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DEVOTED TO

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

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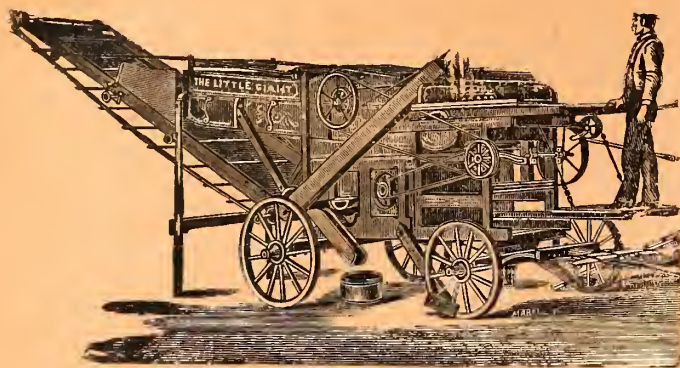
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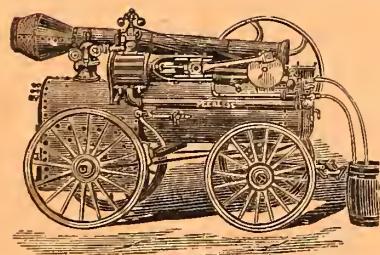
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LITTLE GIANT and
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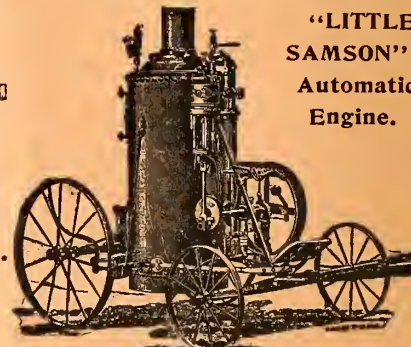
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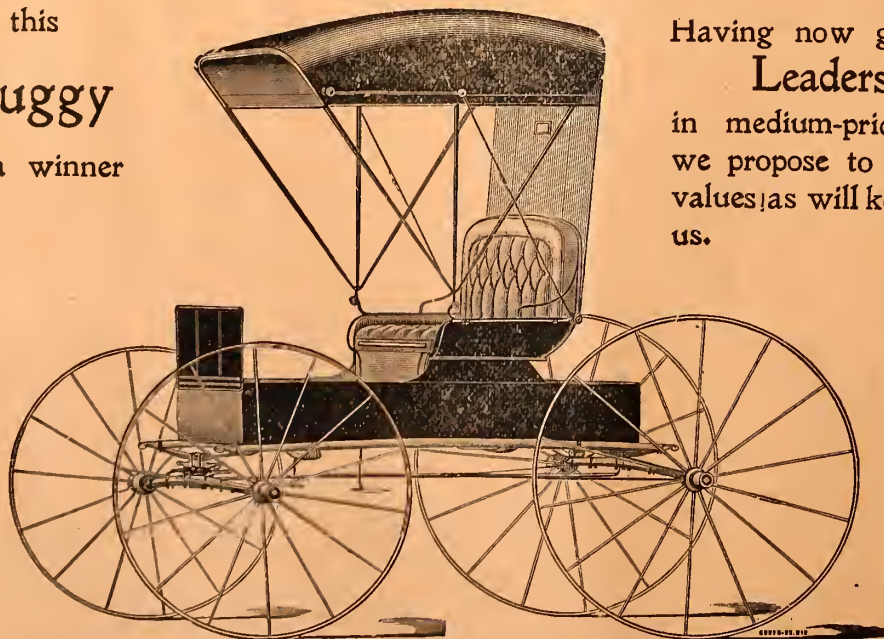
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

65th Year.

Richmond, August, 1904.

No. 8.

Farm Management.

WORK FOR THE MONTH.

During July, up to this writing (20th of the month) we have had much more seasonable weather than was the case in the preceding months. The average temperature has been nearer the normal, and whilst we still lack much rainfall to make up the usual average for the State, yet there have been heavy thunder showers over nearly every section of the State, and these, though not sufficient in many parts to make good previous damage to crops, yet have helped very materially. What is needed now is a good general rain and then crop conditions would not fall far short of an average.

Winter wheat harvest has been completed now all through the country except in the extreme Northwest. Much damage has been done to grain in shock in several of the leading producing States, and no doubt the already deficient crop has been still further reduced. We see no reason to alter our opinion, that the total wheat crop will be at least 100,000,000 bushels less than that of last year, even though the spring wheat crop should realize the best that is expected of it. We notice that Mr. Hill, the president of the Northern Pacific Railroad, who is recognized as an authority on this subject, as it is his business to provide for the transportation of the crop from the North and West, confirms our opinion on the yield. He says that he does not expect the crop to exceed 600,000,000 bushels, which is even less than our estimate. We have reports as to many crops threshed out in this State. They confirm our estimate as to quantity. The quality, however, is in excess of the

average. We see no reason why farmers should be in a hurry to market the crop. There is going to be a strong demand for it later.

The oat crop promises a better yield than looked at one time possible. Whilst winter oats have been a comparative failure, the spring grown crop on account of the long continued cool weather has done better than usual.

The corn crop is very varied in promise throughout the South. There is an increase of about 2 per cent. in the area planted, and in this increase all the South Atlantic States participate. The condition is nearly up to the ten year average, and considerably in excess of that of last year. We are afraid, however, that the crop is being injured by the excessive heat and lack of moisture at the time of this writing. We have had a number of parties in complaining of the "rolling of the blades"—during the last few days. Wherever cultivation has been at all neglected this is sure to be the case, as there is a serious lack of moisture in the ground.

The tobacco crop is making good progress in most sections, but, like corn, needs rain. This crop will be materially smaller than for some years past. There is a reduction in the area planted throughout the country of nearly 25 per cent. The only increase noted is in the uncured section.

The cotton crop planted is a large one, considerably in excess of that of last year, and is making good

progress. There is every indication that the yield will be large, but we do not anticipate that this will cause the price to fall very seriously, as there is no surplus crop carried over, and the demand will be active for the new crop. Planters should arrange to market judiciously, not rushing the crop on the market, but supplying the staple as consumption and not speculation calls for it.

The hay crop has been rather short in most sections, the weather having been too dry and cold for it. There is promise, however, for a good second crop, where the rains have been frequent. This crop will, however, be largely supplemented by forage crops which have been planted in greater area than ever before. We have had almost constant enquiry as to these crops from sections from which we never before heard on the subject. Sorghum, sorghum and peas, cow peas, soy beans and millet have been widely planted over the South, and the reports we hear from these crops is very encouraging. When once farmers realize what an immense amount of stock feed can be raised in this way at little cost, and that when judiciously fed so as to combine the carbohydrate and protein crops in the ration, stock of all kinds can be carried through a long winter not only without loss, but with a constant increase in value, and at the same time make a large manure heap, which will obviate the necessity for buying fertilizer, there will be no need for us to urge this subject on the attention of our subscribers. It is not even yet too late to sow sorghum or sorghum and peas or millet for hay. We have known excellent crops of these to be made from seed sown in August. Of course, crops planted so late as August cannot make so large a yield as those planted earlier, and they require more care and patience in curing them, but where there is likely to be a deficiency in feed for stock during winter no hesitation should be made in sowing this month.

The apple crop is likely to be a comparative failure. The fruit set badly, and much of that set has since dropped. There is a fair crop of peaches on the higher mountains, but in the valleys there are none.

Live stock of all kinds is in good health throughout the South, and has generally done well, as is usually the case in a dry summer. The grass is more nourishing than when forced into lush growth by constant rain, and it stays in the animals better. There is, and is likely to be, a good demand for fat stock on the local and Northern markets, as the strike

of the packing hands in the West has stopped the killing of stock there to a very great extent. At this writing there does not appear to be an early prospect of a settlement of the strike, and Eastern and Southern markets will have to provide for their own wants.

The work of harvesting the spring sown forage crops should have attention as they become ready. If intended to be made into hay, the proper time to cut the crop is when just coming into bloom, or in the case of peas, when the first formed pods are turning yellow. At this time the stalk and leaves are fullest of nutriment and will cure into the most palatable hay. Of course, where the crops have been grown for the seed as well as the forage they must be allowed to stand until the seed forms and nearly becomes ripe. In this issue will be found two articles dealing with the much debated question as to how best to cure pea vine hay. We can commend both plans from personal experience. Practically they are what we have always advised—viz., to cure the crop like a heavy clover crop. Sorghum and sorghum and peas hay should be cut and allowed to lie as cut for twenty-four hours, and then be put into windrow or small cocks to cure out. Sorghum alone when grown for the forage and seed should be cut off at the root like corn, and be allowed to lie on the ground for several days to partially cure, and then be set up in shocks like corn. Sorghum is not easily spoiled by the weather, and therefore may remain in the shocks without fear of loss until convenient to house the same. Indeed, many large growers say that it makes more palatable feed and is more cleanly eaten by stock if always fed from the shocks all winter. The stalks are sweeter and more succulent than when stored in the barn.

Soy beans for hay should be cut when the first pods are beginning to ripen, and be cured like pea vine hay. When grown for seed the stalks should be tied in bundles and be set up in shocks to cure, and should be handled as little as possible, and then only when damp with dew, as the seed shells out badly in dry, hot weather. Hogs should be turned into a soy bean field after the crop is housed to glean the shattered seed.

Millet should be cut when in bloom or just in advance of blooming, and it then makes a good hay, which can safely be fed to either horses or cattle. If the seed is allowed to form it is not a safe hay to feed to horses. Some can eat it with impunity, whilst in others it affects the kidneys seriously.

When cut before the seed forms it makes better hay, and does not draw on the land so heavily.

The corn for filling the silo will also by the end of the month be ready for cutting. Do not, however, be in too great a hurry to cut. Much of the silage about which we hear complaints as to its sourness and want of nutritiveness is the result of cutting the corn too early. It should be allowed to stand until the ears are beginning to glaze and the stalks have lost much of the water, which are a characteristic of immature growth. It will still have enough moisture in it to ensure that the bulk when packed in the silo will heat sufficiently and pack closely enough to exclude all air. In this condition it will make sweet, nutritive silage. When filling the silo see to it that the sides and corners of the silo are kept well filled and tramped solid, and that the ears of corn are thrown from under the carrier or blower, where they naturally accumulate, equally on the whole surface of the silo, so that the feed shall be equally good all through. When the silo is full, or the crop is all in, then cover with a foot of marsh hay or cut straw or cotton seed hulls and water this cover freely. It will fill with mould in a few days and effectually seal and preserve the silage.

The seeding of forage crops for winter and spring grazing and for cutting for green feed in the spring and for early hay, and, more important still, for making a cover for the land during the winter and preserving and improving its fertility, should have attention. This month and September are the best months for seeding crimson clover and hairy vetch, the two first crops to be sown. English vetch and rye may be sown up to the end of November, commencing in September or October. In our last issue we published several articles on crimson clover growing, and refer our readers to them. We strongly advise that the whole crop of crimson clover should not be all seeded at one time. It is a plant easily killed by the hot sun when just starting growth, and many good stands are lost in this way every year. If, however, part be seeded at one time, other part a week later, and still more another week later, some is sure to stand, and a crop be secured. When seeding crimson clover and the vetches always seed with them a mixture of wheat, oats and rye, say from 10 to 15 pounds of the clover seed or 20 pounds of vetch seed per acre, with three-quarters of a bushel of wheat, oats and rye mixed in equal parts. This will ensure a crop, and make better grazing and feed than either sown alone.

August and September are the two best months in the year for seeding clover and grass in the South. Let this matter have early attention. We need to grow thousands of tons more of hay every year to meet our requirements. From recent statistics, which we have seen, it seems probable that we now in the State of Virginia alone import not less than from 750 to 1,000 cars of Western and Northern hay each year. What the whole of the Southern States import we are unable to say, but it must be an immense quantity. Every pound of this can be grown profitably at home, and ought to be. We are hoping to see such attention given to the alfalfa crop, about which we published much matter in our last issue, and as to which crop there are several very encouraging articles in this issue, that very much of this deficiency shall be made good from this source alone. Alfalfa hay is the most nutritious dry feed that can be grown for all kinds of stock, and the possible yield per acre is so large that every effort should be made to secure a stand and an increased acreage each year. August and September is the time when alfalfa seed should be sown, and preparation of the land cannot begin too soon. All the clover and grass crops require land in a good state of fertility to ensure a stand, and, more important still, they require that the preparation of the seed bed should be the best. Plow deeply and harrow and roll and reharrow and roll until the land is as fine as a garden bed before thinking of sowing a seed. An application of lime is also very essential especially for the clovers, which will not grow in a soil at all acid. In our last issue we published an article from Mr. Clarke, probably the most successful hay grower in the country, in which he gives particulars of the fertilizers which he uses to secure his great yields, and to this we refer our readers for information on this point. We may say, however, that we should not advise the use in the South of so large a percentage of nitrate of soda in the fall as he applies, but should reserve this until spring, and then apply it as a top dressing. The bone meal and potash can safely, and ought to be, worked into the land before seeding. Our own experience has convinced us that for good, permanent results in grass growing bone meal cannot be surpassed as a fertilizer. Anywhere from 300 to 600 pounds to the acre ought to be applied, and the more the greater the profit in the long run. We again repeat what we have so often said, *grow grass and clover alone and not with a grain crop*. Seed heavily. We would never sow less than 2 bushels of grass seed to the acre, from 10 to 15 pounds of clover seed, and 20 pounds of alfalfa. In seeding for a meadow select two or three varieties

of grass like orchard grass, tall meadow oat grass and herds grass, which mature at the same time. For a pasture mix a larger number of varieties which mature at different seasons, so as to ensure grazing for as long a period as possible. For this purpose we would add to the above varieties perennial rye, Virginia blue and meadow fescue. Sow with each seeding some red clover or alsike, say 5 or 6 pounds to the acre. Where Timothy succeeds it is a profitable grass to grow, as there is always a demand for it on the market. Sow a peck of the seed per acre, and sow it alone. In this issue will be found an article from Mr. Clark giving particulars of his first crop of grass this year. We would like to see some of our farmers try to excel this.

Though too early to seed wheat or oats, yet it is not too early to begin to prepare the land for the seeding of these crops. More of the success of the crops depends on the preparation of the land before seeding than upon the fertilizer applied. Plow deep and break fine with the cultivator, roller and harrow and keep these implements going over the land every week or ten days until time to seed the crops. The essential for success in wheat growing is a fine, deeply broken seed bed, yet with a compact sub-surface and free from weeds.

Turnips should be sown this month. Prepare the land finely and make it rich if you expect to make a heavy crop. Farm yard manure and acid phosphate are the proper fertilizers to apply, and they should be well worked into the land with the cultivator and harrow. To make the best crop the seed should be sown in drills 2 feet apart, and after the plants have grown the first rough leaves they should be thinned to stand 10 inches apart in the rows. Grown in this way from 20 to 30 tons to the acre can be raised. Ruta bagas should be sown first, as they take longer to mature, and common turnips later in the month and in September. Every man who keeps a cow or sheep ought to grow turnips. They are almost essential to successful sheep husbandry and a great help with cattle.

Dwarf Essex rape should be sown this month for fall and spring grazing for the hogs and sheep. Prepare the land as for turnips and sow in drills in the same way as advised for that crop if the best are desired. The seed may, however, be sown broadcast if time does not allow of drilling and thinning. Three pounds of seed will be sufficient per acre if sown in drills or 5 pounds seeded broadcast. Do not

turn the stock on too soon, and do not graze too closely, and you will have a pasture both in fall and spring.

ALFALFA IN VIRGINIA.

Editor Southern Planter:

Replying to your request for experience with alfalfa, my desire to settle more fully some uncertain points, has held me back until now.

We prepared a plot of four acres February, 1903, for potatoes, a deep, rich loam, top dressing with scrapings of summer cattle yard, about 7 loads per acre, no other fertilizer. A large crop of potatoes came off first of July, 1903. The plot was plowed, disced and harrowed late in August. About September first seeded with alfalfa, 14 pounds per acre (much more than was needed), using an ordinary shoe drill. No other seed mixed with it. This made a good stool during the fall and started off vigorously in the spring. When about 6 inches high some streaks or strips seemed to cease to grow, remaining so for some time. On seeking for the cause I found that these light strips were where the manure had come from the horse barn; all the rest, being nearly all the plot, came on as though treated with bacteria, which I found to be present. As there had been no alfalfa on the farm previously, I ascribe this to the sweet clover (*Mellilotus Alba*), to which the cows had access while using that yard where I got the most of the manure. The lighter parts came on better after a while, and at first cutting, May 26th, the average height was about 3 feet, some of the tallest measuring 4 feet. First cutting gave one and one-half tons per acre cured hay (estimated). The second started off more evenly and made less height, but thicker, cutting, July 1st, about the same yield per acre as the first time. A beautiful new growth is in sight at this writing. Most of this plot was in good tillage, but at one spot there was a very heavy sod of Bermuda grass. I have watched this spot with considerable interest, as I knew there would be a fight for life between these two giants. The alfalfa had the advantage in one way, being a good fall and early spring grower, but, on the other hand, the Bermuda had solid possession. The result so far is that the alfalfa got a good root and came on so vigorously before it was warm enough for the Bermuda that the grass made a very poor showing. After the first cutting it brightened up a little, but was so soon under again that it now seems about to give up the battle, while the alfalfa is as large there as anywhere in the lot. I sowed another plot about Octo-

ber 1st last, but failed entirely to get a stand, although the ground had been well prepared. I believe September 1st, and without a nurse crop, is the best time to seed it.

Everything eats alfalfa, and we should seed more of it and have better and more stock to eat it.

York Co., Va.

B. F. WRIGHT.

ALFALFA IN VIRGINIA.

Editor Southern Planter:

In your June issue of SOUTHERN PLANTER you requested your patrons to write you briefly their experience and observation with the growth and cultivation of alfalfa. More than twenty years ago while travelling in the Territories and on the Pacific Coast I first had my attention directed to the growth of alfalfa. In fact, I saw nothing of the grass or hay kind growing after I had gone through the Platte Valley, in Nebraska, to the Pacific Coast, except alfalfa. I was told in California the roots of alfalfa would grow till they reached water, and have been known to go forty feet in the West. On my return from California I bought some seed to experiment with and sowed it on a rich gray soil in my garden. I sowed the seed in September. The seed germinated quickly and grew vigorously, and for twenty years held its own against all noxious growths till finally the heavy weeds smothered it. I noticed each succeeding year of its growth about the last of April the alfalfa would be matured enough to harvest, and I suppose about three crops could have been harvested from its growth during the year. Last September a year ago I selected three small plats on the farm to again test its merits. Two of the plats were elevated land, with the gray primitive soil with the red clay subsoil. The seed germinated quickly and grew vigorously. The plats were near the farm-yard, and the chickens during the winter season destroyed the alfalfa, root and branch. The following April I re-plowed the plats and reduced them to a fine tilth and re-sowed them in alfalfa, and to-day have as vigorous a growth of alfalfa or Chilian clover as can be found in Utah or California. This is where the stock has not been allowed to trample upon it to its injury. The third plat selected was on a very steep place, and while the growth here is sporadic, it shows a strong, healthy growth. Two years ago I saw in Albemarle county, Va., as fine a growth of alfalfa as I have ever seen, growing on a red steep hill. I am of the opinion that alfalfa will grow anywhere in Virginia where white or red clover will grow. It might be necessary to sow and re-sow the land two or

three times to insure a satisfactory stand, and I am of the opinion that the cheapest and surest way to inoculate the soil is to sow the seed. In sowing one of these plats a few seed fell on barren, hard spots near the road side, and they are growing as vigorously as if they had been sown on better selected earth. I mention this to show that the alfalfa will grow here under unfavorable conditions even.

H. E. WOOD.

Fluvanna Co., Va., June 23, 1904.

ALFALFA IN TENNESSEE.

Editor Southern Planter:

In the year 1901 I began the culture of alfalfa in an entirely experimental way, upon the advice of the greatest advocate of alfalfa east of the Mississippi river, Mr. Joseph E. Wing, of Ohio, who has been growing it successfully for ten years or more on his Woodlawn Farm. I had an old stable lot of one and a third acres, on one side of which grows a row of thick and tall osage orange trees, and the soil of which was fairly representative of the whole of our tillable land, with the advantage obtained from having been an old stable site. We plowed this ground during the last week of February, and after having worked it over thoroughly several times with a harrow, on the 6th of March sowed 20 pounds of alfalfa seed and a bushel of spring barley. They both came up quickly and made good stands, and about the last week of June (rather too late to leave a nurse crop on) the barley ripened and was cut, leaving the alfalfa plants, small and sickly in appearance, but thick enough to be called a fair stand. The alfalfa made very little growth during the month of July, owing to the absence of moisture, and on the first of August I ran the mower over it, cutting it as close as possible to the ground. Luckily we had a light shower shortly afterward, when the alfalfa sprang up thick and strong over the whole plot, and in another month we were able to cut it again, and took off probably a half ton of hay. The growth of the month of September was allowed to die down at frost and mulch the ground for the winter. The next season, 1902, we cut this plot three times, beginning the last week of May, and after August 1st the plot was used entirely for pasture, affording excellent pasture, used in connected with blue grass, for sheep and cattle, until frost again. In 1903 I was able to cut the first crop about the first of June, and tried to keep an estimate, according to the conveniences at hand, of the yield per acre. The first crop, which contained some red and white clover when cured, weighed 4,400

pounds per acre. I did not weigh the succeeding crops, but as near as I could estimate it, the second crop, cut before the first of July, made at least 3,000 pounds; the third crop, cut some four weeks later, was excellent, and I am convinced that it produced at least two tons to the acre. The last crop was cut about the first of September, and made about 1,500 pounds of hay. I am sure that we made at least six tons of good barn dry hay per acre on this plot last season. The first crop only has been cut this year, and it is fully up to any yield the plot has made heretofore, in spite of the fact that a small percentage of the plants were frozen out during the winter. We finished putting up the hay about the 20th of May, having been delayed by rains just at the time it should have been cut, and by the 2d of June had about fifteen inches growth on the next crop. Altogether, we are perfectly satisfied with the experiment on this piece and on another plot of five acres sown in the fall of 1901, and other seedings have done as well as we could hope for. It is our expectation to begin this fall and next spring and increase our acreage in alfalfa to two hundred acres as fast as possible. It is our experience that good hay can be more easily made from alfalfa than from any other clover or grass we have ever grown. The hay can be cured into a beautiful tea green, with all the aroma, and evenness of quality of the freshly mown hay field. I have found it a safe and profitable feed for all kinds of live stock under varied conditions.

A word on the subject of inoculation. My observation of this plot during the first year of its growth showed that only here and there in spots or streaks where the soil was particularly fertile did the alfalfa plants show the dark green color and strong foliage, indicative of good health. The second year almost half the plot showed this feature, and the third year, 1903, the whole plot was of the desired color and strength. It will be remembered that the alfalfa bacteria was not exploited until the spring of 1903, but the accounts appearing in the leading farm papers and Experiment Station bulletins led me to investigate the roots of our alfalfa for nodules. They were found in great abundance over all parts of the plot, and as luck would have it, also had spread to the other patch, probably from using the same tools on both plots, the rake being a supposedly reasonable means of scattering the bacteria.

My experience leads me to believe that September 1st to 15th is the best time for sowing alfalfa in the South. Failing to get a stand at that time, or in case of loss by freezing out in winter, I think the stand could be renewed on the same ground in latter part

of February or almost any time in March, by reseeding with disk drill. Do not sow a nurse crop with the fall seeding, but see that the ground is broken up as early as possible in the summer, and thoroughly worked into a fine and dusty seed bed before putting on the seed. I believe the seed should be put in with a drill at the rate of 12 to 15 pounds per acre, and not more than one to one and a half inches in depth. In view of the lights before us on the inoculation theory, I think it would be folly to sow alfalfa without in some manner inoculating the soil or the seed. The soil can be inoculated by simply sowing soil off an old and well-established field of alfalfa, showing the bacteria-bearing nodules on the roots. Prof. Soule, however, recommends taking a given amount of this soil and mixing the seed before sowing. This, no doubt, would give a more even distribution of the bacteria, but you can readily understand that the soil does not have to be sown with quite the same care as the seed, and if the higher parts of a plot are well inoculated the infection will soon spread by the natural drainage and cover the whole plot, as was the case with my first experimental piece.

