, 40 & 50	Large cans Best Tomatoes, can...	9	Best N. C. Corn Whiskey, per gal..	2.00	
Fair Black Tea, per lb.....	25	2 lb. cans Best Tomatoes, can....	6	Best Catawba, per gallon.....	45	
Best Rice, per lb.....	8	Large Juicy Lemons, dozen.....	15	Blackberry Wine, per gallon.....	45	
Good Rice, per lb.....	5	Green Coffee, per lb., 9c.; 3 lbs....	25	Good Port or Sherry Wine, gallon.	1.00	
Pure Leaf Lard, per lb.....	11	Quart Mason Jars of Light Syrup.	10	New England Rum, per gallon....	2.00	
Good Lard, 9c., or 3 lbs.....	25	½ gallon Can Light Syrup.....	20	7 year old Pure Rye, 1896, Good	Hyspire Brand, per gallon.....	3.50
Cooked Sliced Ham, per lb.....	12½	1 gallon can Light Syrup.....	40	Duffy's Malt Whiskey, per bottle,	80c.; per dozen	9.00
Good Salt Pork, per lb.....	8	½ bbl. Clipped Herrings.....	2.75	O'Grady's Malt Whiskey, per bottle,	80c.; per dozen.....	9.00
Choice Salt Pork, per lb.....	10	200 pound sack salt, per sack....	85	McDermott's Malt Whiskey, per	bottle, 80c.; per dozen.....	9.00
Best Salt Pork, per lb.....	12	100 pound sack salt, per sack....	45	Pure Scotch Whiskey, User Brand,	per quart	1.15
Best Potted Ham and Tongue, can.	4	Best Full Cream Cheese, per lb..	15	Pure Fulcher Mountain Whiskey,	per quart	1.15
½ lb. can Chipped Beef.....	10	Lump Starch, per lb.....	4	Pure Savage Mountain Whiskey,	4 years old, very fine, gallon...	3.00
New N. C. Cut Herrings, dozen,	10c., or, per bbl.....	Best Water Ground Meal, per peck,	20c.; per bushel	Wilson Whiskey, \$1 bottle; per	dozen,	11.50
10c., or, per bbl.....	4.25	Best Ship Stuff, per 100, \$1.20; ton.	23.00	With 1 dozen one-half pints free in	case.	
New N. C. Roe Herrings, dozen,	18c., or, per bbl., \$5; or ½ bbl.	Best Bran or Brown Stuff, per 100.	1.10	3 year old pure Blackberry Wine,	per gallon	1.00
18c., or, per bbl., \$5; or ½ bbl.	2.75	Best Mixed Oats, per bushel....	48	Jas. E. Pepper Whiskey, bottle...	1.00	
Our Pride of Richmond Flour, best	patent, per bbl.....	Cotton Seed Hulls.....	9.50			
patent, per bbl.....	4.75	Best No. 1 Timothy Hay, per ton..	17.00			
Our Daisy Flour, good patent, per	bbl.	Porto Rico Molasses, per gallon..	35			
bbl.	4.25	New Orleans Molasses, per gallon.	50			
Our Excelsior Flour, good family,	per bbl.	Good Dark Molasses, per gallon..	20			
per bbl.	3.75	Maple Syrup, ½ pint.....	10			
Fresh Soda Crackers, per lb.....	5	3 plugs of any 10c. Tobacco for 25c.,	such as Peach, Plum, Grape, Reynold's			
Ginger Snaps, per lb.....	5	such as Peach, Plum, Grape, Reynold's	Sun Cured and other brands.			
New Mixed Nuts, per lb.....	12½					
Cocoanuts, 5c.; or, per 100.....	3.50					