GEO. CAMPBELL BROWN.

Ewell Farm, Maury Co., Tenn.

ALFALFA—SHEEP HUSBANDRY.

Editor Southern Planter:

I notice your discussion on alfalfa. I will give you my small experience.

I sowed it in spring as directed, and had great trouble to keep the weeds down. I have been accustomed for some years to sow red clover or scarlet clover in my corn at last working. Twice by chance I got seed which had some alfalfa in it. I had no trouble whatever with it. It withstood the drouth and the winter better than the red clover or scarlet. If it will do this here at this elevation of 2,500 feet, I feel quite sure there is no place in the "Old State" where it would not winter.

Being a native of the "Old State," I am rejoiced to see the interest there manifested in legumes and sheep. I think I can reply to the man who wished to know why the English could keep such large flocks, while we could not.

In the first place, the English provide an abundance of food for their flocks at all seasons of the year, and do not give an alternate feast and famine; secondly, that food is provided in small inclosures so that the sheep are moved frequently to uninfected soil; thirdly, the food is much of it upon tilled soil,

and this tillage destroys the infection and keeps the soil and sheep in health.

One of the very best sheep dips is made by a very weak solution of tobacco, to which hardwood ashes are added until it will kill ticks. This may be known by catching a few ticks and putting them in the dip, then place them on a board; if in a few moments they are dead the dip is all right; if not, add more ashes. I never tried it, but I believe the ashes themselves would make an effective dip.

M. A. DUNLAP.

Pocahontas Co., W. Va.

RAPE IN VIRGINIA.

Editor Southern Planter:

I saw to-day an interesting experiment with the cultivation of rape. It is on the farm of H. H. Hudgins, Esq., near Columbia (Fluvanna county). About the last of March Mr. Hudgins sowed one-third of an acre of his farm in rape. The first of May he turned twenty hogs upon it. These hogs have grazed it continuously since, and with a small ration of corn, have kept in excellent condition and with no perceptible loss in the growth of the rape. With these hard times upon us, and corn scarce, if the farmers would sow small areas in rape it would enable them to feed their hogs at a comparatively small cost. I think Mr. Hudgins told me the seed he sowed on the one-third acre cost him twenty-eight cents. The rape seed was sown as turnip seed is usually sown.

H. E. WOOD.

Fluvanna Co., Va.

CURING COW PEA HAY.

Editor Southern Planter:

In the last two years I have cured 120 acres of cow pea hay, the season of 1902 being dry and that of 1903 wet, making a very fine hay in the dry weather and a good hay in the wet. The method used being different from any I have heard of, may be of interest, and I give it.

I cut the cow peas when the first leaves begin to turn yellow, follow the mower immediately with a horse rake, and follow the rake immediately with men and forks, who segregate the rows into small piles, not over three feet in diameter and eighteen inches high, leaving them as puffy as possible. In this way the hay is got into piles, constituting a good fork full, unwilted and full of leaves; the warm air penetrates easily and it is cured green. In a week, weather favoring, the hay will be fit to put away. Should it rain, I wait patiently until the sun and air dry the

piles, except at the bottom, and then one movement of the fork turns the pile over. If rain again falls before the hay is secured, the waiting and turning process is repeated. I put the hay in ricks 12 feet wide and as high as possible, for it settles a great deal, and as soon as the rick is finished thatch it with straw or fodder so as to turn water. The difference between this method of curing and others usually practiced is the small pile used, which dries more quickly than a large one, and which permits the water to run through, instead of being caught and retained in the middle of a shock, causing mold and rot.

F. SNOWDEN HILL.

Prince George Co., Md.

CURING COW PEA HAY.

Several methods of seeding cow peas may be followed. Broadcasting is commonly practiced, but that requires more seed and it is not easy to distribute them evenly, and if the weather is particularly dry the stand will not be so uniform as where a drill is used. At the station it is found preferable to use an ordinary grain drill, stopping up every other tube. This puts the peas in drills about sixteen inches apart. The seed should be covered by about three inches of dirt, which ensures a moist seed bed and quick germination. By utilizing the drill a more uniform stand can be secured and less seed is required than in other ways. Where the drill is used the land can be cultivated once or at most twice, so as to destroy weeds, break up the crust and preserve a dust mulch, all very desirable ends, especially in case of a drouth year. Where the peas are grown in drills they do not tangle so badly as where seeded broadcast, and it is easier to cut and separate them when making the hay.

As already suggested it is best to have the crop ready for hay making from the last week in July to the middle of August, as the weather is generally settled at that time and evaporation is most rapid. The peas are ready to cut for hay when the lower leaves are beginning to turn yellow, the pods well formed, the peas well hardened and the pods assuming a yellowish tinge. If cut before this time the crop is not sufficiently matured to contain the highest percentage of food nutrients, while if permitted to grow older the leaves become dry and brittle, and as they are the richest in protein their loss is to be avoided. It is not at all difficult to decide from the description given when the proper time has arrived to cut peas for hay, though judging by the correspondence of the station it seems to be a difficult question to decide on the average farm. It is best to cut the peas in the morning if possible, and especially when there is little or no dew on them. They should then be allowed to

wilt in the sun all day and be run over with a tedder next morning. The tedder completely inverts them and leaves them loosely strewn over the ground, thus aiding rapid evaporation and ensuring quick drying. The same evening they may be raked into windrows, and if the weather is fair, left to cure further in this condition for a day or two, depending on the amount and strength of the sunshine, as it is always necessary to prevent the leaves becoming so dry and brittle that they thresh off the vines.

After remaining in windrows until fairly well cured, gather the peas into small stooks and let them stand for a day or two, then at the end of twenty-four to forty-eight hours gather into large ones. These may then be capped with a fork full of straw, and the hay can then be permitted to stay in the field for a week or ten days, or until it becomes thoroughly cured. The small forkful of straw placed on the top of each stook acts as a "watershed," and is much cheaper and more satisfactory than any other form of capping that we have tried. Hay caps of ducking have hitherto proved too expensive and required more time to put on, take off and dry out and put away than where straw is used. If the straw is loaded on a hay rack and driven through the field, the man on the wagon can cap the stooks as he goes along and cover a great many of them in a short time. When the hay is cured and ready to go to the barn, the straw can be gathered in with the hay. If that seems objectionable it may be gathered up and used for bedding or scattered on the ground as deemed preferable. While some may think the method outlined involves considerable labor, it is the simplest, easiest and surest method of curing pea hay that we have tried. The hay will be ready to store in the barn when a small amount twisted together fails to show any apparent moisture. It is preferable to store the hay in large masses, thoroughly salting it and packing it down as tightly as possible to exclude the air. Then let it alone. Even if it should heat after it has been carefully field cured, if it is not disturbed it will come out clean and bright and in the best possible condition. Many people destroy their pea crop by attempting to open up the mass if they feel it begin to grow warm. Let it alone and it will come out all right. Many others fail because they do not put the hay in large enough masses or pack it well enough.

Other ways of curing pea hay are frequently suggested, and some of them are doubtless excellent in their details, but to date, the one given has proved uniformly satisfactory. We have been able to cure out a bright, clean, fresh pea hay with a delightful aroma from crops cut all the way from the middle of July to the middle of October, and it would seem that while it might involve a little more labor and trouble than some writers advocate, its uniform safety makes it the best method to pursue in the long run.

The difficulty of curing pea hay is due to the im-

mense amount of water which the crop contains at the time it is ordinarily ready to cut for hay.

The following figures are interesting on that account:

VARIETY.	Green weight Lbs.	Cured weight Lbs.	Water lost Lbs.
Taylor	22,500	6,200	16,300
Wonderful	21,400	5,200	16,200
Clay	20,700	4,900	15,800
Blackeye	18,000	5,150	12,850
Whippoorwill	16,500	4,800	11,700

—Prof. A. M. SOULE, in *Breeder's Gazette*.

GRASS GROWING.

Editor Southern Planter:

Herewith find report of my 1904 first crop of grass. The season has been a backward one for most crops. The grass, as a whole, is light, mine is better than last year, the first crop last year on fourteen and five-eighths acres was 55 tons, 729 pounds. This year on eleven and one-third acres there was 60 tons, 175 pounds, nearly five and one-half tons per acre. I have found thus far that potash will make the grass stand up whether wet or dry. My seventh-eighths acre field is the best this year that it has ever been. Many others who have adopted my method have heretofore secured eight tons of dry hay to the acre in one crop, but until this year my best hay has been seven and three-quarter tons. This seven-eighths acre field has produced from one seeding in fourteen and one-half years 121½ tons of dry hay. Many have beaten me in a single crop, but I think this record is a world beater. Some say the fertilizer I use, made of bone, muriate of potash and nitrate of soda, is not all soluble. That may be so, but with this compound and the intense culture given I get from six to ten tons of dry hay yearly. If any of your friends will send me a 2-cent stamp I will send them a circular to tell them how. The one-quarter acre field which produced 6,401 pounds in three crops in 1903 yielded the first crop this year, 3,261 pounds. The fertilizer was put on this section last fall. I am experimenting to find out what is the best time to apply the fertilizer, whether fall, spring or both. Shall report later. I tried three and one-half acres of oats for hay. Sowed 22 bushels, cut them July 11th. Put them in the barn the 16th. Had four days' good sunshine; they were very dry. They weighed eleven and one-half tons, cost \$6 per ton in the barn. They make excellent hay. The five and one-half acre plum orchard is loaded with plums. Hope to report more profit this year in plums. The trouble with

plums is that there is so little time to market them, one bad storm and they go by.

Higganum, Ct.

GEORGE M. CLARK.

SOME NOTES ON JULY PLANTER.

Editor Southern Planter:

Referring to the Editor's remarks on my contribution to the July number of the SOUTHERN PLANTER, I have no doubt that the results in Rhode Island were correct, and that acid phosphate gives better results on land that was acid and sweetened by lime than it would on an acid soil. But this fact does not militate against the fact that lime in contact with acid phosphate will revert the phosphoric acid. Liming land and afterwards using acid phosphate is all right, but lime in direct contact with phosphoric acid is all wrong.

SEEDING TO GRASS.

Stick to that advice you give the Amelia county man, to sow grass without a nurse crop. A friend of mine was recently visiting in West Virginia and met a farmer there who said to him: "Massey advised sowing grass alone, and my neighbors said that it would not do, but that it was necessary here to sow with fall grain. But I took his advice and now have the best stand of grass in the whole neighborhood, and my neighbors are watching my experiment closely." One may get a good stand of grass in a grain field and then lose it by the sudden exposure to the hot sun after harvest. Another common reason for failure in grass and clover is the sowing of too little seed. I was often laughed at in Virginia for sowing clover alone, 15 pounds of seed per acre. But my clover crop was always enough heavier than the crops of those who laughed and sowed six to eight pounds to pay for ten times the amount of seed used.

SORREL.

The growth of sorrel is usually an indication not only of poverty in the soil, but of acidity. Not that the acid in the sorrel comes from the soil, for it really comes from the air, but because sorrel can abide an acid condition in the soil that clover cannot. Hence the use of lime will bring about conditions more favorable to the clover and enable it to overcome the sorrel that prefers the acid condition.

TOMATOES.

The tomato crop has always been a favorite one with me both in the garden and as a truck crop in the field. I agree with Mr. Price, that it does not pay to stake and prune tomatoes in field culture. But in my garden I find that I can get earlier, more and better fruit from the same area by staking and pruning, though at far greater expense and labor. I set my garden plants in rows three feet apart and the plants two feet apart in the rows, and then train to

one stem and tie to stakes. But if I was growing them for the canning factory I would give the plants more room and never prune or train. Another thing I have found out years ago in regard to tomatoes. I can get smoother fruit and a more perfect crop on mellow farm land that will not make more than 25 to 30 bushels of corn per acre than in a rich old garden soil, plowing under in the field a light broadcast dressing of manure. The thinner soil will bring earlier fruit, too, than the rich soil, and there will be less rot without spraying. Mulching the tomato plants with straw is an advantage in a dry season, but exactly the reverse when the season is wet. The tomato is very fastidious about moisture. If the weather is very dry they do not do well, and then if it gets too wet it is just as bad for them. I keep the crust broken between the rows all the time to retain moisture in dry weather, doing it very shallow, even when they are fruiting and ripening.

VELVET BEANS.

Growers in the extreme southern part of this State in sandy soils on the Atlantic Coast R. R. claim that notwithstanding the great mass of growth the beans make they are more easily secured than the cow pea, since they are planted so wide apart that there are fewer attachments to soil. In an experiment I made here years ago the beans were planted eight feet apart, and we started at one side of the plot and rolled them over and over, cutting them loose as rolled, and cleared the ground completely. But the job then was separating them for loading, and on a large scale it would be necessary to slice them into squares. But you are right in your advice in regard to them for any locality north of the southern corner of North Carolina.

DUAL PURPOSE SHORTHORNS.

I think that what you say in regard to these simply shows that the stock indicated have been bred into dairy Shorthorns, and have gotten a dairy type, and hence are valuable for the dairy. But that they can be at the same time the best beef makers is a physical impossibility. There were in this country in my boyhood a great many deep milking Shorthorns or Durhams, as we called them, and they were of pure dairy conformation. But they have been bred out by the general breeding of the breed for beef, and while here and there we have deep milking Shorthorns, they are sports or freaks, and will not transmit their milking qualities when bred to a modern Shorthorn bull. The best beef quality and the best dairy quality cannot be combined in the same animal, and while we may get a half and half cow, the real dual purpose is a myth. You can ruin a beef breed by trying to make good milkers for the dairy out of them. I would as soon think of training a bull dog to hunt quail and expect him to do it like a Setter that is "built that way." Just as well expect a Per-

cheron to beat a Standard bred trotter on the track as to expect the finest dairy performance from a breed bred for beef. The two characters are too diverse.

W. F. MASSEY, *Editor of Practical Farmer.*

In our remarks on the advisability of giving attention to the breeding of dual purpose cows we relied not merely on recorded tests of what these animals have done, but largely on our own personal experience in handling cattle of this type. We found them good at the pail and good as makers of beef and as producers of beef steers. We have kept numbers of these dual purpose cows which gave an average of five gallons of milk per day for weeks after calving, and made from 14 to 22 pounds of butter per week, and which, when they failed to breed made 1,500 pound beef animals. In connection with this subject a series of studies made at the Wisconsin Experiment Station, extending continuously over nearly five years, is very instructive. In the summary of the conclusions reached the author of the report say: "The cows in the University herd may be considered as representing three different types of cows—viz., extreme dairy type, large dairy type, and dual purpose type. If the results for cows of the same type be averaged, we find that the large dairy cows lead in average annual production of fat with 325 pounds, the extreme dairy cows being next with 310 pounds, and the dual purpose cows last with 293 pounds. The rank of the cows according to net profit returned decreased in the same order from \$45 for the large dairy cows to \$35 for the dual purpose cows. In the opinion of the authors cows of the large dairy type of the particular breed suiting the fancy of the farmer and weighing, say 1,000 pounds or more, everything considered, be found most satisfactory for the dairy farmer. Cows of the dual purpose type, on the other hand, are to be recommended for farmers who wish to utilize more or less of the rough feed produced on their farms for raising beef for the market in conjunction with keeping a number of cows for milk production." As farmers who are simply and solely dairymen are and always must continue to form a large minority of the farmers of the country, the wisdom of breeding and improving the type of dual purpose cows cannot be questioned or disposed of by saying that this type of cow is not as perfect as a purely dairy or beef type for the specific object for which the different types may be kept. Where there is one farmer wanting a purely dairy or purely beef animal there are hundreds who want an animal that will make both milk, butter and beef, and will bring calves which will profitably consume the roughage of the farm and turn it into beef.—Ed.

NUTRITIVE RATIO OF PLANT FOOD IN THE SOIL.

Editor Southern Planter:

Messrs. Whitney and Cameron, in Bulletin No. 22, Bureau of Soils, says: "The idea now held by the Bureau as a result of these investigations is that *the ratio of the nutrient elements in normal soils does not play a very important part in the yield of crops.*" (Page 62.) Again: "This (a defective nutritive ration) cannot be in general an important cause of low crop yields, and that the subject of nutritive ration can, therefore, safely be put aside for the present as of relatively little importance to the farmer." (Page 62.) And, again, on page 63: "There is no obvious relation between the amount of the several nutritive elements in the soil and the yield of crops." . . . "The conclusion logically follows that on the average farm the *great controlling factor in the yield of crops is not the amount of plant food in the soil.*" . . . "It appears further that practically (theoretically) *all soils contain sufficient plant food for good crop yield.*" (Page 64.)

I return now to page 62: "It would appear from the results given in this bulletin that plants can and do yield ordinary crops, though growing in media containing very small traces of all of the plant foods, while *if the amount of these plant foods is increased a thousand times*, as in the case of our alkali soils of the West, where potash, lime, phosphoric acid and nitrates are frequently found in very large amounts, *they are unable to give corresponding increases in the yield.*"

By the way of answer to the above extracts and more particularly the latter clause, I do not propose to quote authorities, but simply call the reader's attention to what has actually been accomplished along this line, and in confutation of above ideas, by actual practical farmers on the farm.

I will cite first the case of Mr. Z. J. Drake, who grew 255 bushels of shelled corn, or 239 bushels of crib cured corn per acre. I have enjoyed the pleasure of conversing personally with Mr. Drake, and also of closely examining the prize acre, and derived quite valuable information from the former and interest and instruction from the latter. This contest, premium or prize acre had been so completely exhausted of its original store of fertility by continuous cotton culture that its maximum yield under ordinary culture was but five bushels of corn per acre; and it, together with the land contiguous to it, was so outrageously and notoriously poor that it received the rather opprobrious epithet of "Starvation's Empire." By liberal manuring with the rakings and scrapings of cow lots, fence corners, etc., and stable manure, Mr. Drake so improved it as to gather 800 pounds of seed cotton per acre. About this time, the "American Agriculturist" prize was offered, and Mr. Drake, seeing his opportunity, went in to win, and won.

Now, according to the idea of Messrs. Whitney and Cameron, this truly wonderful increase in yield was due, not to added plant food, but, first, "to improving the texture of the soil"; second, "the organic matter content"; third, "the structure of the soil" or "the arrangement of the soil grains"; and fourth, "physical factor the exact nature of which is yet to be determined." Now, without wishing to underrate the importance of "efficient methods of cultivation" and their efficiency in increasing crop yields; I would call the reader's attention to the fact that in this instance, the only difference in cultural methods pursued in the making of 5 and 255 bushels per acre was that, in the latter case, a subsoil plow was run in the turning plow furrows to a depth of 12 inches. As this has been done in thousands of instances, yet no wonderful increase of crop yield has followed, I am forced to the conclusion that the increase was due to but two things—first, the added plant food; and second, an exceptionally favorable season.

In thirty-five years of actual experience in practical farming, I have learned some things about maximum crop yields and how they may be obtained that are not found in the bulletin of Messrs. Whitney and Cameron. Those gentlemen tend to make obscurity more obscure by stating that "the great controlling factor in the yield of crops is not the amount of plant food in the soil, but it is a *physical factor the exact nature of which is yet to be determined.*"

They would strive to bring to naught the research and labor of centuries, and give us absolutely nothing in its place. They would wantonly destroy the bread and give us a stone in place of it. I lay no claim to being even a little piece of a scientist, yet I am not willing that the light we now have should be obscured in any such a manner. "Effects follow causes" or they do not. Which is it?

Thoroughly enrich, by adding plant food, a piece of land, then just "tickle it with a hoe and it will laugh with a harvest." All the deep preparation and thorough culture possible will not make a sterile soil produce maximum crop yields unless plant food be added. Aside from a few soils that are decidedly deficient in some elements, though they probably contain an excess of other elements just as important: a condition of things that, of course, needs correcting by restoring the equilibrium or "balance"; I care but little for "ratio" or even the "law of minimum"; what I do care about in most instances is the "law of maximum," for the reason that that is just what it takes to bring about production of maximum (i. e., greatest possible) crop yields; the soil must contain an excess of all the elements of plant food in available form over and above any and all requirements the plants can possibly make upon it. A bountiful supply of all the elements of plant food must be provided, whether artificially or otherwise.

Gomez, Miss.

G. H. TURNER.

Mr. Turner sends us another article in continuation of this subject, which we intend to publish in our September issue. We may then make some remarks on the question ourselves, as we took occasion to comment favorably on the celebrated Bull. 22. Whilst the deductions drawn from the experiments made by Messrs. Whitney and Cameron, as published in Bull. 22, have been the subject of adverse comment by a number of scientific agriculturists, we believe still, and this belief is based on our own practical experience, that those deductions are in the main sound. There is more in crop production than is covered by the quantity of plant food supplied.—
ED.

ALFALFA GROWING.

Editor Southern Planter:

I am glad to know that you are going to give the special aid of your valuable journal to alfalfa the greatest grass known, and one destined to revolutionize farming in the South, if sown by the right parties. You well know cotton was called king, then iron, then corn, (correct me if I am wrong); but if you and I are spared 10 years we will hear the cry go up from all over the land, "Hail to king alfalfa." I would say to all who expect to sow it, *don't, don't*, use anything but home-grown seed, which the Breeders' Gazette has been trying to beat into our heads for three years. I would say to any one thinking of sowing alfalfa, follow *close the advice of the editor of the SOUTHERN PLANTER*, inoculate your seed, *keep down the weeds* and success is in sight, provided you have alfalfa land. Three things are essential to the growth of alfalfa east of the Blue Ridge and South of the Potomac. G. G. G.! *Grit, Git, Gumpton.*

"Lay on McDuff."

B. B. BUCHANNAN.

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.

Plant for Name.

I enclose a stalk of a plant that comes up in the clover. What is the name and what is the feed value? Some of it grew four and one-half feet high. How much seed per acre should be mixed with red clover?

L. C. GODWIN.

Accomac Co., Va.

The plant sent is Cheat (in some sections called Chess). It is considered a pest wherever it is found.

It is the plant which so often takes the place of a crop of winter oats when the same has been winter killed. There has been a great deal of it in the State this year. It is either introduced into the land with the oat seed or is lying dormant in the land waiting for a favorable opportunity to grow. It should be destroyed wherever found, as it is of little value as feed, and is sure, if not kept out of the land, to come up when not wanted.—ED.

The Rye Crop.

An enquirer asks what is our average crop of rye in this country.

The average crop of the United States for the last five years was 15 bushels to the acre.

In Virginia the average for the past five years was 10 bushels to the acre.

In Washington and Montana States the yield is often from 25 to 30 bushels to the acre.

In Virginia we do not find records of more than 12 bushels to the acre. We have no doubt, however, but that on good land with proper preparation twice that yield could easily be grown in Virginia. Rye is usually here grown on thin land and mainly for pasture, and this does not conduce to a very heavy yield.—ED.

Skippers in Meat.

Seeing an inquiry in your paper about how to get skippers out of meat, I advise that you use carbon bisulphide just as you would on grain. Do not pour it on the meat. Put it in a saucer and let it evaporate. The meat must be in a tight box or barrel. Have used this treatment with excellent results.

New Kent Co., Va. R. B. FOUNT LE ROY.

Skippers in Hams.

In glancing over the July number I find on page 463 an inquiry as to skippers in hams. I believe with you that it is best to prevent their getting there, if possible, but if you do not succeed in this, immersing the ham in boiling water for five or ten minutes will, I think, destroy the skippers without hurting the ham.

Albemarle Co., Va.

WM. R. DUKE.

Ground Lime Stone.

Will lime stone, reduced to powder, give as good results as unslacked lime on land? Also, what quantity of the former would you advise using per acre?

Morgan Co., Ala.

R. S.

Ground lime is being largely used in some sections of Pennsylvania, where there are mills for grinding

it, and with success. We believe they use from 500 pounds upwards to 1,000 pounds to the acre.—ED.

Fall Cabbage.

Will you kindly give me some advice about the best time to set out cabbage for fall. How they may be kept after frost comes? How to cultivate and manure so as to make them live at this season?

Halifax Co., N. C.

M. NELSON.

The seed for late fall cabbage should not be sown in your State before 1st August. Make the bed rich and make it away from the buildings, where insects are not likely to be so troublesome. Encourage the plants to grow quickly by cultivation between the rows and the application of a little nitrate of soda. Dust the plants with tobacco dust and air-slaked lime to keep off flea beetles. Set out the plants in naturally moist, clayey land made as rich as possible. Encourage quick growth by cultivation and a dressing or two of nitrate of soda alongside the rows. They should commence to head in November, and be well headed in December. Bend the plants over to the ground with the heads towards the North, and cover the stalks and the base of the head with soil, and they will keep well.—ED.

Curing Pea Vine Hay—Harvesting Corn—Grass Mixture.

1. What is the best and most economical (with respect to labor) method of harvesting and curing pea vine hay, and when should they be mowed?

2. What is the best method of handling corn, as we do in this section, cut tops, pull fodder, haul corn to barn and shuck and then worry over the stalks in the fields when we go to cut wheat, or as it is done in Pennsylvania and New York and elsewhere, cut off at ground and shuck from the stalk? If one only has hand labor, when should corn be cut, if this latter method is followed, and how should it be handled?

3. Please give mixture and proportion for a winter grass sowing for pasture, and when should it be sown?

THAD. S. TROY.

Rondolph Co., N. C.

1. In this issue you will find two articles dealing with the harvesting of pea vine hay. We can commend both methods, as they are practically what we have always advised and practiced.

2. Cut the corn at the ground and set up in shocks to cure. We have for years condemned the practice of pulling fodder and cutting tops as both wasteful of feed and wasteful of money. Cut when the corn is glazed and dented. It will then cure out in the shock plump and sound.

3. In our article on "Work for the Month" you

will find advice as to mixtures of grass seeds for meadow and pasture.—ED.

Seeding Wheat With Lime.

Would it be advisable to sow lime in place of fertilizer for wheat, using drill and sowing at same time as wheat? How much lime should be sown per acre?

Wythe Co., Va.

G. J. R.

We have never tried the drilling of lime with wheat, but have seen some reports in which it apparently was the course taken and succeeded. We always applied the lime broadcast, and then drilled the wheat. We doubt whether the drill will put on lime sufficient, at least 25 bushels to the acre should be applied.—ED.

Grass for Name.

Kindly give name of enclosed grass, and also land adapted to its growth.

SUBSCRIBER.

Amelia Co., Va.

Enclosed please find sample of grass, of which please let me know the name. I found it growing in a lot of orchard grass.

H. W. ROBERTSON.

Bedford Co., Va.

The grass sent with both the enquiries was meadow soft grass or Yorkshire fog. It has no recognized value as a feed in this country, except for marsh lands in the Northwest.—ED.

Clover and Bean Bacteria.

1. Does the same bacteria that works on the general crop of garden beans answer for soy beans?

2. Is not the Clay or cow pea really a bean; and if so, is it necessary that any special bacteria be used for it?

3. Is the red clover bacteria available for crimson clover, or any other variety of clover?

FOSTER CLARKE.

Mercer Co., W. Va.

1. No. The soy bean bacteria is so far as at present known a specific bacteria of that plant.

2. Yes. The cow pea is botanically a bean. It is rarely necessary to apply bacteria for the production of the cow pea crop, as the seed itself carries sufficient bacteria to ensure a growth even on land in a section where the crop has not previously been grown. The growth is often on such land not heavy the first year, but the second year shows the land to be fully inoculated.

3. This point is not definitely settled, but the best opinion seems to be that this bacteria is available for all varieties of clover.—ED.

Plows.

Please tell us what is the best turn plow for use on

a farm for breaking land. I use "Boy Dixie." Is there anything better?

B. D. BOWDEN.

Craven Co., N. C.

We have no use whatever for the little turn plows which are so much used in the South. They are the cause of much of the unprofitable farming. Get a plow that will turn a furrow at least eight inches wide and six inches deep, and then work can be done which will result in crops. You will find such plows advertised in the *PLANTER*. We always used the Oliver Chill.—ED.

Hairy Vetch.

I am very much afraid that hairy vetch is likely to prove a weed hard to get rid of, and liable to scatter and spread over the farm. Would like to hear from you as to this.

WM. H. BUSH.

Powhatan Co., Va.

There is no reason to be afraid of hairy vetch proving itself a troublesome weed and difficult to get rid of. When not wanted it can be killed out as easily as any crop we know of. It is simply an annual, and if not allowed to go to seed there is an end of it. But even if allowed to seed and spread itself over the farm instead of being a detriment like most weeds, it would enhance the value of every acre of land on which it grows. A good crop of it will put more nitrogen into the soil than a ton of cotton seed meal, besides the vegetable matter which it supplies to the soil. In this way it will supply all the nitrogen required to produce a crop of corn or wheat. A weed which will do this can never be regarded as something desirable to be got rid of. As a feed for stock either green or cured into hay it is one of the richest in protein which can be produced, and there would be just as much sense in desiring to be rid of a crop of red clover as of a crop of hairy vetch.—ED.

Improving Land for Grass.

I have some land which was originally good land, comparatively easy to work. It contains considerable sand, but has red clay spots. Some of this land has been worked hard, having been in corn every two or three years for fifteen years or more, and left in corn beds between crops. While other part has been left in corn beds from five to twelve years, and a portion has grown up in pines, some of this land is cultivated in corn this year; some has been left in beds for three years and is grown up in sassafras bushes, while other has been left in beds, and is covered with small pines. Please advise how best to improve this land and get in grass. It is some distance from railroad, with bad road to haul over, making it very difficult to get lime. Can you advise a plan to get this land in grass without the use of lime.

The land is rolling, with small branches running through it? Also please advise best method of getting rid of very large bramble briars.

Spotsylvania Co., Va.

SUBSCRIBER.

Land which has been worked and treated like this has been is not in a condition to produce grass right away. It must be prepared for the crop by good cultivation and enrichment. We would plow it deeply as soon as possible, and if able would also subsoil it. Then if we could get lime to it even if only sufficient to give it a light dressing, would lime it. It should have from 25 to 35 bushels to the acre at least. We should harrow this in, and then sow part in crimson clover, wheat, oats and rye (12 pounds of crimson clover and three-quarters of a bushel of wheat, oats and rye mixed, and other part seed with hairy vetch, wheat, oats and rye (15 pounds of vetch and three-quarters of a bushel of wheat, oats and rye), and harrow in the seed and roll if dry. This should give a winter cover, and will provide grazing in the early spring. In May we would plow down the crops, apply 300 pounds of acid phosphate per acre and sow in cow peas. In August cut the peas for hay, leaving a long stubble. This stubble we would cut into the ground with a disc or cutaway harrow or a cultivator, and at the same time apply 300 pounds of bone meal per acre and sow to grass alone. Sow 2 or 3 bushels of mixed orchard, tall meadow and red top (herds grass) per acre, with 5 pounds of red clover or alsike clover per acre. Harrow in the seed and roll if dry enough. Top dress with farm yard manure during the winter, and you should get a stand of grass.

The bramble briars should be cut off and burnt, and the roots be plowed up and raked off and burnt.—ED.

Diseased Wheat Ears.

Please let me know what is the matter with these wheat heads. It is not smut, or rust. I noticed them first eight to ten days ago. Parts of the heads were green, parts white. I waited to see what the result would be later, and find only badly shrivelled grains in the white part, but fully developed grains in the then green parts. Only about one-quarter acre is partially affected. I don't think it is rust, as (I think) rust affects the whole plant, and all grains are equally shrivelled. I saw some heads green at both ends and one inch of the middle white.

Lunenburg Co., Va.

CHR. RICKERS.

As we were unable to decide what was the disease affecting the wheat, we sent the same to the Department of Agriculture, Washington, with a request for opinion thereon, and have been favored with the following reply:

Yours of June 28th, asking the trouble with some diseased heads of wheat enclosed, has been referred, through the Pathologist and Physiologist, to this laboratory. These heads are affected in the same way that many other samples are which we have received a number of times this season from other places. The cause seems to be simply the unusual amount of wet weather, together with the general coolness of the season. With a few exceptions the season has been unusually cool, and there has been much rainfall, and the water gathers inside the chaff at the base of the grain, and, soaking the plant thoroughly, prevents further nutrition. Of course, in some cases the grain may be already partly formed, and in other cases it may not yet be started, which will account for the fact that some spikelets are partially filled, others have no grain at all, and still others may have even fully developed grains. The portion of the head where the spikelets are closest together is also likely to be more damaged, as in that case the drying out of the head after the rainfall does not occur so easily. Naturally, varieties of wheat having club heads will suffer most. The pink looking fungus occasionally seen on the decaying heads is not concerned with the injury, but is an accompaniment of the trouble.

M. S. CARLETON, *Cerealist.*

Preparing Land for Wheat, Oats and Pasture.

I have a field of 30 acres under fence I wish to sow to wheat, oats and clover this fall. Twenty acres has been in clover for two years, 1903 and 1904. Eight acres in weeds, broom sedge, etc., two acres poor, thin land. This field has been grazed, but not very close. The twenty acres I wish to sow to wheat, the eight to oats, the two acres I wish to plow and improve. Now, how would you advise me to proceed to prepare this land? Kind and quantity of fertilizer per acre? What can I sow on the poor land this fall to improve it? I wish to use this field as a pasture after harvesting, wheat and oats and one crop of clover. The land is all a gravelly loam, with red subsoil.

J. H. SHAW.

Mecklenburg Co., Va.

The oat crop should be the one first seeded, as winter oats to be a success should be got in not later than the middle of September. Plow the eight acre lot at once, and as soon as plowed apply 25 bushels of lime to the acre and harrow in. Harrow again once or twice before the time to seed the oats. In the second week in September apply 300 pounds of acid phosphate broadcast and harrow again, and sow two bushels of winter oats per acre broadcast, and cover well with the harrow. Then sow 2 bushels of mixed grass seed (orchard, tall meadow, red top Vir-

ginia blue and meadow fescue), and 5 pounds of red or alsike clover and harrow in lightly and roll. In the intervals between working the oat plot have the 20 acre plot plowed, beginning as soon as possible, plow deep. When plowed apply 25 bushels of lime to the acre and harrow in. Harrow and reharrow and roll this piece at weekly intervals until the 1st of October, and then apply 300 pounds of acid phosphate and bone meal in equal parts, harrow in and drill one and one-half bushels of wheat per acre, sowing at the same time with the drill two bushels of the same mixture of grass seeds and clover, as are advised for use on the oats. The two acres of thin, poor land should be plowed at once, have 300 pounds of acid phosphate applied per acre, and be sowed with 10 pounds of crimson clover, 1 bushel of wheat, oats and rye mixed in equal parts, and 5 pounds of red or alsike clover. We have advised the seeding of the grass and clover seed on the different lots in order to meet the requirements of pasturage after the wheat and oats are cut. It may be successful or it may fail. We do not approve the practice of seeding grass in grain crops, as it so frequently fails to make a stand. If the land were ours, and we could dispense with the pasturage until the fall, we would not seed the grass and clover on the wheat and oats, but would disc the stubble as soon as the grain crops were cut and sow cow peas or cow peas and sorghum and graze these off as soon as they were ready, and then sow grass and clover alone. In this way the certainty of securing pasturage would be increased, though it would be later, and a good crop of clover and grass might confidently be looked for the following year.—ED.

Skippers in Hams.

In the July number of SOUTHERN PLANTER, J. M. Faris asked how to get rid of skippers in meat. To prevent them from getting in the meat, in early spring every few days make a strong red pepper smoke in the smoke house; later, if they should make their appearance, hang the meat on the hottest, sunny side of house as long as required, and they will come out. A month's sun will not injure the meat.

Warwick Co., Va.

W. C. MINER.

Getting Rid of Fleas and Lice.

A subscriber writes us that fleas may be kept out of buildings used for housing stock of all kinds by the constant use of plaster (gypsum) in and about the places. Sprinkle freely upon the droppings and litter. The use of kerosene will rid hogs of lice. Spray it over them or pour a little on the centre of the back

from head to tail, and this will soon spread all over the animal, and the lice will let go at once and quit.—ED.

Alfalfa Land—Thin Shelled Eggs.

Please let me know which you consider best for alfalfa, branch bottoms or hillside, "not steep."

2. The best remedy for hens laying thin shelled eggs. They have free access to air-slacked lime?

T. O. D.

1. The "Branch bottoms" if the land is sufficiently elevated above the stream to give perfect drainage and keep water from standing on the field will yield heavier crops of alfalfa than the hillsides, as the plants will get a more constant supply of water from the subsoil, which will naturally be permeated with it from the branch. Such hillsides, however, as you describe ("not steep") will, if made rich, grow alfalfa.

2. We can suggest nothing more effective for thickening the shells than a plentiful supply of calcareous matter. We think, however, that this can be supplied in better and more acceptable form than air-slacked lime. Broken oyster shells and rough old mortar from a building or the refuse of a lime kiln are better because more acceptable. In this rough form the matter helps the hens to digest their food, and in the process of grinding in the gizzard becomes assimilated with the food and passes into the system.—ED.

Beehives.

Please give dimensions and directions for making a Langstroth beehive or some other good hive.

Bland Co., Va.

S. H. HELOY.

You will find hives and many appliances advertised in the PLANTER, and will be able to buy them cheaper than you can make them. We do not have by us any book with instructions for making these hives, and have had no personal experience with them.—ED.

Parsnip Seed.

A year ago I bought of T. W. Wood & Sons, of your place, some very good parsnip seed, and from it had a good crop; but as I went North in the early winter and remained until May, the parsnips were not harvested. And as my home burned down, I am occupying another house, and they are still standing and loaded with some of the best seed that I ever saw. I wish to save some of it, and this brings me to the object of this letter. When I was a boy (about 72 years ago) my mother sent me to the garden to collect the parsnip seed. Some one present told me to

be careful to reject, either the seed from the main stem or from the branches (I forgot which), as it would produce nothing but small roots, running into the wild parsnip, which is poisonous. Is there any truth in it?

P. NORTON.

Davidson Co., N. C.

We never heard of such a difference in the seed before, and do not believe there is any truth in the tale.—ED.

Orchard Management—Cattle Ticks—Clover Seeding.

Please answer the following questions through the columns of your paper:

1. We have a young orchard six years old with first crop of fruit this season (apples) on thin land, gravelly. Give best method of improving ground to get best results from trees. Could we use some sown crop and not have to cultivate through summer?

2. Where can I find Zenoleum for killing ticks on cattle? Do you know of some home-made remedy? Have been giving sulphur previous to this, with fair results.

3. I have a clover sod that I wish to put in wheat this fall and resow to clover again, how much seed will be best to sow. Have cut a good crop of clover (first crop) July 1st. How soon should the second crop be ploughed down? What kind of fertilizer would be best to use on same? Soil is light red, with dark red clay subsoil.

I. H. FLAUST.

Randolph Co., W. Va.

The best system of management for a young orchard in the South is to keep the land in cultivation from April until July, then in July and August to sow crimson clover or hairy vetch, with a light seeding of wheat and winter oats mixed, and let this crop cover the ground until the following April, when it should be plowed down and cultivation started; 200 or 300 pounds of acid phosphate and 100 pounds of muriate of potash per acre should be applied before seeding the clover or vetches. Such a system provides food for the trees at the lowest cost, encourages growth at the proper season, and checks and ripens the growth in the fall. If after two or three years of such management the growth becomes too luxuriant, resulting in long, sappy wood instead of the short, sturdy spurs and limbs indicative of bearing wood the orchard should be seeded down to grass in August and the crop be allowed to stand two or three years, according as the trees may seem to require. The first crop of clover and grass may be mown for hay, but the later crops should be mown and left on the land as a mulch.

2. Write the Zenner Disinfectant Co., Detroit, Mich. You will find their advertisement in the

PLANTER for the last four months. Lard with kerosene mixed in has been successfully used by some parties. But we do not think this as effective or otherwise as desirable as Zenoleum or the dips made by Laidlow, McKill & Co., of this city, or as Coopers' Dip, both of which you will also find advertised in the PLANTER. The sulphur remedy is useful, though not a perfect preventive.

3. Plow the second crop down as soon as possible now, as it is essential to the success of the wheat crop that the land shall become compacted again before seeding. After plowing the crop down keep the surface worked every week or ten days with the harrow and roller until time to sow the wheat. Usually from eight to ten pounds of clover seed is sown per acre, but we prefer to sow twelve.—ED.

Sick Hogs.

My hogs are making me weary of trying to raise enough for home use. The pigs begin to cough, many of them, before weaning, then get thin and have a vigorous case of thumps, a strenuous inside movement, I can describe by no better term than thumps, stop growing, and after a long time a portion die. Those that do not are never any good. Will some one tell me what is the trouble, and how to eradicate it?

J. R. SKINNER.

Loudoun Co., Va.

We think the probable cause of your trouble is that you do not let the sows have exercise enough and live a natural life in the pasture and woods. Sows kept closely in confinement seldom farrow strong, healthy pigs, and these lying in hot beds of litter are very susceptible to lung trouble when a cold wind strikes them. Let the sows run at large both when carrying the pigs and after the pigs are farrowed, of course, having a dry, warm house in which to shelter them in time of storms. Keep their beds dry and free from dust.—ED.

Alfalfa—Timothy Chaff.

1. Please give me some information about alfalfa, whether you sow it with other grains or by itself. Where can you get it, and at what price?

2. Would it be injurious to feed to cattle clean Timothy husk or chaff in a mash?

Culpeper Co., Va.

A SUBSCRIBER.

1. In this and last month's issue you will find much information as to the alfalfa crop. You can get the seed from the seedsmen advertising in the PLANTER. The price varies from week to week, but they will gladly quote you.

2. No.—ED.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The various crops of fruit and vegetables which have been the objects of care and attention and have cost both time and money, should be carefully harvested and shipped in the best and most acceptable packages if there is to be a reasonable return for the investment. Do not let products become over-ripe nor yet ship before they are sufficiently matured to show well when opened out. See that before being packed or stored they are cooled off and carefully culled and sorted. Ship only one quality in a package, and mark that quality on the outside, and let the contents grade up fully to the marking. Keep culls at home or ship separately. See that all products stored for home use are put where they will be protected from the weather and have a reasonable chance of keeping well. Use culls and defective products first.

Fall cabbage seed should be at once sown on rich, moist land, and the growth of the plants should be pushed on by watering with manure water and a little nitrate of soda. Dust them with tobacco dust and air-slaked lime to keep off bugs, worms and beetles. The best varieties are Flat Dutch and Savoy. Have the ground prepared for setting out the plants in the first week of September. It should be made rich, and after the plants are set out they should be pushed so that they may commence to head by November.

Broccoli plants should be set out this month. They require the same management as cabbage. Make the soil rich, and push them. They make a head like a cauliflower.

In the Eastern and Tidewater sections of the South Atlantic States sowings of English peas and snap beans may be made. The crop is an uncertain one, as an early frost will ruin it, but if this keeps off until the end of October there is money in raising these products. They are also most acceptable for the home table.

Seed may be sown this month for fall and early winter lettuce plants. Select a moist, shady place for the bed and do not make it overrich. Radish seed may be sown towards the end of the month.

Kale and Spinach may be sown at the end of the month. These should be sown where they are to grow to maturity. Sow in rows two feet apart.

Celery plants should now be set out in the rows where they are to mature. Celery requires a rich, moist soil in order that it may make a quick growth. Make the bed rich with farm-yard manure or a fertilizer having 7 or 8 per cent. of ammonia, 5 per cent. of phosphoric acid, and 8 per cent. of potash. Break the soil deep and make it fine. Set out the plants about 6 inches apart if the variety grown is a self-blanching one, so that they may crowd each other and thus blanch the stalks. If not a self-blanching variety, the plants should be set out in rows five feet apart, so as to provide soil for earthing up to blanch. Set two rows of plants in each row, six inches apart each way. A little soil should be drawn to the plants as they grow to keep them from spreading, but do not earth up the plants to blanch them until they have nearly matured their growth. Water frequently if the weather is dry.

Sow Crimson Clover on all land not wanted for other winter crops as soon as the spring crops are harvested.

Cultivation should cease in the orchard and bush fruit patches so as to encourage ripening of the wood.

Land intended to be planted in strawberries should be plowed and worked so as to encourage germination of weed seeds.

INTENSIVE TRUCKING.

Editor Southern Planter:

I always read with great interest everything from the pen of Prof. Massey. It is not only interesting, but very practical information which permeates all his articles.

In a late issue of the *PLANTER* I have read carefully his article on "The Lettuce Crop" at or near Newbern, N. C., where he speaks of using artificial heat and moisture in raising lettuce, celery, berries, etc., in competition with the Florida crops.

Now, it looks to me from my point of view, that our Newbern trucker friends are getting just a little bit too selfish, too grasping, too piggish in their work, and are trying to secure everything in sight. Latitude, Gulf Stream and altitude gives them an advantage—a great and wonderful advantage—over New York, New Jersey, Delaware, Maryland and Long Island in the matter of growing crops for the early markets, and it seems as if our Newbern friends should be content with that great advantage; but in-

stead of being content, they are using artificial warmth and moisture in order to grow the winter vegetables and thus cut out Florida and other sections to the far South.

It speaks well for Newbern people intellectually, but it is rather an infringement on good morals and manners for them to grasp after everything in sight.

Even here in the Norfolk trucking section, which is the best trucking centre in the United States, we can grow five crops per annum. It seems to us that that is good enough. We do this without resorting too much to artificial means or methods.

It is true, in some cases, the plants are started under cover, glass or cotton, and it is true a wind-mill may be on hand to supply a little water—just a little to keep the young plants growing in the thickly sown beds and prepare them for transplanting in the open fields—but, as a rule, our people question the wisdom of engaging in a large way in the intensive tillage of the soil, such as calls for artificial heat and moisture.

The "Good Master" has promised us "seed time and harvest," and the "gentle rains" fall upon the "evil and the good," and we can get along very nicely without resorting to extreme measures, to get ahead of the "other fellow."

A case in point. A gentleman not far from Norfolk rents a little three acre patch of land, with a good house thereon, paying for the land and house \$250 per annum rent. This leaves him about two and one-half acres of land to cultivate. It is thought that he will easily sell \$3,000 worth of produce from that small acreage of land.

He sowed radishes in December, and then set the land out to lettuce in March. Just before he cut the lettuce crop, he sowed beets between the lettuce rows. Just before he pulled his beets, he transplanted canteloupes by an ingenious method or twist of the wrist, between the beets, and in this way, if he keeps it up, and "fights it out on that line all summer, "he will beat the record."

He gets four crops in a little less than eight months practically without artificial heat or moisture, and can get at least one, perhaps two, more crops inside the twelve months, making five or six crops from the same land in a single season.

It seems that where nature has done so much, man had best utilize to the fullest extent the natural advantages, without taking such undue, unfair, unkind, unnecessary, unnatural, unprecedented, unjust and unwarranted advantage of their fellow-men, as the Newbern people are doing when they raise the Flori-

da crops all winter, and the Northern crops all summer.

There can't be much "tar on the heels" of the Newbern trucker. Nor does he give the flies any chance to roost on him.

But we give him due notice, that if he persists in his wild career, our people here in self-defense may have to put a glass roof over Norfolk, Nansemond and Princess Anne counties, divert the waters of the Dismal Swamp, James and Nansemond rivers for moisture, and the sun and Pocahontas coal will give us warmth enough to make it hot for those who started this unholy crusade against the perquisites, privileges and pocket-books of the whole Atlantic Coast trucking belt.

A. JEFFERS.

Norfolk, Va.

EXPERIENCE WITH PEAR BLIGHT.

Editor Southern Planter:

Much has been written about the blight on pear trees, and some writers speak very positively on the subject, declaring that it is a fungus disease—that is to say, a disease caused by a growth of minute plants which spring up suddenly like mould, mildew, smut and mushrooms. Dr. Groff says that "fire blight is a contagious germ disease like diphtheria or scarlet fever." In this belief he has the sanction of some of the learned doctors to support him, and is on what is supposed to be the orthodox side of the question, but the common name, "fire blight" indicates that the common people who gave it the name, believed that it was caused by strong heat.