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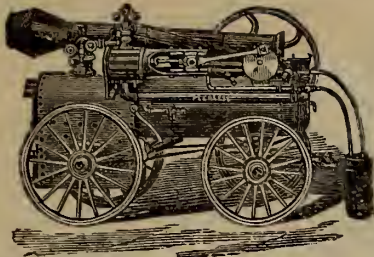
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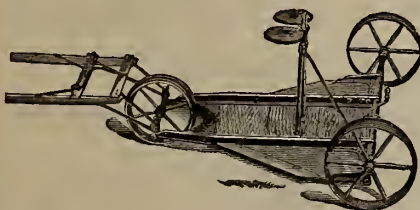
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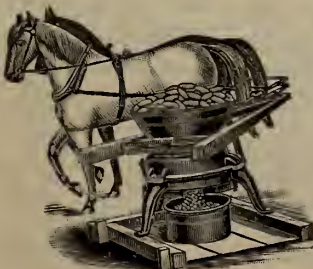
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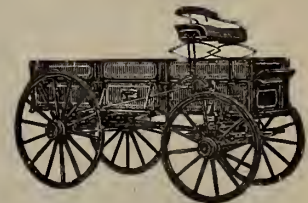
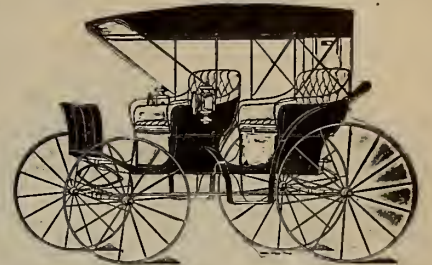
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Times-Dispatch, Richmond, Va.....	1 00	1 25
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| Apples, | Nectarines, | Pecans, | Ornamental and |
| Pears, | Cherry, | Chestnuts, | Shade Trees, |
| Peach, | Quinces, | Walnuts, | Evergreens, |
| Plum, | Almonds, | Small Fruits, | Roses, Etc. |
| Apricots, | | | |

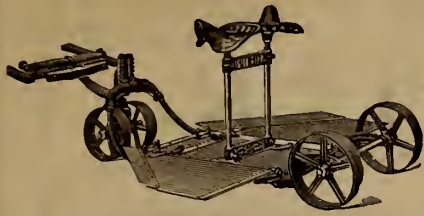
CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

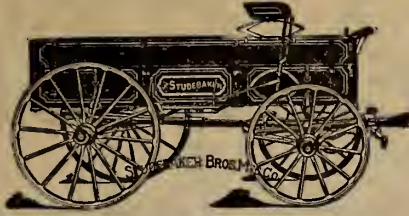
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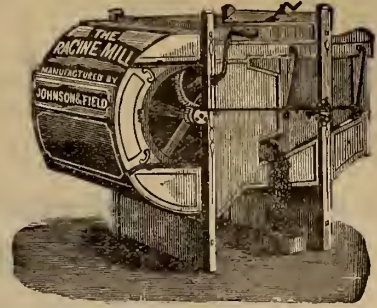
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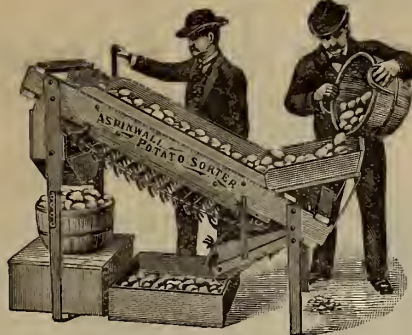
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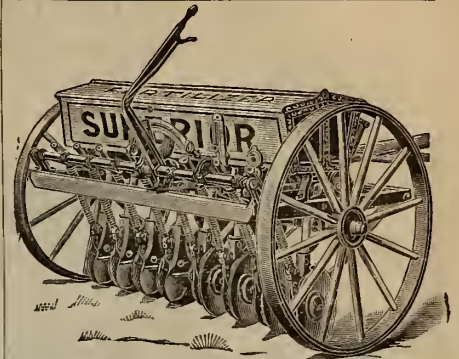
The Lyons Improved Fanning Mill.



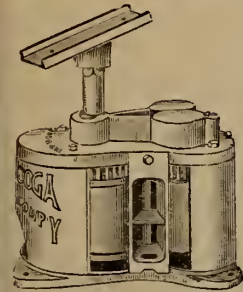
ROSS
Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