According to my experience, pear blight is caused by sun scald, and the fungus growth which the microscope shows on the dead limbs is the result and not the cause of their death. My opinion is that the fungus or germs come on after the death of the limb, as the sweat on the dead man's face, and the flies and crows come to feast on the body of the dead horse when he can no longer offer resistance to their attacks. I believe the fungus does not make its appearance on the pear trees until after they have been cooked by the sun when shining uncommonly hot.

I had three pear trees of the same age that had borne fruit two years, and were full of nearly half grown pears, when two of them suddenly blighted and the other remained unhurt. One stood on ground lower than the smokehouse, which had been enriched by wood ashes which had been thrown out. Another stood below a hog pen, where the soil had become very fertile by drainage from the pen. Both these

trees had made an astonishingly fast growth, and the bark on the limbs was smooth, thin, tender and full of sap. The other tree stood on the northwest side of the ice-house, on poorer ground, and was partly shaded from the fierce rays of the noon-day sun.

One day about the latter part of June, after a spell of very hot weather, I observed that the tree below the smokehouse appeared to be dead. In one day every leaf had suddenly wilted, and was turning black, and the young pears were shrivelling. The tree presented exactly the same appearance which forest trees do when killed by the heat of a burning "follow," or new clearing in the woods. I have often seen trees standing several rods outside the "follow" that were killed by the heat, no blaze having touched them or been within five rods of them.

On removing the bark from my blighted pear tree limbs before it had begun to dry and shrink, I found it loose enough to make whistles, and the sap, of which there was a profusion, had a reddish hue, and the inside of the bark, which naturally should have been white, was of a yellowish red. The tree below the smokehouse died immediately after being blighted. There was no bother in sawing off limbs—the whole tree was removed.

A writer in the *Ohio Farmer* thinks the application of a barrel of ashes to the roots of his pear trees saved them from blight. It is my opinion that wood ashes by stimulating its growth was the cause of killing my pear tree, which stood below the smoke-house. At all events a supply of potash in the soil did not save it. The tree below the hog pen had about one-third of the limbs on the east side blighted. These were promptly sawed off, but the tree had received such a severe shock that the next year it died. The tree near the ice-house was not injured, and has borne crops of pears every year since.

As already stated, my experience leads me to believe that blight is caused by sun scald. When the tree has grown unusually fast, the bark on some of the limbs is tender and full of sap. The heat of the sun scalds the sap, causing it to ferment, and this changes its nature from a wholesome nourishment for the limb and its fruit, to a poisonous liquid, which produces death to the parts affected, and then the fungus comes like the mould on the apple sauce or the buzzards to the battle-field to feast on the dead. It is the "blood poisoning" of pear trees. If the heat of fire will kill the hardy forest trees, it is rational to suppose that the heat of the sun at a particular season will injure tender pear trees.

Infancy is the critical period of life in the human family, and also in the life of pear trees. If we get

them safely past the danger incident to this period then their prospect for long life and usefulness would be greater than for apple trees. It is said there are pear trees still growing on the Mississippi river which were planted by the Jesuit fathers 200 years ago. There are three pear trees in a neighbor's garden which, he assures me, are more than seventy years old. We have a large pear tree in our door yard which was set out by my father, and is more than fifty years old, and with an appearance of lasting fifty years longer.

I cannot help thinking that what some pomologists call fire blight on pear and apple trees is not blight at all. Some of the limbs on vigorous growing forest trees die without any apparent cause, except that the trees have put out more limbs than they could support, and the weakest die from lack of proper nutrition. It is a case of the "survival of the fittest." The pine tree when a bush throws out limbs close to the ground, and as the tree grows the lower limbs die, and are blown off by the wind, until when the tree is full grown it presents a smooth trunk straight as a ship's mast, without limbs for 50 or 60 feet from the ground. There is no doubt that limbs on pear and apple trees often die for the same reason without being blighted at all. Of course, they should be sawed off the same as if they had been blighted by the sun or the "germ disease." Some writers say isolated pear trees are seldom blighted. There must be a mistake about that. My pear trees were at least six rods from each other and blighted.

William Saunders, late Superintendent of Garden and Grounds for the Agricultural Department at Washington, in his report for 1892, says: "The fact that bacteria has been found in the diseased shoots of pear trees does not seem to prove that they are the cause of the malady, but that they are simply a consequence of the disorganization and decay of vegetable tissue." He further says: "I have noticed that during the month of May when there was over 30 degrees difference in the temperature within twenty-four hours, nine days thereafter twig blight would set in." He further says that on May 18, 1888, he noted a change of temperature between sunrise and 4 P. M. of 35 degrees, and blight set in on the 27th. In May, 1889, and in May, 1892, he noted similar changes of temperature and wrote to friends predicting that blight would appear in nine days, and it appeared as he had predicted.

Mr. Saunders is very high authority, and he did not believe in the contagious germ disease, and did believe in the sudden and great change of temperature as the cause of the injury. J. W. INGRAM.

Live Stock and Dairy.

MILK FEVER.

Editor Southern Planter:

Since the introduction of the more successful treatment for this disease, much literature has been circulated on the subject, and although the proportioned percentage of mortality under the old treatment has been converted into restoration, very little has yet been advanced which sheds much light on the true character of the disease.

It is not the writer's intention to advance new theories upon it, or yet to invite controversies regarding its character, but simply to give publicity to the results which have been obtained at this Station, together with a brief description of the causes, symptoms, treatment and the appliances for the administration of this new treatment.

The term "milk fever," for this appears to be the one by which the disease is most commonly known, is rather misleading—in fact, altogether so—as it would indicate a feverish condition in which the udder was painful and accompanied by increased temperature, both local and general, and although such conditions as this are not unfrequent they should in no way be associated with the disease under consideration. This term has undoubtedly been adopted on account of its intimate association with the parturient period, when the milk secreting glands are or should be exceedingly active. Other terms (quite as misleading as to its character) are in common use in different localities, among them being parturient apoplexy, parturient fever, puerperal fever, puerperal apoplexy, paralgia, puerperal collapse, calf fever, dropping after calving, parturient paresis, the latter being probably the most expressive and appropriate term, indicating a condition of incomplete paralysis associated with the parturient season, and even here leaves a possibility of error, as parturient paralysis, both anti- and post-partem, are known conditions, which can only be separated from the one under discussion by a careful analysis and comparison of the symptoms.

Milk fever, or more properly parturient paresis, attacks cows in the prime of their life (5 to 10 years of age), in which lacteal development has been great, as in "the improved dairy breeds," and only those to any extent which are in high condition at the time of parturition. It usually makes its appearance in from one to three days after calving, the earlier after that act the more rapidly and certainly fatal is it; it may, however, be delayed a much longer period, but the longer it is delayed the milder is the attack. (The writer recalls one case which occurred in his practice on the 20th day.)

Symptoms.—Parturient paresis usually makes its appearance after a comparatively easy and quick de-

livery, in from twelve to seventy hours. The first symptoms of excitement (when present) frequently pass unnoticed, when observed, they are those of restlessness, stamping of the feet, throwing the head, wild appearance of the eyes, with dilated pupils, belching; the calf, if still present in the stall or lot, is frequently made the object of attack. These symptoms rapidly give way to muscular weakness. The animal staggers, loses power of standing, falls to the ground. Efforts to rise become less and less effectual, until she becomes overcome with the deadly coma which soon follows, from which she never rallies, or else recovers as quickly as the attack made its appearance, and on the second or third day is apparently none the worse for her experience.

A more careful examination of our patient reveals the fact that the udder, which a short period before the attack was full of milk and active, is now slack and empty, soft and flabby to the feel, and less sensitive than one in the normal condition during such period; yields little or no milk, the horns and head are usually hot at the commencement of the attack, but during the period of coma are usually cold; the pulse is always quickened and weak, or may be almost or entirely imperceptible; breathing becomes purely mechanical, the cheeks are usually puffed out at each expiration, and the cow assumes that peculiar position characteristic of the disease, lying propped up on her breast bone, with the head thrown well around on her side, and unconscious to her surroundings.

Among the diseases for which this might be mistaken, and vice versa, might be mentioned *anti-partem* and *post-partem paralysis*; in either case, while the cow is unable to rise, there is no loss of consciousness, no previous excitement, lacteal secretions remains active, though reduced, the pulse is less affected, and the appetite, although usually impaired, is not wholly lost. *Mammitis* or inflammation of the udder occurs about the same period after calving, but the conditions are altogether different. In the former (parturient paresis) the udder becomes cold and flabby and secretions are almost, if not wholly, suspended, while in mammitis the udder becomes inflamed, hot, painful and swollen, and although it does not yield the amount of milk its size would indicate, it is on account of the inflammatory action existing in the gland, suspending its function. In mammitis, too, the cow remains standing, or is able to do so, and is disinclined to move, from the painful character of her condition.

Parturient paresis need not be confounded with metritis (inflammation of the womb), which usually follows difficult delivery, and which is accompanied by a swollen, discolored condition of the genital or-

gans, with foetid discharges, in which we usually find high fever, with suspension of many of the important functions, such as rumination, milk secretion, with constipation and scanty secretion of urine painfully passed, all being the result of infection gaining access to the genital organs through abrasions made in the mucus membranes from difficult parturition. Again, it need not be confounded with injuries to the lumbar regions, causing muscular weakness and a staggering gait, which sometimes follows the parturient act, and where difficulty of progression is the most pronounced symptom.

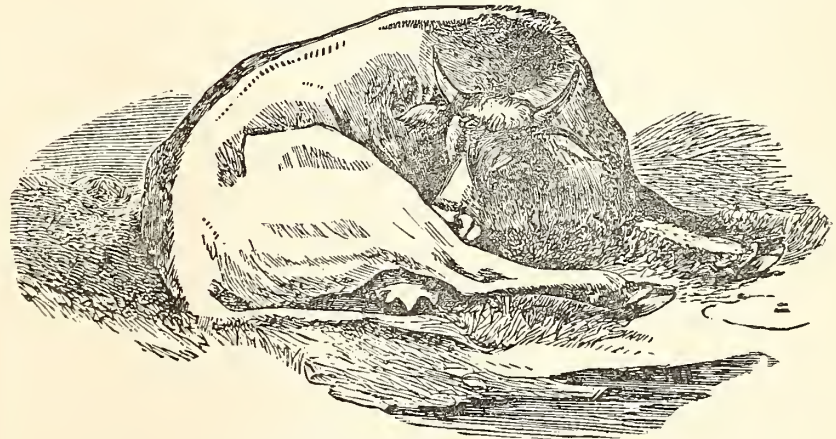
Causation.—Among the most fruitful causes of parturient paresis may be mentioned high lacteal development, coupled with general plethora, induced by high feeding and want of exercise. A damp season, which yields an abundance of grass, has in the writer's experience been the most favorable for its development. May, June and October, the most anxious months for the dairyman, whose cows come in at those seasons.

Treatment.—Previous to 1899 all manner of treatments were suggested and practiced with varying degrees of success, among them might be mentioned large doses of purgatives, stimulants, blood letting, ice, warmth or blisters to head and spine, according to the practitioner's individual ideas; some gave sedatives and swore by them, but all managed to lose from 60 to 85 per cent. of the cases treated. The writer's observations were, however, able to note this fact, that the men who gave the least medicine by the mouth were the most successful, indicating clearly that too much interference was detrimental rather than beneficial. About that year a Danish veterinarian, Schmidt, turned his attention to the udder as being the source of the trouble, and his experiments developed the fact that a solution of potassium iodide injected into the udder under the most rigid antiseptic precautions, gave surprisingly good results, 50 to 70 per cent. of patients treated by that method making good recoveries. Since then what is known as the oxygen treatment has come into vogue, and is doing even better service than Dr. Schmidt's injection, making it possible to save practically all cases which can be reached early in the attack.

The writer has watched with much interest the development of this most valuable addition to the veterinarian's equipment, and has made attempts at the development of practical appliances for the safe and effectual application of the treatment. The object

of this is to bring these appliances to the knowledge of the practical dairyman, and thus to relieve him from the everlasting dread of losing the choicest of his herd. Ambition to develop his ideal producer was held in check by fear of this disease, from which, when he had overstepped the threshold of safety he saw his best cows life snuffed out in a day.

It is known that pure air contains one-fifth by bulk of oxygen, and that in this form it is readily absorbed and appropriated by the tissues, and that the other gases are non-injurious to the tissues of the udder when uncontaminated. Advantage, therefore,



CHARACTERISTIC POSITION

of cow suffering from Parturient Paresis, and position in which she should be kept while comatose.

has been taken of this, and a supply of pure air pumped into the udder produces the desired effect almost as quickly and certainly as purified oxygen, but requires greater care in its introduction than the former (oxygen purified) on account of the contamination it is liable "*dangerously so*" to contain. While there may be no great risk in introducing air, as it occurs in an open field or lot in the entire absence of dust, and presence of bright sunlight, there can be no question of the danger from the introduction of air into the udder in a dirty or even moderately clean stable, where other animals are housed, as such air is known to be highly contaminated with bacteria, the introduction of which have been proven not only injurious but fatal to the patient so operated upon by producing infective inflammation of the glands. The writer recalls a most disastrous incident which occurred in a prominent Show ring, where contamination was pumped into the udders of upwards of a score of the best show cows for fraudulent purposes, every one of which succumbed to its deadly effects. While in itself a disastrous occurrence, this proved a valuable object lesson.

JOHN SPENCER, *Veterinarian.*

Virginia Experiment Station.

(To be Continued.)

HORSE BREEDING IN VIRGINIA.

Editor Southern Planter:

The remarks of David Swift, in your July number, bring up a great many questions of vital importance to the farmers of Virginia, who want to see the State grow to the place she should among the sisterhood. A life spent among horses, with an experience begun in Iowa, of careful training by a father who is a horse breaker and breeder of success, with a knowledge of the best of studs of the Central States, with considerable experience on the White Star SS. Line, and a careful study of the conditions as they exist in England and Scotland, induces me to offer some opinions on Mr. Swift's questions. In the first place, the horses of this section cannot be said to suffer from inbreeding, except, maybe, in the case of some man who has a colt that he has been foolish enough to save and breeds his dam, his daughters and all his progeny back again to the same horse, as I have seen in a few instances.

The one thing in which the United States breeder has made the worst mistake, and the reason that we are still going back to Lincoln and to Renfrew for such numbers of stallions, is, we have not bred to any purpose. I am not a fast horse man, still I do not want to decry the standard bred or the thoroughbred, in any way; I am proud of the work of the American fast horse breeder. But I want to say as strongly as I know how, common farmers, leave the fast horse and the light harness horse severely alone. You know nothing about the business, you might raise a dozen Lou Dillons and Star Pointers and you would never know it, and if some man was there to tell you, you could not train or perfect them so that they would benefit you. The raising of speed is a lime-time business, and the farmer has no business to follow it. If any man who is in that business who knows, and knows that it is the work he is fitted for, should read this, please pass on, this advice is not for you.

There is an unsatisfied demand for draught horses in the cities, for horses weighing upwards of 1,600; this is fact one.

Now, these horses can be raised by almost any man who will breed for that definite purpose, and can be marketed without training; this is fact two.

Now, let us see the way it will work. Suppose Mr. Swift breeds the best mares obtainable to a Shire horse, which is my preference. Under present conditions he will have to go and buy, and as they are very scarce in this State, after looking for a horse, he will come home and try to put in pra-

tice some of the methods he sees in use in the horse breeding States. The common mares will be good enough for him to start with. If he feeds well he can raise a work horse that will weigh around 1,300 or 1,400, and it is poor policy to soak himself for a big lot of money till he learns how to feed and care for his colts. He should save the best mares from this first cross, and the next time he goes to buy a horse he will buy a better one for less money than he knew how to buy the first time. From this second cross he may market a few good enough for busses or delivery horses, meanwhile he will have some good, stocky farm horses. By this time he will see his way to buy one or two pure bred mares, and be fairly launched on the horse raising world. To start out after this fashion takes time and work; on the other hand, it is surer, and maybe just as quick as buying a lot of expensive breeding stock at first. If the farmers would learn what it is that is wanted in the cities, also what is wanted for farm use, and the way to raise them, it would not be long before they would have a money making business, and at the same time have teams to work their land without going to the Mississippi Valley to get them.

I am not sure that the Shire is the best horse for this State. The feather on their legs, though I like it, has to have care in our winter mud. Many men are turning their attention to mule raising, but they should remember that to have a good mule country, they must have a big horse country first, for they are dependent upon the horse raiser for their mares. There is undoubtedly good money in mules, though Virginia farmers must learn to feed. I have seen mules that would, with proper feeding and care, have made 1,100 pound mules, grow up to 900, which means a big loss in price. One often hears it said that stock does not grow here like it does in the West. I am satisfied, and well-informed men tell me the same, that there is no country on the foot-stool where live stock will generally do better than in Virginia. It is in the men who dish out the feed. A whole chapter could be written on this subject.

In conclusion, let me restate the case. If the farmers of Virginia will breed with a definite, studied purpose, with the care that the trotting horse men have exercised, it will not take long to have the finest farm teams, and also a greater number to market. To learn of the requirements and possibilities, they need to go to countries like Central Illinois or cities like Chicago or Toronto.

A stallion of the draft breeds, of common to fair quality will be hard to buy for less than \$2,000 at

the present time, and mares also are very high. There are quite a number of Percherons in Northern Virginia, but most of them were saddled off on men who knew very little of what they were buying, and they are of the commonest type. It pays to take a little time and start out on a still hunt, if one is going to buy.

Wm. F. Woods.

Charles City Co., Va.

THE HORSE FOR THE FARM.

Editor Southern Planter:

Seeing an inquiry as to the best breed of horses for the farmer to raise in a communication from Mr. David Swift, of Louisa county, I will try and give some good reasons for recommending the Percherons.

I use and breed nothing but the pure bred Percherons. I keep my mares breeding every year, and do all the farm work, hauling, etc., and work my stallions when they are not making the season.

I have mares ranging in weight from 1,600 to 1,900 pounds, and a pair of my largest mares walk faster to mower, cultivator and plow than any team I ever owned. One of them is sixteen years old, and has never been struck with a whip that I know of. My others are as good, but not quite as fast at the walk. Mares of 1,600 pounds in weight carry a plow through stiff soil and heavy soil by their weight in the collar. An erroneous idea seems to prevail that the big ones cannot stand harrowing as well as the lighter horse, as they are said to sink deeper in the soil. This is too absurd for argument. The big Percheron has a foot in proportion to his size and weight, and does not go as deep as the light horse or mule. The man who tries farming with a big team will never go back to the lighter class of horses nor to mules, that cannot raise a colt every year, etc.

We have in this (Rockingham) county seventeen registered Percheron stallions and Clydesdales, and one Belgian, and all do big work in the stud every spring. Why? Because our market, Harrisonburg, is the best in the State. We have Pennsylvania, Maryland, West Virginia and New York buyers visit us to buy our surplus horses every third Monday in the month. One of the principal reasons why our county is the wealthiest in Virginia, taking out the cities, is because our farmers raise big, marketable horses. Numbers of our most prosperous farmers buy up all the good, big grade draft colts at weaning time at from \$50 to \$60 per head, and raise them for market. They can be put to work at two and one-

half years old and used one and one-half years on the farm, and then be sold at four years old at big figures. I have sold colts, pure bred, at the following ages and received these figures for them: One 6 months old stud colt, \$450; two yearling fillies, \$800; one 2 years old stud colt, \$600; one two year old stud, \$700; one 2 year old stud, \$950; one 5 years old, \$600; one 4 year old, \$800; one 2 year old filly, \$200; one two year old filly, \$200, and a number of aged mares at from \$275 to \$500. Now, as to the gray color, I prefer it. Why? Because everything else being equal, the gray gelding will bring from \$10 to \$20 more on the city markets than any other color. The reasons given by city users and buyers are these, the gray Percheron never fades and seldom ever gets flea bitten. They can stand more heat, and the color stamps them as Percheron grades, and the Percheron carries a better middle on less feed, can stand more hard usage, has better feet, and a more active disposition than any of the other draft breeds.

I once got the dark color craze, but experience taught me better. I still have two blacks, two bays, one roan and one brown, and in the last eighteen months I have sold four blacks, and before this appears in print another black will, I think, be sold and shipped. I bought a 2,108 pound colt under three years old this spring and paid a big price for him to take the place of a 2,200 pound stallion I had been using for five years, and although I could have bought a black from the same party for about half of what I gave for this colt, I preferred the one I got, and especially his dark gray coat.

I think Mr. Swift's preference for the Shire comes from a lack of knowledge of the breed or his acquaintance with one that was an exception to the most of them. My advice to him is to take time to investigate the matter before making an investment. Last winter at the sales of pure bred mares and stallions in several Western States, notably Illinois, Wisconsin, Kansas, the Percherons averaged more than twice as much as any other bred, and one lot sold was part of Col. Holloway's Shires and Clydes, and he has the greatest prize winners of the breed on this side of the sea. Ask F. F. Berry & Co., horse dealers; Newgrass & Co., dealers, Chicago, Ill.; I. H. Dahlgren, horse dealer, New York, and the following users of drafters, and see what they say as to best draft horse for use, and wear on city streets: Swift & Co., Armour & Co., Jacob Koehler, Schwarzchild & Sulzberger Co., Montgomery Ward & Co., and many of the great breweries of the city of Chicago,

Milwaukee, and, in fact, any city, and see what they have to say. Take the country over, and see the great increase of users of the Percheron and the great decrease of the other draft breeds and the effect has not been produced without a cause.

Mr. Swift is all right in regard to the SOUTHERN PLANTER, the ordinary farmer can get the value of the cost of one year's subscription from each issue of your journal, and may it and its editor "live long and prosper," is the wish of all of your subscribers, one of which I always expect to be.

Rockingham Co., Va.

JOHN F. LEWIS.

THE FARM HORSE.

Editor Southern Planter:

In your July number, page 472, Mr. David Swift, of Louisa, asks that some one who has had some experience with the larger breeds of horses in this State, please tell him which breed of draft horse was best adopted to our country, and was the best to raise for farm purposes.

During the last few years I have paid special attention to this subject, and shall be glad, through your well-known journal, to give him my opinion of the breed of horses that is best for the farmer to raise for farm work. The Percheron is undoubtedly the very best draft horse that has ever been imported into this county. And when the Percheron stallion is bred to good, well-shaped, sound, Virginia mares that weigh not less than 1,200 pounds, the result of this cross will always give a well-shaped foal, which, if properly cared for, will make a horse that can do all kinds of farm work, and also a horse that can trot along the road to a wagon, pull a good load, and work every day. Again, the young horses of this breeding will sell for a good price when they are four years old, as the large cities pay from \$400 to \$500 a pair for these young horses, and they are hard to find for that money. Keep the young mares, however, and sell the geldings, as the mares will do the farm work and bring a colt each spring, too. The Shires and Clydesdales are both too slow and plethoric for the road, and a good farm horse must be a good road horse, too, or he will not fill the bill as he should.

The Percheron will do well anywhere in this State if you will only give him a chance. As to the gray color, that is to his credit, as it is a sure indication of his Arabian blood—the blood which every pure bred Percheron possesses to a greater or less degree. Some people will tell you that the Percheron has bad feet. But I tell you that these bad feet are caused

by the ignorance of the blacksmith, and are not characteristic of the breed. You would not undertake to walk behind a plow all day with a pair of low quartered, high heeled shoes on your feet? Then why expect a horse that weighs 1,500 pounds to wear a narrow shoe that simply causes the rim to be pressed from his hoof by the mere weight of the animal? Horses, as well as people, should, according to their size and nature of their work, have their shoes made to protect their feet, not ruin them.

However, the farmer is not going to make a success at raising any particular breed of horses until he first learns to correct some of the many mistakes which most farmers make in this State—viz.: In the first place, they expect too much of the stallion; it matters not how good the individual is or what his breeding is. Men are too apt to point to a poorly shaped, half starved, ungainly looking colt and say that he is by such a stallion, giving the sire the credit of all the colt's failings, without ever stating that the colt was out of the poorest mare that he ever owned, and that the only reason he bred the mare was because she was not fit to use, and that the reason the colt was not any larger was because it had never had enough to eat since its birth. The stallion cannot do more than his part. You must feed the foal and its mother, then feed the colt after the same has been taken from its mother, and continue to care for and protect the colt until he is four years old, and then you will have a horse worth owning, and very little trouble to sell for a good price.

Remember that "like begets like," and never breed an unsound horse, male or female, unless you want to take chances on producing a colt that will show some unsoundness before it is ever developed. Do not use animals with spavins, ring bones or any other constitutional trouble for breeding purposes. And above all, never breed to a blind horse, or allow a blind mare to be bred, unless you know that the animal lost its eyes from a mechanical cause. See that your brood mares are not roughly treated. A good driver is a man who loves his team, is never willing to see them overloaded, or go without a feed at the proper time, and does not let them suffer for water.

J. G. FERNEYHOUGH, *State Veterinarian.*

Blacksburg, Va.

THE HORSE FOR THE SOUTHERN FARMER.

Editor Southern Planter:

The great cause of so many small horses in Virginia is the introduction of cheap Southern and Texas stock. Now, if Mr. David Swift will come

to Southwest Virginia and get one of our Norman (Percheron) stallions to cross on his small mares, he will find it to produce just the farm animal he needs. There is an imported Norman in this county that can be bought cheap, as he has been here six years, and to avoid inbreeding his owners will sell. This horse was bought by a company of farmers, ten in number, from a New York importer for \$1,250. He is a coal black and weighs 1,800 pounds, and can be bought for less than \$400. He changed owners two years ago and sold for \$400. Stop trying small mares, stop inbreeding, and breed to none but the best of the kind wanted. \$15 insurance is cheaper than \$5.

W. H. TINSLEY.

Roanoke Co., Va.

THE HORSE FOR THE VIRGINIA FARMER.

Editor Southern Planter:

I also am a subscriber to and admirer of the grand old PLANTER, as well as Mr. Swift, whose article I note in July issue on the farm horse. This has been a question that disturbed this locality for some time, and does still to a certain extent, and his article, with the request of the editor, for some one to answer, has moved me to give my small experience along these lines. Fifteen years ago I became disgusted with the quality and weight of the farm horses locally, and bought an imported Percheron stallion, at a cost of \$1,200, a direct descendant of M. W. Dunham's great Brilliant, black, and weighing about 1,600 pounds, a horse of fine action and carriage, and crossed him on the best bred and formed mares I could get of good size, and got horses that were "A one," weighing 1,300 or 1,400. I stood him in this (Gloucester) and one other county, and made money. though at first the public said it was too extreme a cross, but the proof of the pudding is in the eating. and now that I have sold him, and gone to breeding mules from the large half bred mares, those who did breed ask me all the time why I do not get another one, though some are following my example and breeding to my Jacks, because they see there is more clean money in a good three or four year old mule (or at any age) than even a good three or four year old grade Percheron. I vastly prefer the Percheron to the Shire, especially in this climate, and I know this breed will take better with the public as a stud horse.

One of my neighbors leaves to-morrow to purchase another horse of this same breed, and while at this time there are no young fillies for sale, Mr. Swift

can buy in a year or so all he wants for about \$100 per pair at five months old, but I would say to Mr. Swift that I know from actual experience there is more clean profit in raising good mules than anything along these lines, and though he may say I have written this to make the remark I am about to, I will state I have two Jacks, and need but one, and will let any one take their choice.

W. S. MOTT.

Gloucester Co., Va.

THE FARMER'S HORSE.

Editor Southern Planter:

An inquirer in your July number asks what kind of horse is the best for a farmer to raise, stating his mares weigh eight hundred and fifty pounds. If he is not able to buy both larger mares and a horse of the same type, let him buy a pure bred Percheron stallion and breed his small mares to him, and he will find a great improvement in size and farm usefulness. Keep his mare colts and continue breeding to the large horse, increasing the size each cross. Once he begins using large horses he will have no other, and should he be fortunate enough to raise one he thinks too large he will have no difficulty in disposing of it at a remunerative price. No country is better adapted to raising horses than his. Color has but little to do with the selling qualities of a first class heavy horse, and these are the only horses that can be bred with any certainty of getting what you breed for. Some farmers in the West prefer some of the other draft breeds, but the Percheron, as a draft horse, stands higher in America than any other. They are kind, gentle and easily broken to work anywhere, and consume as little feed as any horse doing the same amount and kind of work. If, as he says, he wants to buy some mares, he will find the best ones in the hands of farmers, who believe in keeping that kind, and to be induced to dispose of them a fancy price must be offered. If he is at all doubtful as to the utility of heavy horses on the farm, let him buy a pair and plow them along with a pair of small ones, and he will need no further argument. By all means let him keep away from grade stallions. Cheap grade stallions have cost our country untold wealth, and all such should be prohibited by statute. The Valley of Virginia and the Southwest know the worth of these horses, and will have nothing but the best.

ROANOKE CO.

Roanoke Co., Va.

In writing to advertisers, mention PLANTER.

The Poultry Yard.

THE BEST KIND OF GRAIN FOOD.

We are often asked the advisability of feeding poor, cheap wheat, shrivelled oats, or grains that have passed through a fire and become almost vegetable charcoal. None of these grains will prove valuable foods for the fowls. While they do contain more or less of food value, it will be necessary for the fowls to eat very much more of the shrivelled, imperfect grains or screenings to gain the proper proportion of foods to sustain body, life and egg production. The feeding of the charred or partly burned grain provides an excess of vegetable charcoal for the fowl. A very large per cent. of the burned portion of the grains is little better than ashes from the stove. Such grains contain no substance, and add no benefit or improvement to the fowls' condition. A reasonable amount of good, clean charcoal is good for the fowls. It helps to sweeten the crop and gizzard and influences the condition of the fowl very much as a soda tablet will benefit the dyspeptic after a meal.

If you are feeding a whole lot of chickens that you do not care either to gain a profitable egg supply from or to feed up and prepare for market poultry, it may be practicable to feed them almost anything that they will eat, but when you are keeping your poultry for the purpose of having plenty of eggs and eggs of high quality, and fine-flavored fowls in the best of health and condition, then feed your poultry the very best quality of grain it is possible for you to obtain. One poultryman of our acquaintance pays fifteen cents a bushel over and above regular market price for the general run of wheat, to be supplied with the choicest and plumpest of grains.

The oatmeal factories will not purchase light weight oats. This is why hulled oats are usually of the very best quality. At times it will happen that in hulling the oats in the mill where oatmeal is made that some that is rather light for making oatmeal will be hulled. This, of course, is always sold with the hulled oats that is sent out for poultry or other stock to eat, at the same time even this is far above the average of the oats that is usually bought to feed to poultry. When asked what kind of grain is the most profitable to feed to poultry, we say absolutely at all times the soundest and most perfect that you can obtain, providing your purpose is to have a profitable egg yield during the winter. If you are not particular as to this, less attention may be given the selection. It is the habit of many to put corn into the oven and heat or brown it a little for the poultry during the cold or winter months. This cannot in any way injure either the corn or the poultry, but doubt very much the statement or claim of some

that corn so prepared is responsible for an increased egg yield.

Protein of the proper kind and quality and in the proper amounts has far more influence over the egg yield than has all the charcoal or parched corn in the world. Poultry will always obtain plenty of fat-forming foods to provide the fatty part of the egg. Lime is usually supplied plentifully enough to furnish the egg shell, but albumen or white of the egg is the finest of all albumen and its making calls for the very best quality of protein.

Meat furnishes the best of these. Raw, lean meat we presume would be by far the very best, but this is entirely too expensive to furnish a full supply to the hens, so it is necessary to feed them grains of the better qualities strong in protein. Oats and wheat furnish this to a large extent, and this is why oats, wheat and a little cracked corn with some green bone are said to furnish a perfect ration for the egg producing hen.

In the feeding of hens you must consider at all times the liability or possibility of what the hen may eat or drink tainting the value of the eggs. Filth or dirt of any kind, onions, too much cabbage, and turnips are just as liable—in fact, just as certain—to taint the eggs as they will taint the milk of a cow that is fed on them.—*The Feather*.

COW PEAS FOR POULTRY.

Cow peas for food for poultry were harvested after maturity, stored in dry lofts and thrown to the fowls in scratching pens, where they were scratched over and searched for during the day.

After a few days the egg supply very visibly increased, and within a few weeks almost doubled that from an equal number of hens kept in separate quarters and fed on other grains.

The hens seemed to like the small branches and leaves, and would eat every particle except the hard, stiff stems. The general health of the flock was excellent, and not a single hen showed the least symptom of ailment during the winter season.—*Southern Agriculturist*.

It is not always convenient to procure a supply of cane sorghum seed, but in some localities it is as common as corn. It makes a good poultry food, stimulating egg production and adds variety to the daily ration.—*Commercial Poultry*.

The Horse.

NOTES.

The black stallion, Burlington has recently been purchased by J. E. Lane, of Esmont, Va., and placed in the stud at Woodmonde and Hattondale Farms. Referring to this handsome and exquisitely finished thoroughbred son of Powhatan, "The Thoroughbred Record," of Lexington, Ky., a widely recognized authority, says: "J. E. Lane, of Esmont, Va., has obtained for use in the stud the great race horse and sire, Burlington, 'the gentleman in black,' as he was known while on the turf. Burlington was a capital race horse, winning among other races the Criterion stakes and Pelham Handicap as a two-year-old. At three he won the Brooklyn Derby, Belmont, Trial and Tidal Stakes from the best of his day. Burlington is by Powhatan (son of imp. Leamington and Maiden by Lexington) out of imp. Invercauld by St. Albans, she out of Eleanor by Voltigeur, she out of Themis by Touchstone, she out of Rectitude by Lottery, etc. This is the No. 9 family of the Bruce Lowe figure system, from which come Mercury, Bendigo and Peter, a great racing and producing family. Mr. Lane has a number of grandly bred mares and in looking for a suitable stallion to mate with this band of matrons he purchased of Catesby Woodford, Para, Ky., the handsome son of Powhatan and Invercauld. McCleary, Practice, Aileen Wilson, Yours Truly, Quincy and Miss Hume, other good winners are by Burlington, and with the excellent opportunities that Mr. Lane will give him, taking into consideration his great record as a high-class race horse and excellent breeding, he should receive liberal patronage from breeders."



At the sale of horses in training by the Fasig-Tipton Company, New York, held there recently, C. F. Dyer disposed of three head of Virginia bred two year olds in Red Reynard, bay colt, by imp. Fatherless, dam Miss Rhoddie, by Milner, Renault, bay colt, by imp. Charaxus, dam Merry Maid, by Eolus, and Axis, chestnut colt, by imp. Charaxus, dam Ethie, by Eolus. Rey Reynard went to H. C. Schultz for \$1,000, Renault to W. C. Michael for \$150, and Axis to Alex. Shields for \$100.



Dr. James Kerr, of the Antrim stud, Warrenton, Va., has lost by death, due to accidental causes, the bay mare Aunt Bella, by imp. Ardington, dam Aunt Sally, by Salvator. This mare was cut down in a steeplechase at Fredericksburg last month. She was not large, but well formed and handsome, and valued on account of rich breeding and speed.

Ellerslie bred horses were in evidence at the recent meeting at Fort Erie, Ontario, where Minotaur, 4, by Eon, dam Mermaid, Eonic's dam, by imp. St. Blaise; Mistiss, 2, by imp. Fatherless, dam Eostee, by Eolus; Chamblee, 4, by imp. Charaxus, dam Cantey, by Eolus, and others from that noted Virginia breeding establishment earned winning brackets.



Among the mares sent from a distance and bred to Kelly, 2:27, during the present season may be mentioned Juno Wilkes, 2:27, a large, handsome chestnut, daughter of Victor Wilkes and Nelly Lambert, dam of Madge Wilkes, 2:29 $\frac{3}{4}$, by Daniel Lambert. She is owned by Capt. W. G. Sills, of the United States Army, whose regiment is now stationed in Texas. Along with Juno Wilkes came her foal of 1904, a well grown, handsome chestnut colt, by Suffix, son of Superior, 2:17 $\frac{1}{4}$.



Manager Joel Cochran, of the Albemarle Horse Show Association, Charlottesville, Va., is sending out quite a handsome catalogue of the prizes to be distributed there during the annual exhibition of this well-known and popular organization, to be held on August 3d and 4th. Charlottesville is the central point of an important breeding and grazing district, one which furnishes horses able to go out and win important events on the big race tracks. Charlottesville is quite an important railroad centre, too, hence being easy of access the annual Horse Show is an event looked forward to for months ahead in that section, and since its inception has always been accorded generous patronage. The prizes have been enlarged this season, and other important classes added to the programme this season, which renders it even more attractive than formerly. Secretary F. B. Treiher and Treasurer A. V. Conway are earnest co-workers of Manager Cochran, while other officers of the association include such men as E. O. Meyer, president; H. E. McGruder, first vice-president; George B. Goodyear, second vice-president, and C. Ruffin Randolph, third vice-president.

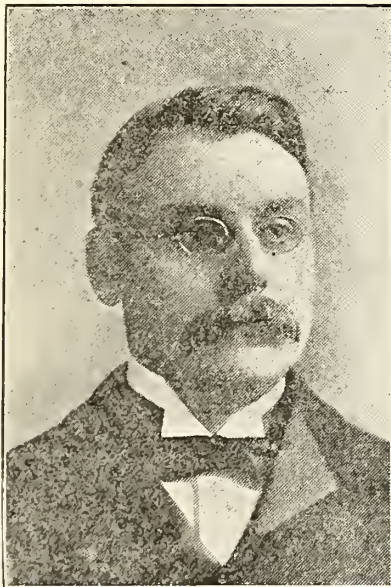


W. C. Dyer, Roanoke, Va., is working for speed the pacers, Little Belle, 2:13 $\frac{1}{4}$, and Sport, 2:22 $\frac{1}{4}$, and a half dozen or more green trotters. Dyer's horses are quartered at the half mile track of the Roanoke Fair Association, and all of them are doing well. Among the trotters in his charge are Capt. Cook, gray gelding, 4, by Jack Cook; Lady Dudley, by Norfolk, dam Filigree, by Mambrino Dudley, and a couple of promising fillies, both four year olds, by Red Leo, 2:26 $\frac{1}{4}$. BROAD ROCK.

Miscellaneous.

THE NEW DIRECTOR OF THE VIRGINIA EXPERIMENT STATION.

We have pleasure in presenting a likeness of the gentleman who has just been appointed Director of the Virginia Experiment Station and Dean of the Agricultural Department of the Virginia Polytechnic Institute at Blacksburg. We hail this appointment of Prof. Soule as the beginning of a new era in the agricultural advancement of the State. He is a young man of untiring energy and perseverance, wholly devoted to his profession, who has by his ability and marked individuality made for himself a



PROF. A. M. SOULE.

noted position amongst the teachers of scientific agriculture throughout the country. The son of a Canadian farmer, and brought up on the farm, he knows practically the difficulties and wants of the farmer, and he has shown by the work he has done at the Tennessee Experiment Station and Agricultural College, and by his articles in the leading agricultural journals of the country that he is ready, able and willing to help in the solution of the every-day problems of the farm. We count Virginia very fortunate in having secured his services. In this issue will be found an article from Prof. R. H. Price, giving further details of Prof. Soule's work in the past. Prof. Price and he were co-workers for some years at the Texas Experiment Station.

In writing to advertisers, mention PLANTER.

A STATE FARMER'S ORGANIZATION NEEDED.

Editor Southern Planter:

In several Southern States there are successful farmer's organizations. Various sub-organizations, such as stockmen, dairymen, nurserymen, horticulturists, etc., come together for a two or three days' meeting. Each division or section meets a few times by itself to discuss matters purely personal, but all sections come together in a body to discuss matters in which all are interested. Now, why cannot Virginia have such an organization? In all such successful organizations the politician is kept in the background. Leading scientists and experts are invited to address the meetings, but no politician. We need such an organization to get appropriations and laws passed favorable to agriculture. We need such an influence upon our young men now engaging in agricultural pursuits. There are still men left in the State who do not think it exactly honorable to work on the farm. The only true gentleman, in their opinion, is the one with "lily white hands," a man of leisure. We want all such men to "rub up against" a strong farmer's organization.

There is a good horticultural organization in the State, and its influence for good has been great. Large organizations have much influence on the railroads in securing favorable freight rates. When the requests of our agricultural boards are backed by a strong State organization they will have much weight before the Legislature. Other interests organize, why not have an organization of farmer's interests. Why should he remain solitary and alone with all the parasites trying to feed upon him. The farmer's occupation is honorable and most noble. But for sympathy and co-operation he must look to his brother farmers, and not to those whose interests are entirely different. "In union there is strength." Let us organize. We can do it if we will.

Montgomery Co., Va.

R. H. PRICE.

PLANT FOR NAME.

Enclosed find a weed which is a very obnoxious one. Please give name of it in next number of the PLANTER.

Giles Co., Va.

SUBSCRIBER.

As we were unable to identify the plant we sent it to the Department of Agriculture, Washington. The Botanist, Prof. Dewey, writes us that it is yellow hawk weed (*Hieracium praealtum*). He says that

this is the first record he has of it South of the northern boundary of Pennsylvania. In the section from northeastern New York to Maine it is known as the "King Devil Weed," and is regarded as the worst weed in that region. It is propagated not only by its seeds, but by underground root stalks and by runners above ground. It has been found that the weed may be killed by the application of salt at the rate of about 300 pounds to the acre. In Vermont, where this remedy was tried, the salt improved the growth of Kentucky Blue Grass.—Ed.

GRASS SEEDING FOR HAY.

I have eleven acres of gravelly upland I want to sow in grass alone this fall to make hay next summer. Which would be the best grass to sow? How much per acre? What time is best to sow? What kind of fertilizer should I use, and how much per acre? Would you recommend sowing any nitrate of soda on grass in the fall?

W. M. H.

Rockingham Co., Va.

In our article on "Work for the Month" in this issue will be found advice as to seeding grass, which will answer most of the above queries. On page 479 of the July issue will be found Mr. Clark's formula for the fertilizer which he uses to secure his great crops. We approve the same for use here in the South, except that we would not apply the nitrate of soda in the fall when seeding the crop, but would use the same as a top dressing in spring after the crop has commenced to grow.—Ed.

A NEW DIRECTOR ELECTED FOR THE VIRGINIA EXPERIMENT STATION.

Editor Southern Planter:

Prof. Andrew MacNarwin Soule, of Tennessee Experiment Station, has recently been elected Director of the Virginia Experiment Station and Dean of the Agricultural Department. I consider the Board very fortunate in securing his services. Working with him at the Texas Experiment Station for three years, I found him to be an able and hard-working officer. His work at the Tennessee Experiment Station has taken high rank. He has built up the agricultural work there immensely. He also is an able teacher. His influence with young men is excellent. I expect to see much larger numbers of young men take the agricultural course under his management. He is a strong young man, both mentally and physically. A native of Canada, he was educated at Guelph Agricultural College. He worked a few

years at the Missouri Experiment Station, and his later work in Texas and Tennessee at the Experiment Stations, make him very familiar with our Southern ways and customs. I consider him one of us. He married a Southern lady. I think it will not be long before the State will feel his strong influence along agricultural lines. He is a man who spends money in his agricultural experiments, and the Board will have their eyes opened when some of his requests go in for agricultural equipment and experimental work. Instead of spending something like \$12,000 for salaries out of the Federal appropriation of \$15,000 for station work, the Agricultural Department alone will need more than the three thousand dollars left. I want to see more of this Station money devoted to true Station work. The farmers of the State have a very strong representative along these lines in Prof. Soule. While the Board is to be congratulated upon its wise selection, it appears also that the Board has given him latitude for excellent work. Under his management I expect the Station to be taken off the "side track" and be placed on the "main line," for which it was intended. Now, if the Board could get a man to do creditable work in the position Prof. Alwood has recently resigned, and to work with Prof. Soule, on mycological lines, and with the completion of the new agricultural building, the Virginia Experiment Station would be making rapid progress. Many changes are taking place both in the College and Station, and we hope all will be for the better. As a farmer, I desire to give credit where I think it is due, and to offer suggestions for improvement where I think they are needed. When the State Experiment Station starts off well, we want to turn our attention to the State Department of Agriculture.

Montgomery Co., Va.

R. H. PRICE.

DISINFECTANTS AND LICE KILLERS.

The July issue of the SOUTHERN PLANTER contains some suggestions upon the subject of gapes in chickens, in which carbolic acid is recommended as a remedy.

There is something about the use of carbolic acid that reminds one of the glorious Fourth, just past. Last year, the year before, and the year before that many people lost their lives from explosions, accidental discharges, and the ensuing complications. Every person who handles fireworks knows full well that he is running a risk. Nevertheless when July 4, 1904, came it found plenty of enthusiastic people ready to assume this risk and eager to par-

ticipate in the celebration with toy cannons, giant crackers, bombs and torpedoes. Some of those very people who said to themselves on July 3d that there is really no danger, if one is careful, are now crippled or dead from wounds inflicted by fireworks.

So it is with the farmer or poultryman who persists in using poisonous and caustic drugs in the drinking water and food of his animals. He has never had an accident, and therefore assumes that he never will have one. Sooner or later, however, there comes a time when a mistake is made and disastrous results follow. A child gets hold of the bottle that has been carelessly left within his reach, the contents are mistaken for something else, or an overdose is given, and a heavy penalty is the result.

There might be a ghost of an excuse for this pernicious habit of using deadly poisons if there were no substitute for these dangerous drugs, which has not their poisonous qualities. Carbolic acid, bichloride of mercury, chloride of zinc and preparations of a similar nature are disinfectants, but they are also deadly poisons. It is difficult to understand why people will persist in handling such drugs when there are efficient disinfectants which are relatively non-poisonous to the higher animals.

Kerosene and kerosene emulsion are also much used about poultry houses and stock barns. Every person who uses them will admit that they are exceedingly disagreeable to handle, and that there is always an element of danger connected with their use. There is also another objection to the last two products mentioned. It should be remembered that in the care of all live stock there are two classes of parasitic organisms to be combatted. First, there are the insect pests, consisting of lice, ticks, fleas, mites, etc. Any preparation which destroys these pests is termed an insecticide. The other class of pests which must be destroyed in order that live stock may be in the best and most healthy condition is the disease germs. Cholera, roup, distemper, glanders, and a multitude of other disorders are brought about by the presence of minute germs, quite different from insects. The preparation which is used to destroy these pests is termed a germicide or a disinfectant. An awkward and antiquated method of combatting these two classes of pests would be to spray or sprinkle the buildings first with an insecticide, then with a disinfectant. An insecticide is not necessarily a disinfectant, and vice versa. However, there are solutions and emulsions which possess the qualities of both. The coal-tar carbolic preparations have been demonstrated to be efficient destroyers of

insects and disease germs. Therefore, a more proper and progressive method of ridding the premises of the two classes of pests is by spraying or sprinkling with a solution, which is an insecticide and also a disinfectant. Notwithstanding the fact that Experiment Stations have called the attention of the farmer to this fact, there are many who are using kerosene emulsion with the mistaken idea that they are destroying disease germs. Dr. L. L. Lewis, of the Oklahoma Experiment Station, says: "Kerosene emulsion has no qualities as a disinfectant sufficient to warrant its use."

If kerosene emulsion is used it must be followed by another spraying with a liquid which will disinfect. It is needless to say that such a repetition of work is unnecessary and unwarranted just as much as a second planting of a field of grain is unnecessary when one can be made to do the work.

The difficulty lies in the mania some persons appear to have for "home remedies." No doubt there are home remedies that are valuable and home treatments that are warranted. The more farmers can know about these the better it will be for them. But the difficulty arises when Mary Jones, observing that her chickens have a disorder which she calls roup (and which, by the way, may not be roup at all), forthwith puts some kerosene down their throats or some axle grease on their toes and soon afterward notices an improvement. Mary then hastens to announce through the columns of her favorite agricultural journal that kerosene or axle grease, as the case may be, is an "unfailing remedy" for roup. The chances are that the disease was not roup in the first place, and that the remedy applied had no effect upon it, in the second place. Our friend is drawing conclusions from a single case, which is always unsafe. Furthermore, she is assuming conditions which may or may not have been present. It requires one familiar with animal diseases to correctly diagnose a case. Not that an experienced poultry keeper is unable to recognize a case of roup or gapes, but those unskilled in such matters often fail to note details and conditions that are essential. Thus the treatment that proves successful in one case may be disastrous in another. Therein lies the danger of Mary Jones' positive announcement that kerosene or axle grease is a panacea for all ills.