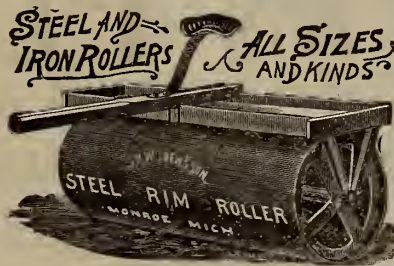
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Evaporators.
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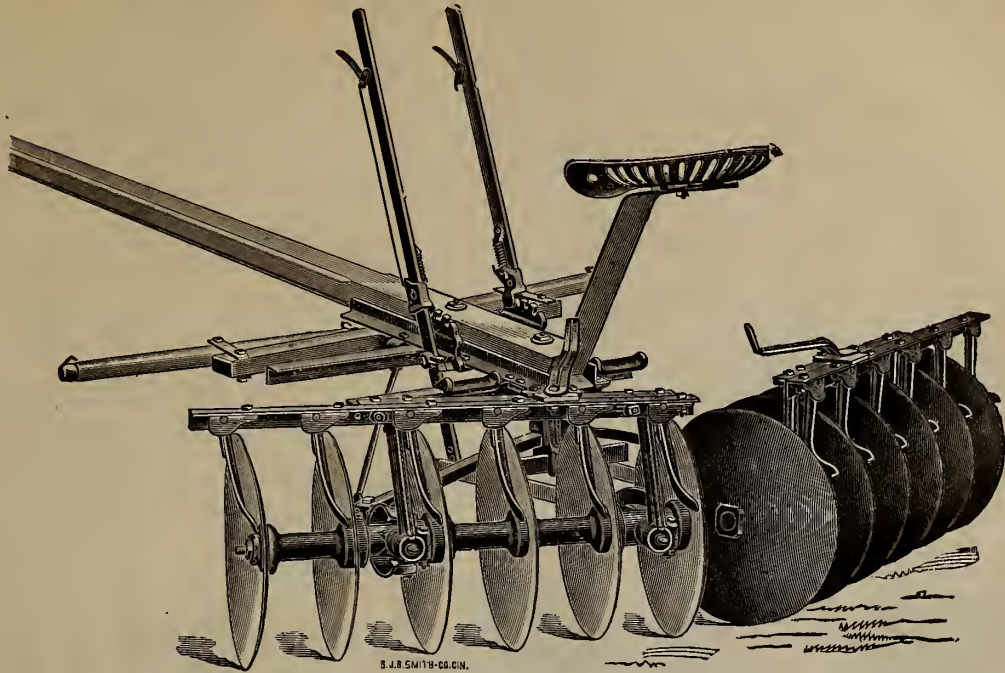
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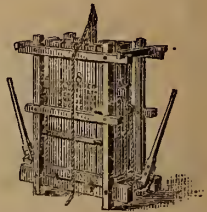
MANFRED CALL,
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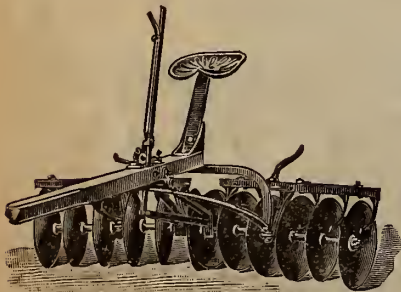
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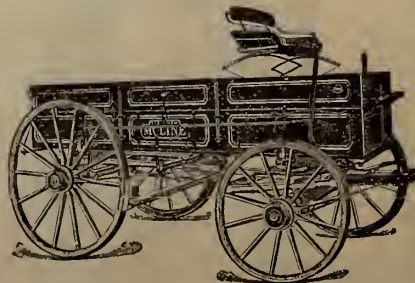
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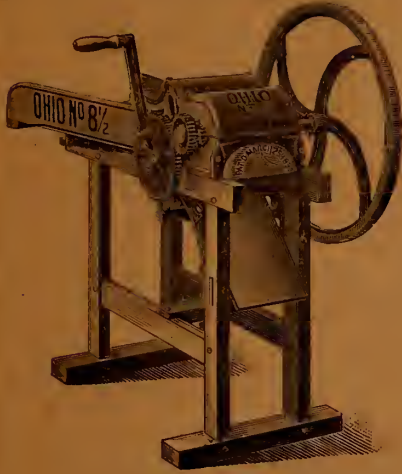
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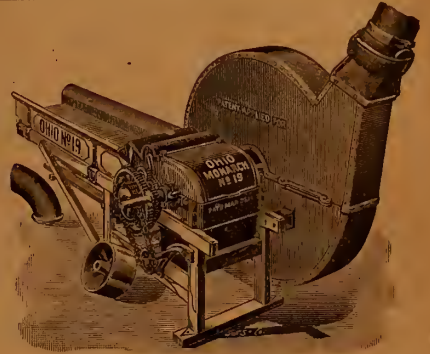
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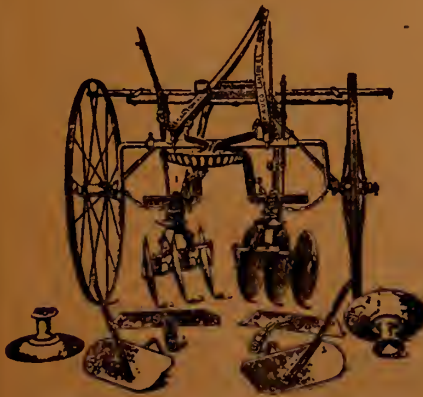
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