Let the farmer and poultry keeper bear in mind that cleanliness and sanitation are the prime requisites of health and thrift. Animals that are free from insect pests are in a much better position to resist disease than those whose vitality is being sapped

by myriads of lice, ticks or fleas. Give the live stock clean, sanitary surroundings and little trouble will be experienced from disease. We can scarcely prevent the introduction of dangerous disease germs into our barns, stables, yards and poultry quarters. These germs float in the air; they may be carried in the water, dirt and dust are often loaded with them; they are almost omnipresent. We may, however, keep the live stock quarters in such a condition that such germs as find lodgment there will be destroyed and thus their disastrous effects obviated. If yards and buildings are sprayed frequently with a disinfectant solution, feeding troughs and boxes treated likewise, and any animal giving evidences of contagion promptly isolated, and disinfected, the danger will be reduced to a minimum. Here, again, it is evident that if the solution which is used to destroy the disease germs is at the same time destroying insect pests an additional insurance against disease is provided.

A READER.

AN EXODUS.

Editor Southern Planter:

When is this movement of our young men, our middle aged men, and our old men, from country to city to cease? Why this unseemly and unreasoning haste to leave the fresh, pure air and sunshine of the country, which God has made, and bury one's self in the great, wicked cities, which man, wicked man, has made, and which in 99 cases out of every 100 are badly made and badly governed.

What does it advantage a man, to gain a precarious foothold and a scanty, meagre living in the city, and lose his old home in the country? What are thousands upon thousands of people daily losing when they move from the farm, in the fresh, pure air and sunshine of the country, and take up restricted, unhealthful quarters in the great big, noisy, dusty, dirty city?

When is this "exodus" from farm to city to cease? To-day there are more than 1,000 families in the city of Norfolk, who pine for the farm they left behind them. More than 1,000 families in one city, which ought to be out on the farm, producing something instead of being in the great city consuming everything.

Yesterday we spent in the country with a farmer. He had fine, registered Jerseys; good pigs, plenty of fat chickens. The rustling corn was on every side. There is nothing which whispers of plenty like the waving corn blades, rustling in the wind.

At the table we partook of a sumptuous repast. There was chicken, eggs, ham, milk, butter, cream,

cheese, pickles of all kinds, tomatoes, beets, apples, corn, potatoes, corn bread, wheat bread, coffee, etc. Take off the wheat bread, coffee, sugar, pepper and salt, and the rest of that splendid meal was grown right upon the farm, where it was consumed.

All winter long this man has green vegetables in his garden. He never buys any meat, lard, butter, milk or eggs. His wife can get up a meal on short notice for five, ten or for fifty people at any time of the year, and that, too, without running to the corner grocery, meat shop, bakery, etc.

His fruit trees are now loaded with fruit of all kinds. The blackberry bushes on the edges of his fields are also loaded down with the delicious fruit. The vegetable crops are planted in relays, so to speak, so that green stuff is coming on all the time for market, and for that best of markets, his own table.

As this particular farm where we visited faced on the salt water, fish, oysters, clams and crabs were to be had all the year, just for the catching. With the waters full of such food, and two or three hundred chickens running around, with fat pigs in the pen, and fine Jersey cows chewing the cud, and the genial sunshine and refreshing showers making all the crops grow and mature rapidly, such a man, so located, is better off, even if he has but ten acres in the country, than if getting \$1,200 to \$1,500 a year salary in the city. He will use every dollar of his salary to buy what he eats and wears—that is to say, he will spend what is left after he pays rents, taxes and all the penalties which a man has to pay who makes his home in the city.

It is not necessary for a man to own a big home in the country. Even if he has but ten acres, it will make him independent, provided he will handle it right. He can have one cow, which will insure him butter, cream, milk, Dutch cheese, etc. He can have two pigs, which insures his lard, pork, sausage, bacon, etc., for the year. He can have 50 or 100 hens, which insure him eggs and chicks to sell and to eat. He can have a great big garden and an assortment of fruit trees, and have fruits and vegetables all the year, his own raising. He can have a little surplus to sell all the time—a little butter, a few eggs, a few chickens, a few vegetables, a little fruit, and these "littles" will bring in cash enough to buy that which cannot be raised or grown upon the little farm. If close to markets, an acre or two in berries or Irish potatoes or in many other similar crops will pay remarkably well. People within easy reach of this city are now making a living from a very small acreage of land.

Last year an aged darkey made \$200 clear of all

expense from about one acre in berries. This year a gentleman is making nearly \$1,000 per acre, net profit, from a little two and one-half acre patch of land. As a rule, the smaller the farm the better it can be fertilized with brains. There is a first class fertilizer factory in the head of every practical farmer. He should use his head and his hands, and then his heart will be in his work.

Such men on a 50 acre farm or a 20 acre farm or 10 acre or even on a 5 acre farm cannot be downed. They will alight on their feet every time like a cat. When the farmer on a 640 acre farm falls or fails, he comes down ker-flop flat on his back. You cannot put a ten acre farmer on his back. He is right side up every way you take him. He covers his farm, and his farm keeps and takes care of him.

The practical, thorough, active farmer on his farm in Eastern Virginia near the sea, is the most independent farmer in the world. Put a great big high fence around him and fence him off from the rest of the world, keep him in and the rest of the world out, and after a ten year period you will find him right side up with care. It is true his clothes might be worse for wear, and a little out of fashion, but he would have good digestion and good health and a clear conscience.

Every man should lay out his farm and arrange his work and plant his crops so as to make his farm as near self-supporting as possible. Sell as much and buy as little as possible. That is what makes nations prosperous, and that will also make prosperity for the individual. The farmers of Eastern Virginia can, if they will, make themselves the most truly independent of any class of people in the world. Fish, oysters, clams, crabs, chickens, eggs, beef, pork, mutton, lamb, lard, fruits, vegetables of all kinds all the year; corn, wheat, oats, hay, potatoes, etc., a little to sell, will buy all there is needed to buy.

The soil and the climate here favor the growing of all the farm crops found in the temperate zone. The markets demand everything grown. And it is really and truly surprising, and very interesting to see and to know how independent a farmer can be here, if he will but make a fair effort in that direction. The salaried man pays out every dollar of his salary, and for what does he pay it? He pays it all out for that which, in the country practically costs him nothing. The farmer in the country, who just succeeds in making ends meet, is really and truly much more independent than the man in the city drawing a salary even of \$2,000 per annum.

Stick to the country young man, middle aged man, old man. Keep your brain clear, head level, stomach in order, conscience in good shape, and remember that it is to the country that the country must go for her statesmen, her warriors, her greatest and best professional men of all classes.

Mark the prediction, within ten years the movement from city to country will begin. That will be a healthy "exodus." That will mean prosperity, not only individual, but collective prosperity. Such a movement will help all classes and all conditions and injure none. Speed the day when it shall become popular and fashionable to "exodus" from city to country.

A. JEFFERS.

MAKING A CONCRETE FLOOR.

C. W., Mt. Victory, O., asks what it will cost to build a cement floor in his cattle barn, 28x58. Crushed stone is \$1 per yard, sand 50 cents, and cement \$2.50 per barrel. He wishes to know how thick the floor should be.

It will take a yard of crushed stone, a barrel of cement and about half a yard of sand, according to the fineness of the stone, to make a yard of concrete. That will mean 27 cubic feet, which, if laid four inches thick, will lay 81 square feet of floor. Therefore to lay your 1,624 square feet will take 20 barrels of cement, 20 yards of stone and about 10 loads of sand. It will take a little more cement than that, for there should be a half inch of richer cement mortar laid on before the under layer is quite set. You should buy cement for less money than \$2.50 per barrel.

JOSEPH E. WING.

INTENSIVE TRUCKING.

I am interested in the growing of various truck crops, and would be glad if Mr. Jeffers will give more in detail the method of growing four crops in one year. I would like to know how the spinach was planted, how wide between the rows? Was the lettuce in rows or in beds? What variety of bean planted, and variety of canteloupe? And last of all, where on earth a market was found for the stuff at the prices quoted so late in the season? I grow lettuce, but have never been able to get anything like such prices so late as May 15th, and the lettuce crop could not have been marketed sooner. I have only been in the business a few years, and feel a great need of information along these lines.

Pittsylvania Co., Va.

W. A. CHERRY.

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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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Rate card furnished on application.

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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 our papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

NO ANONYMOUS communications or enquiries will receive attention.

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

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PUBLISHER'S NOTES.

To Advertisers.

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

Trial Subscriptions.

For 10 cents, coin or stamps, we will send the SOUTHERN PLANTER for three months as a trial subscription. As hundreds of our readers will be in attendance upon all sorts of picnics during this month, we would very much appreciate it, if they will bring this little offer to the notice of their friends. In this way, we will be enabled to get hold of a lot of non-reading farmers. Once we get them to reading, we are sure that we can help them as well as ourselves.

FARMERS ARE USING THEIR BRAINS.

LESS MANUAL LABOR ON THE FARM TODAY THAN EVER BEFORE.

Probably no other calling has made greater strides during the past ten years than farming. The brainiest men are studying the problems of the farm, and the work done by some of the machinery in present use is a little short of marvelous. All kinds of farm labor is now performed better, quicker and cheaper by machinery than it possibly could be done by hand.

One of the best known firms engaged in the building of agricultural machinery is the A. B. Farquhar Co., Ltd., of York, Pa. Their line comprises Engines, Boilers, Threshers, Saw Mills, Drills, Planters, etc., which are famous for their efficiency, economy and safety.

The exhibit of the Farquhar Co. in the Palace of Agriculture at the St. Louis World's Fair will interest every farmer, lumberman and miller. Every one visiting the Fair should make a point of inspecting this splendid line of machinery, and will be well repaid for the trouble.

An illustrated catalogue describing this machinery will be mailed free to all who write The A. B. Farquhar Co., Ltd., York, Pa.

Wood's Seeds.

Crimson Clover

Sown at the last working of the Corn or Cotton Crop, can be plowed under the following April or May in time to plant corn or other crops the same season. Crimson Clover prevents winter leaching of the soil, is equal in fertilizing value to a good application of stable manure and will wonderfully increase the yield and quality of corn or other crops which follow it. It also makes splendid winter and spring grazing, fine early green feed, or a good hay crop. Even if the crop is cut off, the action of the roots and stubble improve the land to a marked degree.

Write for price and special circular telling about seeding etc.

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

Wood's Descriptive Fall Catalog, ready about August 1st, tells all about Farm and Vegetable Seeds for Fall planting. Mailed free on request.

Some Bargains.

- 1 CHATHAM FAN complete; screens, elevator and bagging attachment. Regular price, \$36; my price, \$16. This is the best Fan made and cleans perfectly all kinds of grain and seed.
- 5 BUCKEYE CORN HARVESTERS, made by Foss Mfg. Co. Regular price, \$18; my price, \$6 each. They will save double the cost in a week.
- 1 COOK'S PORTABLE EVAPORATOR FURNACE on rockers; galvanized pan, stack, etc., complete. Regular price, \$22; my price, \$11.
- 1 40-GAL. PORTABLE COOKING KETTLE for stock; has iron frame around it, covering outside, furnace has grate, door and stack, needs no bricking up or setting. Regular price, \$11; my price, \$6. This is a treasure on any farm.

All of the above are new and complete, and may be returned if purchaser is not pleased on seeing them. They must be sold at once.
GEO. T. KING, Richmond, Va.

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.

SAN JOSE SCALE

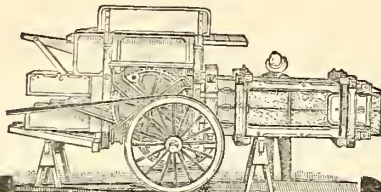
and other INSECTS killed by

GOOD'S

Caustic Potash Whale-Oil Soap No. 3

Endorsed by U. S. Dept. of Agri. and State Experiment Stations. This soap is a Fertilizer as well as an Insecticide. 50-lb. kegs, \$2.50; 100-lb. kegs, \$4.50; half barrel, 270 lb., \$7c per lb.; barrel, 425 lb., \$9c. Send for Booklet.

JAMES GOOD, Original Maker,
989-41 N. Front Street, Philadelphia, Pa.

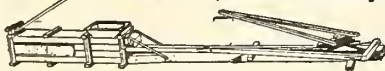


DEDERICK'S BALING PRESSES

are made for every baling need, in wood or steel, every style and size, from hand power to the largest power press made. Why you should buy Dederick Presses, and how we can save you money, is convincingly told in our catalogue, which illustrates the latest and greatest variety of baling machinery made. Send for a copy to-day. It's free. P. K. DEDERICK'S SONS, 87 Tirol St., Albany, N. Y.

The Red Ripper HAY PRESS

Saves Time, Labor and Money.



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

Write for Free Illustrated Booklet.

SIKES MFG. CO., Helena, Ga.

BALE YOUR OWN HAY. MILLET SORGHUM PEAVINES ETC.

WITH A "HANDY" BALER THE STRONGEST, MOST POWERFUL, SWIFTEST AND LIGHTEST OPERATING HAND PRESS EVER PUT ON THE MARKET.

FINISHES ABSOLUTELY UNIFORM BALES STANDARD SIZE EITHER LIGHT OR HEAVY.

LITTLE GIANT HAY PRESS CO.

DALLAS, TEXAS. WRITE FOR PARTICULARS. CATALOG HAND & HORSE POWER PRESSES FREE.

CHAMPION COMBINED GASOLINE ENGINE AND HAY PRESS

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

BALES 15 TONS A DAY HAY



Our catalogue gives valuable pointers about Press construction and operation. Our 37 years' experience make the Gem and Victor Presses most durable, easily operated and least expensive. Send postal for book. GEO. ERTLE CO., Quincy, Ill.

SECRET

BENEVOLENT SOCIETY FOR FARMERS AND THEIR WIVES. Pays \$10 weekly sick, \$20 weekly accident and \$2,000 death benefit, and \$50 old age pension. Organizers wanted, good pay. KNIGHTS OF AGRICULTURE, Washington, D. C.

WITH THE ADVERTISERS.

A new advertiser this month is the Cottage Grove Farm. Finely bred Berkshires are offered.

A splendid lot of grade breeding ewes and a few good bucks are offered by that veteran sheep breeder, Mr. John Mathews.

Mr. T. M. Arrasmith has some excellent Berkshire blood which he is anxious to disseminate at very reasonable prices.

Angora goats, bucks, wethers and does can be gotten from J. H. Harpster in any quantity desired at low prices.

The Nut Nursery Company is another new advertiser in this issue. Parties interested in pecans and other similar stock should look up the ad.

Three splendid thoroughbred mares are offered for sale in another column by Mr. W. Chamberlain.

Inquirers for Red Poll Cattle are referred to the ad. of Arrowhead Stock Farm, in this number.

A splendid flock of Southdown sheep is offered by Col. R. H. Dulany's manager. There is probably no better blood in the country.

Soil infected with alfalfa bacteria can be had in any quantity of Mr. J. B. Watkins at very reasonable prices.

Mr. C. M. Bergh will sell his Guernsey bull to prevent inbreeding.

The Highland Stock Farm has an ad. in another column. Shorthorn cattle, Poland China hogs and Scotch Collie dogs are offered. Special prices will obtain for the present. Look up the ad.

Light Brahma fowls can be had of Mr. J. H. Fraser. Look up his ad. in another column.

Duntreath Berkshires are described in an ad. on another page as "the very best."

Mr. A. L. French, of the Sunny Home Angus Farm, has recently made a splendid addition to his herd, and is giving the public the benefit of it, according to his ad. on another page.

Dorsets and Herefords, at right prices, can be gotten from H. Armstrong.

PLEASED WITH THE RESULTS OF CAUSTIC BALSAM.

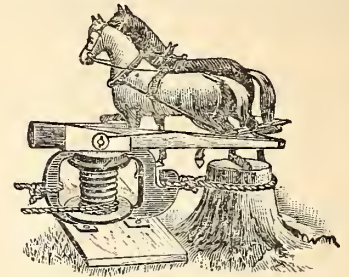
Washington, Va., Jan. 27, 1904.

The Lawrence-Williams Co., Cleveland, O.:

I have used GOMBAULT'S CAUSTIC BALSAM on four horses, one for enlarged ankle; one colt, as absorbent; on third colt, for hard lump on bone from kick, used as liniment and blister; and fourth, on a horse for sprained ankle and tendon. Have been pleased with results and expect to order more soon. JNO. A. KEYSER.

"You are accused of running the end of your umbrella in this man's eye. Are you guilty or not guilty?"
"Not guilty, your honor. The umbrella doesn't belong to me."

Farmers Having Stumps

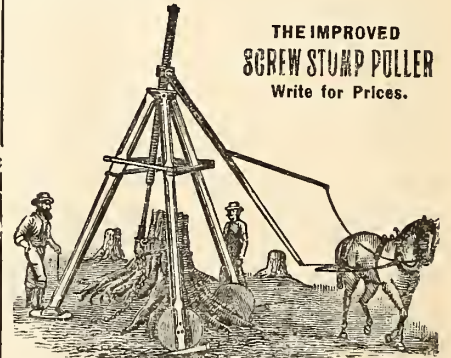


to pull or land to clear, will do well to investigate

The Monarch Grubber and Stump Puller.

It is the best on earth; you make no mistake in buying of a man of 5 years experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money. 5 sizes. Write for catalogue and prices. JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Grottoes, Va.

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.



Monarch Stump Puller

Will pull stump 7-ft. in diameter. Guaranteed to stand a strain of 250,000 lbs. For catalogue and discount on first machine address

MONARCH GRUBBER CO., Lone Tree, Iowa.

Make Your Own Fertilizer

at Small Cost with

Wilson's Phosphate Mills.



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



20th CENTURY Wagon Box and Rack

One of the most convenient, useful, and labor-saving articles ever offered to the farmer. Substantially made and finished from best materials. Malleable castings and very strong. When closed it is available for hauling corn, potatoes, wood, live stock, etc. By suspending canvas or muslin from top, inside, will hold 100 bushels of bulk grain.

SIDES CAN BE LOWERED INSTANTLY
And it becomes a solid rack for hauling hay, straw, fodder, sheaf wheat etc., with ample strength and capacity for three tons. Very convenient for husking corn with side lowered as shown in cut. Made 14 feet long and regular widths. Sold direct to farmers at manufacturers' prices, freight prepaid. Write for Catalogue and Price.

MODEL MFG. CO., Box Muncie, Ind.

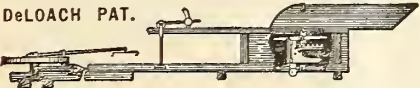


DE LOACH PAT.

Variable Friction Feed

Save Power and Repairs. Make Smooth Lumber. Suits to 4 H. P. up—for the farmer or the lumber man. Also shingle Mills, Lath Mills, Buhr Mills, Planers and Hay Presses. Catalog FREE.

DELOACH PAT.

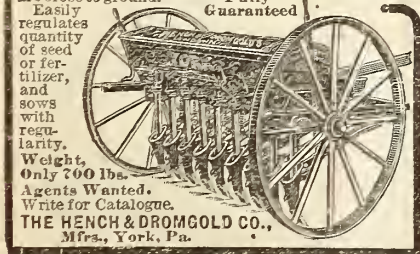


TRIPLEX HAY BALER. SELF-FEEDER. LOW IN PRICE For Hand, Horse or Belt Power. Leverage 40 to 1. Bales quicker, easier and more solid than any other. Also Grinding Mills, Water Wheels, Etc.

120 LIBERTY ST. DE LOACH MILL MFG. CO. NEW YORK. Box 600 Atlanta, Ga. ST. LOUIS

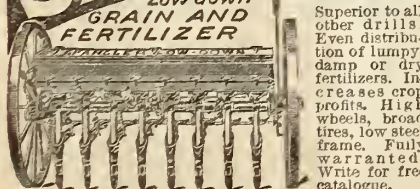
GRAIN DRILL and FERTILIZER

The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Fully Guaranteed.



Easily regulates quantity of seed or fertilizer, and sows with regularity. Weight Only 700 lbs. Agents Wanted. Write for Catalogue. **THE HENCH & DROMGOLD CO.,** Mfgs., York, Pa.

SPANGLER DRILL



SPANGLER MFG. CO., 204 Queen Street, York, Pa.

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.

WASHINGTON NOTES.

A recent publication of the Bureau of Animal Industry on "The Farm Separator" has been in such demand that the Department of Agriculture is preparing a farmers' bulletin (201), entitled "The Cream Separator on Western Plains." The author, Special Agent E. H. Webster, writes largely from the observations made and facts gathered throughout Kansas and Nebraska. Not formerly in the list of dairy States, he says, these two have had a history in dairying both unique and interesting. The first lessons in the industry were paid for by the farmers at the rate of about \$100 per lesson in co-operative stock creamery companies, organized by smooth promoters. The scheme of running a creamery without a sufficiency of contributors of cream or milk was disastrous. The second step was bringing into practice the idea of skimming the farmers' milk at a station and shipping the cream to a central point for churning. This lesson, Mr. Webster says, only cost the farmer about \$25.

The third and successful step was the coming of the separator. To-day the creamery business of Kansas and Nebraska is a cream-gathering system, and the farmer has the separator in his home, while the creamery has the product of it. The author discusses the relative cost of hauling milk both ways and of hauling cream one way, comments on the increase in the butter fat due to the use of the separator, and also urges that while the separator is automatic in its skimming, some care and exercise of brains are needed in the handling of the cream. He also shows that a large share of the responsibility for the production of good butter rests upon the creamery management. There is no fear, he says, of the ultimate outcome of the farm-separator-creamery system if all who are concerned in it make the best use of the means they have at hand and study to know more about the business and to make high quality both of cream and butter—the end to which all efforts should be bent.

"Turkey Bulletin" (No. 200) of the Department of Agriculture, now on the government press, contains the following three general rules for selecting stock:

First. Always use as breeders turkey hens over one year old. Be sure they are strong, healthy and vigorous, and of good medium size. In no instance select the smaller ones. Do not strive to have them unnaturally large.

Second. The male may be a yearling or older. Do not imagine that the large, overgrown males are the best. Strength, health and vigor, with well-proportioned, medium size, are the main points of excellence.

Third. Avoid close breeding. New blood is of vital importance to turkeys. Better send a thousand miles for a new male than to risk the chances of

Just Plain Sense

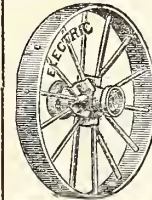
It doesn't require any great wisdom or knowledge to get on in the world—just plain sense.

THAT'S why the most prosperous and successful farmers in the country, for the most part, are using our wheels or our wagons. That's why more of our

ELECTRIC Steel Wheels and ELECTRIC Handy Wagons

are sold every year than of any two other makes—just plain sense.

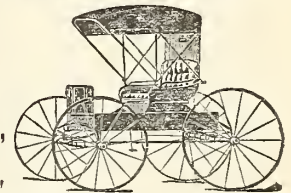
They are made right. They save labor and repair bills. They pay for themselves and they give satisfaction. If you don't know about them, you ought—they're a mighty good thing to have about the farm. Wouldn't it be "plain sense" for you to investigate? We'll send you our book free—no obligations to buy. Write to-day.



Electric Wheel Co.
Box 146. Quincy, Ill.
We'll sell you either the wheels or the whole wagon.

BUGGIES

SURRIES,
DAYTONS,
RUNABOUTS,



SPINDLE WAGONS. CARTS. etc. 85 different styles and grades. Finest material and workmanship. Get our prices and see our vehicles before purchasing. **SAFETY BUGGY CO.,** 1309 E. Main street, Richmond, Va.

SILOS

And the only Patent Roof

THE "PHILADELPHIA"

E. F. SCHLICHTER
1910 Market St. PHILADELPHIA, PA.
Also made by the Duplex Manufacturing Co., South Superior, Wis.

RIFE HYDRAULIC ENGINE

Try it 30 Days Free.



Constant water supply in your home or buildings any height above stream. Water power does it. Keeps going any and night with no attention or running expense. Get our free catalogue.

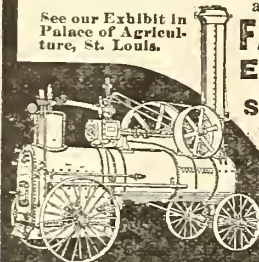
RIFE ENGINE CO.,
126 Liberty St. New York.

Mention the SOUTHERN PLANTER in writing.

Built for Business

Farquhar engines and boilers are built for hard knocks and durability on the road as well as at work. They have every improvement that experience has shown to be of value. For general all-round service

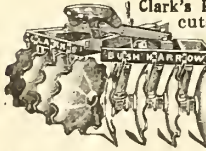
See our Exhibit in Palace of Agriculture, St. Louis.



FARQUHAR ENGINES and SAW MILLS

have no superior. Write for 1904 Catalogue of engines, boilers, sawmills and threshers. Free. A. H. Farquhar Co., Ltd. York, Pa.

Clark's Tools for Large Hay Crops



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

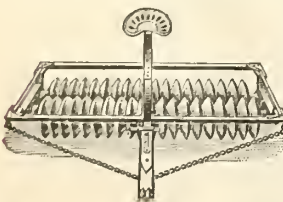


Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day. Send for Circulars.

Clark's Rev. Sulky Disc Plow

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

THE CUTAWAY HARROW CO.,
Hlgganum, Ct., U. S. A.



Imperial Pulverizer, Clod

Crusher and Roller Leads them All

Send for Circulars The Peterson Mfg. Co. Kent, Ohio.

WARRINER'S CHAIN HANGING STANCHION



CLEAN, SAFE, DURABLE AND COMFORTABLE.

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

inbreeding. Secure one in the fall so as to be assured of his health and vigor prior to the breeding season.

Regarding the kind of hens to select, the following advice is given:

No matter what variety of turkeys may be selected for keeping, they should, above all things, be strong, vigorous, healthy, and well matured, but not akin. Better secure the females from one locality and the male from another to insure their non-relationship, rather than run the risk of inbreeding. In all fowls it is well to remember that size is influenced largely by the female, and the color and finish by the male. Securing overlarge males to pair with small, weakly hens is not wise policy.

A medium-sized male, with good, fair-sized females of good constitutional vigor and mature age will do far better than the largest with the smallest females.

Secretary Wilson is a farmer. He was a professor in the Iowa Agricultural College, but above all, he is a practical farmer. Still he proclaims the absolute necessity for scientific study and work if American farming is to push forward and continue to be the first industry of the nation.

"Five thousand students attend agricultural colleges," he said, "but these colleges are feeling their way in the dark along untried paths. They are fitting and trying, as carpenters built barns in old times, and they will at last forge out a system, by comparing notes, which will meet the requirements of producers and be entirely new and suitable to our conditions as a people.


"The most useful and valuable educational work in all the world, appealing to the educator, is that of the farmers of the country. Pioneer work along this line is waiting. The organization of faculties to do the work; apparatus, laboratories, text books, illustrative material, from primary to postgraduate and beyond, where studies of specialists must be combined, where research must be broadened, and where specialties must be grouped to reach a desired end and meet the pressing demands of producers, all these are waiting. This is the great field of applied science where the grower seeks the help of the scholar, of the experimenter and of the observer."

With the rise of beef prices the American hen, both as a meat and egg producer, becomes of prime importance. Is fowl flesh as nutritious as that of beef? Experiments have been made at the Paris Academy of Science to test the nutritive value of the flesh of fowls, as well as that of their eggs. Chickens, ducks and geese were found as nourishing as beef, if not of even greater nutritive value. Ten hen's eggs represent in food value about a pound of beef.

There is one way in which the dairyman is justified in putting water in his

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 catalogue of Farm, Lawn and Poultry Fencing.

CASE BROS., Box 340, Colchester, Conn.



WIRE FENCE

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

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



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.



THE COMBINED BREAKING

strength of Page Poultry Fence is 25,000 pounds, Page Woven Wire Fence Co., Box 57, Adrian, Mich.



FARM FENCE

PRICE AND QUALITY WILL PLEASE YOU—WRITE US NOW.

DOW WIRE WORKS—LOUISVILLE, KY.



FENCE! STRONGEST MADE.

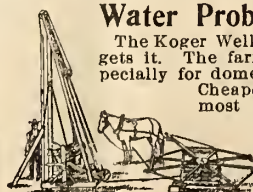
Build strong. Chicken-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free. COILED SPRING FENCE CO. Box 52 Winchester, Indiana, U. S. A.

WIRE FENCE

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

W. H. MASON & CO., Box 80 Leesburg, Ohio.

Water Problem Solved.



The Koger Well Drilling Machine gets it. The farmers' friend. Especially for domestic well making. Cheapest by half and the most practical of any. Best money maker on the market. Catalogue free.

J. J. KOGER & SONS, Mooresburg, Tenn.

THE OAKS FOR SALE.

Being advised by my physician to seek a drier climate on account of my wife's health, I offer "The Oaks" for sale; situated 1-2 mile from depot on main line of N. & W. R. R., 1-4 mile from corporation limits, and contains 145 1-2 acres; dwelling house has six rooms and pantry; situated on an elevation commanding a fine view of the Peaks of Otter (12 miles), town and surrounding country; and surrounded by a magnificent grove of stately oaks, about 10 acres in original growth of large oaks. Land is gently rolling, most of it in grass; three elegant never falling springs, one very bold; plenty of fruit for home use; there is also a 2-room tenant house and large barn and corn crib. There are about 45 acres well set in Clover, Timothy, Alsike and Alfalfa, (about 4 acres in Alfalfa); half of it two years old; cut it five times last year and it now, 10th of May, stands 12 inches, after being frozen down 1st of April. This is strictly Alfalfa land and there are 25 acres that will be ready to seed to Alfalfa this summer; 40 acres seeded to Alfalfa will be worth more than I ask for the whole farm, as hay is now selling here for \$18.00 per ton and has not been less than \$14.00 for two years. There are 7 acres in wheat; 16 in rye; 1 1-2 in oats; 34 in corn, and 4 in peas and sorghum. Will sell the place as a whole or in two tracts. Would say to any purchaser that if he comes and looks at the place and finds it *not as represented I will pay his railroad fare.*

B. B. Buchanan,
Bedford City, Va.

milk, that is by giving the cow all she can drink of clean, pure water. Cows are naturally heavy drinkers and in many cases they get insufficient good water, both in winter and summer, in the winter they have to drink through a hole in the ice and consume less than they need, while in summer they may have access only to a nearly stagnant pool. A good water system both for man and beast is a highly desirable thing on the farm.

The dust bath may be considered almost a specific against lice. The hens will throw the dust up through their feathers, effectively smothering these vermin, which, having no lungs, must breathe through apertures in their sides.

With a little look ahead there is no need of buying fence posts. Few and far between are the farms upon which cannot be found places for tree-growing for posts which will not interfere with the farm crops. The Bureau of Forestry highly recommends the catalpa tree as a quick-growing fence-post species. Locust makes another excellent post and is quick-growing. Care should be taken, however, in locating the locust wood-lot, since the roots sucker freely and become almost impossible of eradication.

Raise more fruit.

GUY E. MITCHELL.

A GOOD SHOCK BINDER.

The Fontaine Shock Binder Company, of Christie, Va., have been advertising their patent binder in the last few issues of the SOUTHERN PLANTER. From the description and endorsements we had seen of it, we had already been favorably impressed with its value and usefulness. The Company very kindly sent us a sample, and upon examination, we are free to say that our good opinion was instantly confirmed. Farmers having corn to shock will make no mistake in investing \$1.50 for this little device.

DELOACH PROSECUTES INFRINGERS.

The DeLoach Mill Mfg. Co., of Atlanta, Ga., writes us that it has instituted proceedings against all infringers on its Variable Friction Feed for Saw Mills. Mr. A. A. DeLoach, of the above firm, is the original patentee and he very naturally resents other people appropriating his brains for their own use. The DeLoach Company has long been a patron of our advertising columns, and scores of our readers are familiar with its saw mills and other machinery.

A FAMOUS SHEEP DIP RECORD.

A careful record was made at the Royal Show of England last year when it was discovered that over 95 per cent. of all the sheep exhibited had been dipped in the well-known Cooper Dip. After sixty years' use this is truly a fact the manufacturers should be proud of.

Northern Virginia Farms

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

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

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

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

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

No. 25.—175 acres. Grain and Blue Grass farm in Rockbridge county, 1½ miles from Buena Vista. Fine condition. Nice home. Price, \$5,300.

No. 28.—516 acres. Grain and Blue Grass Farm, 1½ miles from Buena Vista. First class condition. Handsome home; all modern equipments. Price, \$16,000.

No. 34.—50 acres. Truck and fruit farm, 12 miles from a Washington, near railroad station. Excellent condition. All improved selected fruit. Price, \$5,000.

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

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

No. 35.—400 acre farm in Loudoun county. Excellent grain and grass land. Modern improved buildings. Price, \$8,000.

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

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

W. E. MILLER,
HERNDON, VA.

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.

BLUE GRASS & TRUCK FARMS.

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PROCEEDINGS OF THE EAST TENNESSEE FARMERS' CONVENTION.

(Continued from last month.)

Mr. Robt. Gallagher, of Shelbyville, told how he renovated a wornout farm through a judicious rotation of crops in which the cow pea predominated. Mr. S. F. Gettys, of Sanford, also spoke on this subject, and said on hilly land he found broad, shallow ditches invaluable. Mr. Gettys has made a notable success of preventing a hilly farm from washing and his address was thoroughly appreciated by the large audience.

The Preservation of Farmyard Manure was next taken up by Mr. P. F. Kefauver, of Madisonville, who told about his manure stable which he called his fertilizer factory. Prof. Chas. A. Mooers, of the Tennessee Experiment Station, followed Mr. Kefauver. He gave considerable attention to the construction of manure pits and urged that greater care and attention be given to the handling and preservation of the manure, as at the present time the loss of nitrogen was simply enormous, and as this could be avoided with a moderate outlay, more attention should be given to this important subject.

The Convention offered \$25 in prizes for the best display of corn. A large number of samples were placed on exhibit and some of them were very excellent indeed. The prizes were awarded as follows: First, H. W. Anderson, Limestone, on White Cob Bread; second, R. L. Wheeler, Morrystown, on White Dent; third, J. P. Lewis, Lone Mountain, on White; and fourth, J. D. Cannon, Maryville, on Dent. Following this, Mr. E. S. Huffman, of Normandy, one of the largest breeders of corn in the South, spoke on his methods of breeding and selecting corn. Mr. Huffman has made a great success of this work and says those who are interested in breeding corn should not fail to take advantage of the course in cereal judging offered by the University because of the definite information it gives one with reference to the improvement of cereals through selection and breeding.

Prof. Soule's address on the Construction of Farm Silos was a valuable one. It was illustrated by a large number of miniature silo models. Sections of the various timbers used in the framing were shown to the audience, and the subject was presented in such a simple and clear manner that any one interested should certainly be able to build a silo. The importance of the silo and the simplicity of construction that could be followed were points strongly emphasized.

Dr. T. W. Jordan, of the University of Tennessee, next told of his experience in feeding silage to export cattle. This was certainly an excellent address and is evidence of the practical value of silage for the winter maintenance of cattle. Mr. W. D. Brow-

..To Homeseekers..

"THE BUSINESS OF FARMING IN VIRGINIA."

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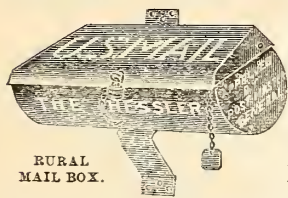
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der, of Pinhook Landing, and W. H. George, of Chandler, also spoke on this subject and gave some very interesting and instructive facts. Col. S. E. Young, of Sweetwater, told of the value of silage for the maintenance of the dairy cow. He regarded it as indispensable. Prof. John R. Fain, of the Tennessee Experiment Station, gave a summary of two years' results in feeding beef cattle on silage. He showed that the cattle had gained more than two pounds per day throughout a period of 150 days and that these gains were made at a surprisingly low cost.

Col. J. A. Reagan, of Sweetwater, next followed with "My Experience with Grasses and Clover." He gave some very practical suggestions with reference to this topic. Mr. P. O. Vanatter, of the Tennessee Experiment Station then discussed "Alfalfa and Grass for Hay and Grazing." He stated that under proper conditions alfalfa could be grown successfully in Tennessee, but that the land must be thoroughly and carefully prepared. This was the key to success.

Chattanooga, through Mr. C. W. Holbrook, Secretary of the Chamber of Commerce, presented an invitation to the Convention to meet in that city next year. He was given a vote of thanks and the matter was referred to the Executive Committee with power to act. Resolutions were then adopted asking the State Legislature to give the Experiment Station at least \$20,000 annually for maintenance and support; approving the farmers' institute system as conducted by Commissioner W. W. Ogilvie; thanking the World's Fair Commission and the railroads for the special rates; and asking the Legislature to give the Agricultural Department of the University the support it deserved. Resolution were also passed favoring compulsory education and the establishment of chairs of veterinary science and entomology and a poultry department in the University of Tennessee; the secretary was highly complimented for his work, and the membership fee was fixed by amendment of the constitution at \$1.00 per year. The following officers were then elected: President, W. Gettys, Athens; Vice President for Life, O. P. Temple, Knoxville; Secretary, Andrew M. Soule, Knoxville; Assistant Secretary, G. B. Wheeler, Morristown.

The Convention then adjourned to visit the University Farm in the afternoon. A special train of street cars was placed at the disposal of the delegates by the Knoxville Traction Co. and more than 700 reached the farm about two o'clock. The 1,200 grass and grain plats were visited and the beautiful farm with its fine growing crops was the subject of much admiration and favorable comment. When the stables were reached the stock received its due share of attention. The excellent dairy herd, splendid beef cattle and Berkshire hogs were great-

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ly admired. Prof. Soule spoke on the requirements of good beef cattle, illustrating his remarks with a group of Hereford steers fed on silage for the past six months at the Experiment Station. These animals were almost perfect specimens of the breed, and it is safe to say that the object lesson thus presented will do much towards improving the quality of cattle kept on the average Tennessee farm. At the close of the stock judging demonstrations conducted by Profs. Plumb, Fain and Soule, the delegates were all seated on the grass and given light refreshments. This constitutes the great annual social feature of the Convention and it is needless to say that it is thoroughly enjoyed. In fact, it is hard to describe the real pleasure it affords the delegates.

In conclusion, it is only necessary to say that the value of the Convention cannot be estimated. It is so far reaching in its influence by reason of its representative nature that the benefits of the information derived from it are everywhere observable. It is doing a wonderful work for this section of the South, and the fervent prayer of its hundreds of well-wishers may be briefly summed up in "long may it live and prosper."

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STUFFED EGG PLANT.

Select moderate sized egg plant and cut them half in two. Scoop out all the seed and inside meat, leaving the rind half inch thick. Chop the meat fine, add to four cups of it two cups of ripe tomatoes peeled and chopped, one cup of bread crumbs, a small onion chopped fine, pepper and salt to taste, pack it all firmly into the shells and put lumps of butter about on the top of it put them all into a biscuit pan which must be half full of water, and bake very slowly for more than two hours. You may treat cymplings (or squash) in the same way with very good results.

BROILED TOMATOES.

Select firm, not overly ripe, tomatoes, and cut them in slices nearly half an inch thick, dip each slice in meal which is seasoned with a little salt and pepper, and put them on a hot griddle, turn several times, and let them cook in all about eight minutes. Serve at once.

POTATO AND BEET SALAD.

Boil the vegetables as if to be used for dinner (or else save what is left over), and let them get thoroughly cold, then cut them into small squares; set the dish into the ice-box till just before serving, then pour over it and mix well with it, by tossing the vegetables up with a silver fork, a dressing made with the juice of two lemons, two tablespoons of sugar, one teaspoon of salt, one teaspoon of celery seed, half teaspoon of mustard, and a small quantity of black pepper. Heat these all in a small pan over a boiling tea-kettle and stir into it two beaten eggs, let it thicken then take it off and add a tablespoon of butter, and when it is cold thin out with a small quantity of cream.

STUFFED RAW TOMATOES.

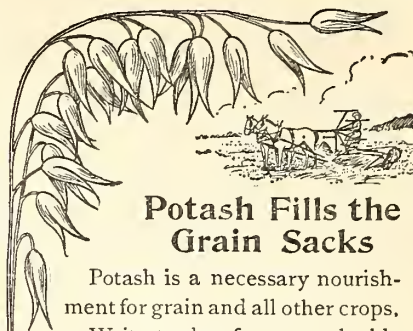
Try to have the tomatoes of uniform size, not very large, and they must not be very ripe, but a beautiful red. Cut off the bloom end and scoop out the inside, leaving rather a thick shell. Chop what you have taken out with half as much fresh cucumber season with a little mustard, pepper, salt and onion juice enough to give it a flavor, fill the shells with this and set them on ice till ready to be served. Garnish with lettuce leaves on curled parsley. Serve one to each guest.

CANNED PEACHES.

Peel and cut the peaches off in as large slices as possible, pack them into a porcelain kettle with water coming half way up, let them boil for ten minutes, if they are soft, but longer if hard. Have the jars hot and fill them from the boiling kettle, screw on the tops at once, and see that they are screwed very tight, and the fruit will keep as long as you want it to.

CORN PUDDING.

Cut the corn from the cob and to a quart add two beaten eggs, one cup of fresh milk, one teaspoon of salt, a tablespoon of sugar, and a big spoon of



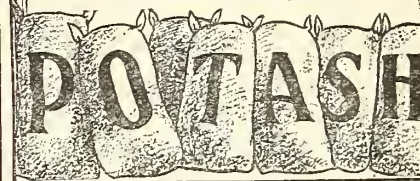
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1 pair bay mules, 5 years old, weight, 2,300 lbs.; 1 pair bay mules, 8 years old, weight about 2,100 lbs. 1 iron gray, standard bred horse, 7 years old, weight 1,250, 16 1-4 hands, sound and good driver, good looker, will work anywhere. Prices right. Address **H. F. LYNN, Jr., Woolsey, Va.**

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1 fine HAMPSHIRE BUCK; 4 fine SHROPSHIRE BUCKS; 180 good grade breeding Ewes. Come and see them or write **JOHN MATHEWS, East Richmond, Va.**

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Shropshires.

8 Bucks and 50 Ewes for sale.

JOSEPH WILMER, Rapidan, Va.

butter and a small quantity of black pepper. Pour it into a pudding dish and bake until the corn is done. If the corn is old and dry it will be necessary to put in more milk, and will be well to score it down the middle before cutting it off.

ICE CREAM.

One quart of fresh milk, scalded, and thickened with a tablespoon of cornstarch, sweetened with three cups of sugar; to this add one quart of pure cream and season with vanilla or bitter almond and freeze quickly; this will beat up to nearly three quarts if you have a good freezer.

TEACAKES.

One quart of flour, two teacups of sugar, one teacup of butter and lard mixed, the yolks of two eggs beaten and stirred into a cup of butter milk, one teaspoon of soda. Make into a dough and roll out very thin. Season with nutmeg or powdered cinnamon.

PEACH SHORTCAKE.

Make a dough of one quart of flour, one teaspoon of baking powder, one cup of lard and butter mixed, and a teaspoon of salt, enough milk to make rather a soft dough, roll it out and bake in your square pie pan, putting three layers in the pan with a little butter between. When thoroughly done pull the layers apart and butter well, spread between them soft juicy peaches which have been peeled and sliced and sweetened for some hours; pile them up again and serve with cream.

BLANC MANGE.

Scald one quart of new milk, into it put one cup of sugar with four tablespoons of cornstarch mixed with it, a minute later stir in two well beaten eggs; let it cook in a double boiler until it becomes a stiff paste then turn it out and season with vanilla, put into molds and set on ice till you want to use it. It is better if kept half a day. Serve with cream seasoned with vanilla and preserved cherries.

CARAVEN.

FALL FENCING.

In many sections of the country old farm fences are overhauled and new fencing is set in the fall after corn is laid by and harvesting is out of the way. Any reader of the SOUTHERN PLANTER who is planning work in this line will do well to write to **W. H. Mason & Co., Box 80, Leesburg, O.**, makers of high grade wire fence. They operate under very low expense and sell correspondingly cheap. Address carefully as above and your letter will have prompt attention.

SCARR'S FRUIT PRESERVATIVE.

This well-known powder is being advertised in this issue by its makers. From a little pamphlet of testimonials we have received, we learn that it is thoroughly effective and harmless in preserving fruits and vegetables.

V. P. I. Farm Bulletin

We have for sale at present, some splendid **DORSET RAM LAMBS.**

For prices, etc, address

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

30 PURE-BRED

SOUTHDOWN EWE

lambs for sale. Price, \$15 each, October, 1904, delivery. This flock was originally purchased from Henry Webb, Babraham, Eng., and crossed from time to time with the descendants of Rams bought by John Hobart Warren from Lord Walsingham, of England. **WM. JOHN, Linden, Va. (Mgr. Col R. H. DULANY).**

Meadow Brook SHROPSHIRE.

For sale; very fine one and two year old pure bred SHROPSHIRE BUCKS; some very nice ewe lambs. **C. A. SAUNDERS, Meadow Brook Stock Farm, Culpeper, Va.**

HAMPSHIRE DOWN SHEEP

We have sold all of our 1 and 2 year old Hampshire Rams, but have a GRAND LOT OF LAMBS for next year's trade. **MEADOW BROOK FARM, J. D. THOMAS, Round Hill, Va.**

REGISTERED SHROPSHIRE SHEEP.

8 ewes, 1 ewe lamb, 3 ram lambs, 2 yearling rams, 1 2 year old ram out of Imported stock. All good size, well marked, good individuals. Prices, ewes, \$12; lambs, \$10; yearling rams, \$16; 2 year old ram, \$25 f. o. b. Barclay, Md. Entire flock at a discount. Must sell as have no place to keep them. **H. R. GRAHAM, Chestertown, Md.**

4 PURE-BRED SHROPSHIRE BUCK

lambs and 1 mature buck for sale, or will trade for pure bred young ewes of same breed. Must be first class in every particular. **Dr. F. E. WILLIAMS, Charlottesville, Va.**

THOROUGH-BRED...

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

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

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

FOR SALE

The Five-Year-Old Hereford Bull LARS, JR., 85297.

One of the Great Sires at Castalia Farm. 10 Years of Usefulness before him. A Sure Breeder, a Tested Sire.

CALVED NOV. 24th, 1898.

LARS, JR., IS A MODEL BULL, showing "QUALITY" as his prominent feature from head to tail. From birth the bull had a most docile disposition, matured early, and has always been a good feeder. He is of the masculine type throughout, with a fine, rich coat of Hereford red and the usual white face and other Hereford markings. His heart girth is ample, ribs well sprung, with good quarters, well flanked behind. He is a sure breeder, and his calves mature quickly. Being only five years old, and a tested sire, with a pedigree combining many champion prize winners of international reputation, Lars, Jr., is fit to head any herd, and is sure to prove a useful and profitable investment. This bull was bred by Mr. Thomas Clarke, of Beecher, Ill., and calved at "Castalia," where he has since been developed.

His Sire is LARS, 50734, SECOND PRIZE YEARLING BULL at WORLD'S FAIR, FIRST AND CHAMPION PRIZE WINNER as a two, three and Four year old at all the principal fairs; also headed the herd winning Grand Sweepstakes at the great LIVE STOCK SHOW OF AMERICA, at Madison Square Garden, New York City, in 1896.

The dam of LARS, JR., is JUDY, 55711 (one of the breeding cows in the Castalia Herd, and is a regular breeder and excellent milker, by PEERLESS WILTON, 12774, a sire of as many prize winners as any Hereford Bull living), and the dam of Judy is JESSIE 3D, 10908, by SIR RICHARD 2D, 970a, the celebrated sire of prize winners, and especially of good breeding cows.

Thus Lars, Jr., may rightfully be expected to be a sire of good animals.

Address MURRAY BOOCOCK, Owner, Keswick, Va.

ELKTON SALE

Tuesday, September 6th, 1904

Pure-bred Reg. Herefords

15 Bulls and Bull Calves. 11 Heifers and Heifer Calves.

The above are by such noted sires as Beau Donald, Actor 3d, Prince Rupert, etc., and out of cows that are the pick of several farmers' herds, and will show for themselves.

GRADE HEREFORDS

15 Cows and Heifers. 5 Heifer Calves. 5 Yearling Heifers. 5 Bull Calves.

Some of the above are almost pure bred, but not subject to registry. We want to close out the latter, as we are going in for raising pure bred Herefords exclusively.

HOGS

Pure bred, registered Berkshires of all ages; Pigs by the noted Royal Bachelor, of international fame; also a number of cross bred sows, gilts and pigs.

SHEEP

40 choice Ewes (young), Oxford Down, Southdown and Shropshires; mostly pure bred, but not subject to registry.

HORSES

3 good Farm Horses. 1 fine Saddle Mare and Colt. 1 registered Percheron Stallion (Imported).

Will meet all trains at Forest Depot, Va., on day of sale or previous to sale, if notified in time.

For all further inquiries, address

THE ELKTON STOCK FARM, Forest Depot, Va.

Berkshire Hogs!



Sires in service, **Rockland Majestic of New Era**; his sire **Rockland Gentry**, champion of America in 1903; grand sire, **Baron Lee IV, Model Lee IX**, sire **Gov. Lee**, champion of America in 1889, Sows of **EQUALLY NOTED** Strains. A few nice pigs for sale. Write for prices.

JNO. CALHOUN, Clfo, S. C.

Maplewood Herd.

..Berkshires..

Selectly Bred. Choice individuals.

Write for prices, stating your needs.

JNO. F. TUCKER,
Smyrna, Tenn.

BERKSHIRE PIGS FOR SALE

We have on our Hollybrook Farm a fine lot of young Berkshire Pigs from 8 to 12 weeks old, for sale. These pigs are from registered stock, and are first-class in every respect. Our pigs have free range, with fine stream of running water through the hog pastures, and our stock is as vigorous and healthy as possible. Price either for boar or sow pigs, \$5 each, crated and delivered on cars, or to express office at Richmond. Address orders to **HENRY W. WOOD, Box 330, Richmond, Va.**



OUR herd represents the very best strains of imported **Large English Berkshires**. Choice stock at reasonable prices.

Address

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

Berkshires

Best **ENGLISH** and **AMERICAN** blood. Herd Boars: **Columbus Lee VIII** (brother of Combination); **Workman of W.** (sire, Jack of all Trades). Stock for sale at prices **YOU CAN AFFORD TO PAY.** **H. W. FUGATE,** Fugate's Hill, Russell county, Va.

NO MORE BLIND HORSES.

For Specific Ophthalmia, Moon Blindness, and other Sore Eyes, **Barry Co., Iowa City, Ia.** have a sure cure.

CANNING TOMATOES.

For the benefit of a subscriber and others, here is the plan I follow in putting up tomatoes and out of 230 quarts only lost five, and these on account of defective tops. I fit the tops to the jars just before I am ready to use them, being careful to see that all tops fit down close all around without rubber on. I use good soft rubbers and only one to a jar. Use glass jars with screw tops. See that jars and tops are perfectly clean. Select only ripe, firm and perfectly sound tomatoes. Round smooth ones peel easier. Put them in a vessel and scald by pouring over them boiling water. When the skins slip easily pour off the water and peel quickly and put them into a preserving kettle, pour in enough hot water to prevent sticking to bottom and gradually bring to a boil. Set dish pan on the stove with boiling water about three inches deep, take top from jar and put in pan of water, lay jar down in water, giving it a rolling motion so water will strike it all around at once, lessening danger of breaking. Roll jar around until it is thoroughly hot, pour out the water and set it up in the pan and quickly fill with tomatoes from the kettle, which should be kept at the boiling point and also the water in the pan during the whole process. Fill as quickly as possible, adjust rubber and take the top out of the pan and screw it down as tight as possible, and set jars away upside down to cool. When cool, examine to see if any have leaked; if not, you can be reasonably sure that they will keep. Some advise screwing tops down tighter after jars are cool, but I believe that this is a mistake. When tops are screwed down as tight as possible while jars and tops are hot, the rubber softens and sticks tightly to jar and top, sealing the jar. If, when jars are cool, you will turn them upside down and give the top a turn, you will notice that air will enter, causing bubbles to pass up through the tomatoes, which I believe to be the cause of so many failures. Good ripe fruit, everything perfectly clean, jars, tops and tomatoes boiling hot when put in and sealed, and tops screwed down as tight as possible to prevent air entering jar is the whole secret of success. I canned 115 quarts in September, 1902, and have a few quarts of them yet, and they are as good as when first put up. This was my first experience at canning and I was almost afraid to make an attempt, as the editor of the **PLANTER** had a short time before in answer to a subscriber replied that he hesitated to advise home canning, on account of failures reported from receipts appearing in previous issues.

Tomatoes can be canned and canned to keep by following strictly the directions above. I have put up blackberries and huckleberries the same way and never lost any.

Mrs. K. W. BABER.

5 BERKSHIRE

Boar Pigs, farrowed April 20th, for sale. Sired by **DANSFIELD ROLAND**, out of **MANSFIELD BELLE**. These pigs are extra fine in every respect, and will be sold for \$10 each f. o. b. express office. Certificate of registration with each one. **T. M. ARRA-SMITH Greensboro, N. C.**

Too Many BERKSHIRE PIGS.

Will sell limited number at prices that will make them go. Choice **YOUNG BOARS** ready for service. **Brood Sows** Reg. bred to King John of Fassfern 9123, he by Imp. Sir John Bull.

WILLIAMSON TALLEY,
Richmond, Va.



BERKSHIRES.

A few fine young boars and sows for sale. Farrowed February and March, 1904. Right age for fall breeding. From registered boar and sows. Pure **Biltmore** blood. Price during August, \$10 each f. o. b. Charlottesville. Write for further information. **ROBERT HIBBERT, Charlottesville, Va.**



Registered **P. Chinas** Berkshire **C. Whites**. Large strain, All ages mated not akin, bred sow, service boars, Guernsey calves, Scotch Collie pups, and Poultry. Write for prices

and free circular. **P. F. HAMILTON,**
Cochranville, Chester Co., Pa.

BERKSHIRE PIGS

for sale. Nice lot at farmers' prices. **EVERGREEN DAIRY & STOCK FARM, W. B. GATES, Prop., Rice Depot, Va.**

Hawksley Stock Farm,

has a few fine young **BERKSHIRE BOARS** to sell. No more pigs until August 1st, also a few half bred **DORSET HORNED BUCK LAMBS.** **J. T. OLIVER, Prop. Allen's Level, Va.**

Essex and Poland China



pigs from 8 weeks to 4 mos. old, an extra choice lot. Also some choice **Southdown** and **Hampshiredown** Sheep and **Lambs.** For prices address **L. G. JONES, Tobaccoville, N. C.**

FAMOUS O. I. C. SWINE.

Mortgage Lifters—the hog for profit. Excel all others in vigor, health, strength of constitution, bone and muscle. Large litters, large gains, gentle dispositions, grand milkers, good feeders, thrive in any climate. Good ones, 3 months old, for sale. **Reg. Stock.** Prices low for quality. **MANSFIELD FARM, W. ELLIOT HAMMOND, Goochland C. H., Va.**

High-Class Poland Chinas



Best registered blood. Strong-boned, healthy pigs. either sex. 4 mos. old, for \$7.50, all eligible to registry and first class. None but good ones shipped.

E. T. ROBINSON, Lexington, Va.

BILTMORE FARMS, - Biltmore, N. C.

Headquarters for GOLDENLAD 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.

SPECIALTY. Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



BILTMORE POULTRY YARDS.



SPECIALTY. Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO BILTMORE FARMS, BILTMORE, N. C.

EGGS FOR HATCHING

The Imperial Fruit and Poultry Farm

❀ ❀ Is now booking orders for eggs for hatching from strictly pure, high-class poultry, at \$1.00 for 15 eggs, except duck eggs, which are \$1.00 for 13. ❀ ❀

BARRED PLYMOUTH ROCKS, WHITE PLYMOUTH ROCKS,
SINGLE COMB WHITE AND S. C. BROWN LEGHORNS,
SILVER LACED AND WHITE WYANDOTTE,
MAMMOTH PEKIN DUCKS.

Satisfaction Guaranteed. Write your name and address plainly.

P. H. HEYDENREICH, Prop., : : : Staunton, Va.

RED POLL CATTLE

Best for Milk, Butter and Beef.

Poland China Pigs.
Shetland Ponies.
Pure-Bred Fowls.

Arrowhead Stock Farm,
Charlottesville, Va.

ORCHARD HILL PURE-BRED

POLAND CHINA

Pigs and brood sows for sale. Also a fine Guernsey Bull Calf and S. C. B. Leghorn Eggs. F. M. SMITH, JR., R. F. D., 4, Charlottesville, Va.

"PERFECTION"

POLAND CHINA BOAR.

Handsomest and best bred P. C. Hog in Virginia. 14 mos. old, registered, first \$30 gets him.

Llewellyn Setter Puppies and Duroc Jersey Pigs, most fashionable breeding. THE CEDARS P. & S. FARM, Midlothian, Va.

Poland Chinas

I have a few very choice Boar pigs for sale. All can be registered, and are fashionably bred. Sows all sold. J. W. HARVEY, Lindward, Va.

Poland-Chinas and Chester Whites

AT FARMER'S PRICES.

S. M. WISECARVER, - - Rustburg, Va.

PIT GAMES

Black Devils and Red Cubans.

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

THOS. W. JARMAN, Yancey Mills, Va.

Piedmont Poultry Place,

"Handles nothing but the best."

We now offer Pure-bred POLAND-CHINA Pigs for sale. We will not sell under 8 weeks old. Single pig \$6; per pair \$10; per trio, \$14. Some ready for shipment May 15th. First orders get best pigs.

Miss E. Callie Giles, Prop.,
Whittles Depot, Va.

Fowls For Sale.

S. C. B. Leghorns, B. P. Rocks, S. C. Black Minorcas, 75c. each. Must close out my business at once. Miss S. M. HITER, Ellisville, Louisa Co., Va.

AGRICULTURAL EDUCATION.

The movement to secure an agricultural education through the public schools of the country is steadily increasing and from time to time manifests itself through unusual channels. At the recent convention of the Travelers' Protective Association at Springfield, Illinois, addresses were made on this subject and the Association voted to present the matter before the National Educational Association at its coming annual convention at St. Louis.

The Travelers' Association passed a comprehensive resolution setting forth that the stability of our social and business condition and the prevention of recurring periods of trade depression require that the balance of our population should be maintained on the land as independent home owners and producers from the soil and that ways should be found and carried out for placing upon the land all unemployed labor and transforming every "out-of-work" into the owner of a home on the land from which he can at all times get a comfortable living with his own labor. It was set forth that the entire American educational system should be so remodeled as to induce every child to be a lover of nature and of the country and to train him toward the land as a source of livelihood rather than away from it; that children should be taught to farm as they are now taught in France and Denmark in the public schools and that farm training schools should be established by county, municipal, State and national governments.

The resolution further called attention to the great remaining public domain in the West as by far the most valuable asset of this nation which will furnish an outlet for our surplus labor during this and coming generations, urging that it be reserved for real home builders who will farm it in small tracts.

The Association appointed a permanent Committee on Education, Irrigation, Forestry and Land, with a member from each State and territory to carry out the idea of this resolution.

PREFERS IT TO ANY OTHER MADE.

Waterford, Ky., April 18, 1904.

Dr. Jos. Haas, 7 S.,
Indianapolis, Ind.

Dear Sir,—I have been using your Hog Remedy for a number of years, and prefer it to any other made. It has saved me several hogs when my neighbors lost theirs.

Yours truly,
HARRY COCHRANE.

THE JOKE BOX.

Cannibal King: That missionary made an awful fuss, didn't he?

Head Chief: Terrible, sir. His struggles were frightful.

Cannibal King: Well serve him as a piece de resistance.

3 Thoroughbred Mares FOR SALE.

VOLLEE, B. M. Foaled 1891, by Volante, winner of the American Derby, and son of Grinstead and Sister Ann, by imp. Glenelge. First dam imp. Lady Trappist, dam of five winners, by Trappist; second, Vic by Albert Victor; third, dam Modena by Parmesan, etc. This mare is a winner, and has a ch. c. Foaled May 19th by the Great Trial winner Chiswick, by imp. Mr. Pickwick—Alice Bruce by Fellowcraft. Price of mare and colt, \$350.

DEABLESSE, B. M. Foaled 1896, by Montfort, son of imp. Mortemer and Revolt, by Lexington. First dam, Miss Grace (sister to Diablo), by Eolus; second dam, Grace Darling, by Jonesboro; third dam, Ninetta, by Revenue, etc. This mare has a filly foal, which will not be sold, so mare cannot be delivered until early in September. Price, \$300.

DARTEE, Br. M. Foaled 1900 by imp. Water Lever, sire of Isonory and Water Lily, by Lord Lyon. First dam, Fearnot, by Jim Gray; second dam, Fearless, by imp. St. Blaise; third dam, imp. Dauntless, by Macaroni, etc. This mare has won races. Price, \$300.

All of these mares are fine individuals, and are royally bred, and all have been bred, and are believed to be in foal to the young imported horse, Aldine, by St. Simon. First dam, Ronaldina, by Barcardine; second dam, Lady Ronald, by Lord Lyon; third dam, Edith, by Newminster, etc. Address

WILLSON CHAMBERLAIN,
R. F. D 2, Charlottesville, Va.

OAK-HILL FARM

SADDLE HORSES, JERSEY AND ABERDEEN ANGUS CATTLE, BERKSHIRE HOGS,

—FOR SALE—

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

SAM'L HAIRSTON,
Wenona, Va.

ELLERSLIE FARM

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

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

4 BULL CALVES

from 1 to 12 months old from Jersey cows, by registered Holstein bull, for sale. In fine condition, and have marks and characteristics of sire. Prices, \$15 to \$25. Also a HACKNEY BROOD MARE of fine qualities at \$125, and Stallion Colt, 16 mos. old, by registered Hackney sire, of perfect form and action, and is now nearly as tall as its dam. Price, \$150. T. P. SHELTON, Jetersville, Va.

—ONE REGISTERED—

HEREFORD BULL

calf, 10 months old for sale, or will exchange for a heifer.

W. J. McCANDLESS Brandy Station, Va.

LIGHT BRAHMAS.

Pure bred stock from prize winning strains. Old and young stock for sale. Hens, \$1.50; roosters, \$2.50; pullets, \$1; cockerels, \$2.00. J. H. FRASER, Cartersville, Va. (Cumberland county).

COTTAGE VALLEY STOCK FARM.

FINE STOCK FOR SALE LOW

7-8 and 15-16 GRADE ANGUS BULLS AND HEIFERS from 6 months to 2 years old. One bull calf half Angus and half Short-horn. Fine Buck Lambs out of Shropshire Ewes by Reg. Dorset Buck. Fine family milk cows fresh young and gentle. One pair splendid 1200 lbs. Bay Mares 6 yrs. old, first class all round farm teams and very good roadsters. Silver Lace Wyandotte Cockerels and Pullets at one dollar each.

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

ABERDEEN-ANGUS Bull Calves.

I offer for sale two pure bred bulls of the above breed, born Dec. 15, and Jan. 30 respectively, sired by my registered bull, ROCKBRIDGE ABACTOR, No. 40364, and out of pure bred but unregistered cows. The Dec. 15 calf is full brother to one sold last season to Mr. Beard, of Moffatts Creek, Augusta county. The other is out of my largest cow and very promising. These calves will be kept with their dams until nine months old. \$50 each.

I have also a fine registered bull calf that will be ready for delivery in February. \$100. No females sold.

B. F. DAY, Glasgow, Va.

MONTEBELLO HERD

ABERDEEN-ANGUS CATTLE.

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

L. H. GRAY, Orange, Va.

ROSEDALE HERD

Aberdeen-Angus Cattle.

Choice bulls, 4 mos. to 4 yrs. old. Prices as low as good breeding will permit. Inspection of herd and correspondence invited.

ROSEDALE STOCK FARM, Jeffersonston, Va.

ANGUS & HOLSTEIN CATTLE.

Registered and grades, of all ages and sexes, and of champion blood for the beef and milk strains and at moderate prices. Also Nursery stock of all descriptions.

MYER & SON, Bridgeville, Delaware.

REGISTERED

Guernsey Bull

2 1-2 years old for sale, to avoid inbreeding. For further particulars, call on or write me at 1524 E. Main street, Richmond, Va. C. M. BERGH.

THE LITERARY TALENT OF RICHMOND.

MARY WASHINGTON EARLY.

Article No. 2.

Amongst the native authors in whom Richmond may justly take pride I may mention John R. Thompson, who was born in that city in October, 1823. He received his earlier education at East Haven, Conn., but took a later course at the University of Virginia, where he graduated in his 22d year. He also returned there two years later and took the degree of bachelor of law. During the ensuing fifteen years, he was editor of the "Southern Literary Messenger," and wrote a series of able and discriminating reviews, book notices and essays on literary subjects. During this period, he produced several poems on special occasions, and essays in verse which were delivered in public. Amongst these, I may mention his fine ode on the inauguration of the equestrian statue of Washington, at Richmond, February 22, 1858.

He also wrote numerous lyrics and other short poems and contributed largely to several leading periodicals, both North and South. His poetry was distinguished for polish and correct taste, and more than this, it shows vitality of feeling. His best known and most admired poem, I believe, is "The Battle Rainbow," written just after the seven days battle around Richmond and founded on the circumstance that on the eve preceding "this long week of glory and agony," a violent storm took place, succeeded by a magnificent rainbow which overspread the eastern sky, seeming to define the position of the Confederate army as viewed from the Capitol in Richmond. But, alas for us! This good omen proved as illusory as the fabled bag of gold tied at the end of the rainbow.

In addition to his poetical gifts, Thompson also possessed an immense fund of learning, and this he drew on freely, both in his writings and his lectures, though there was no pedantry about him. He had the combination of gifts that make a fine lecturer, and made himself a high reputation in this field. I remember well hearing him deliver a deeply interesting lecture, during the war, on Edgar Poe, a subject he was especially well fitted to treat of, both from his personal intimacy with the illustrious poet, and from his fine powers of discernment and discrimination.

John R. Thompson's talents and scholarship were (I believe) even more highly appreciated in England than in this country. He was traveling abroad to recruit his health when the culmination of the civil war arrived, and he remained a year or two thereafter in London, connected with the London Herald, and a contributor to Blackwood and the Cornhill Magazine. During the civil war, he was the correspondent of "The Index," the

PLEASANT VALLEY STOCK FARM

SHORTHORN

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.

REG. SHORT HORN BULL

FOR SALE

Solid Red, white tip on switch, calved October, 1901. Very handsome, large and thrifty. Milking family. Immune and acclimated to Southside Virginia. Price, \$100. Address W. F. STEPHENS, Bracey, Va.



COOK'S CREEK HERD

SCOTCH - TOPPED SHORTHORNS...

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

HEATWOLE & SUTER, Dale Enterprise, Va.

SHORT HORN BULLS

for sale, from 3 to 20 mos. old; sired by VERBENA'S CHAMPION, No. 129881, and ROYAL CHIEF, No. 185432. Some good POLAND CHINA spring pigs and 2 nice fall boars. All stock eligible to record. Rare bargains for quick buyers.

WM. T. THRASHER, Springwood, Virginia,

—The Woodside—

Jersey Herd. Bull Calves and Yearlings Richly Bred.

DAVID ROBERTS, - Moorestown, N. J.

Swift Creek Stock and Dairy Farm



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

JERSEY BULLS AND HEIFERS.

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

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

A FINE

Jersey Bull

for sale. 3 years old and registered; also 1 yearling and 1 this year's bull calf, entitled to registry. 1 DORSET HORNED BUCK LAMB. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

Confederate organ published in London.

On his return to this country he settled in New York, and engaged on the staff of "The Evening Post."

While Richmond has lately shown such honor to the memory of her adopted son, the distinguished Dr. Hunter McGuire, I hope the day is not far distant when she will be mindful of the claims of the gifted John R. Thompson, and erect to his memory a statue or a shaft, doing homage to his talents, his scholarship and his high character.

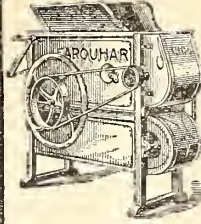
Speaking of John Thompson reminds me of a Richmond poetess, Miss Susan Archer Talley, and one of more than ordinary ability. Although born in Hanover county, Va., she was only 8 years old when her father moved to Richmond, and there she grew up, and was educated. She lost her hearing early in life, but this did not seem to interfere with her mental development. At thirteen, she commenced writing poetry, and at sixteen, some of her poems were published in the "Southern Literary Messenger," to which journal she contributed for several years. The critics dealt kindly with Miss Talley. Griswold gave her unqualified praise, and Poe ranked her high, giving imagination as her distinctive characteristic. In 1859, she published a volume of poems in New York. The chief poem in the book, "Ennerslie," gives the reader a distinct reminder of "The Lady of Shalott." There is a noary tower, grim and high, a river gliding by, a lady fair, and pale young Lord Ennerslie, all producing an atmosphere resembling that of "many towered Camelot." Next to "Ennerslie," I believe her most admired poems are "Madonna," "Cloistered," "Guy of Mayne," "Rest," and "Autumn Rain." She sometimes also writes very good short stories in prose. Her married name is Mrs. Von Weiss, she having married a German.

The present generation of Richmond authors does great credit to that city. Miss Ellen Glasgow and Mr. James Branch Cabell are, I believe, the most prominent of the young authors of Richmond, although Mrs. Charles G. Boshier, of that city, author of "Bobby" and "When Love is Love," is also coming to the front. Miss Glasgow has made her mark as a novelist, while Mr. Cabell's specialty lies in charming little romances laid in medieval times. These are somewhat in the vein of Anthony Hope, and do not fall short of that writer. Scattered through these tales we find delightful little lyrics (as, for instance, "The Castle of Content,") which prove the existence of a vein of poetry in Mr. Cabell. His aunt, Mrs. Isa Cabell, for many years a resident of Richmond, though now of Norfolk, is also a person of literary talent, and has written quite extensively for publication.

Mrs. Burton Harrison, though not a native of Richmond, was very much

FARQUHAR Pea and Bean Threshers

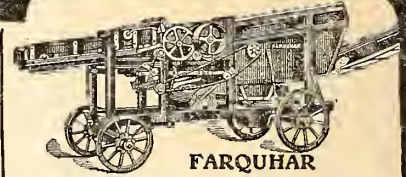
Farquhar Pea Huller No. 1



Hulls all kinds of peas and beans from the pods. Cleans them thoroughly without breaking or cracking. Not an experiment or a cheap machine made just to sell, but a good, solid, substantial, money making and labor saving device. Just what every farmer who raises peas or beans, no matter how small the quantity, wants. You cannot afford to be without one. It will more than save you the cost in one season. Thousands of testimonials.

Special discounts to introduce the first machine in each locality. Write for particulars and catalogue.

A. B. FARQUHAR CO., Ltd., YORK, PA.



FARQUHAR

Pea Vine Thresher and Shredder No. 5

Can be run with 8 to 15 H.P. engine. Threshes and cleans all kinds of peas and beans from the vines, and shreds the vines. Makes valuable shredded hay and turns the vines into money that would otherwise be wasted. Shells corn from the ear and shreds the fodder. Only perfect machine made. Don't cut or saw, but shreds the fodder without rough sharp edges to make the cattle's mouth sore. Shredding is done with a double cylinder. Machine is strong, substantial and well-made throughout.

SPRING LITTERS.

We have now coming ready for shipment seven litters of

LARGE YORKSHIRE PIGS

All recent experiments place this breed in front, as the best and most profitable bacon hog. They will raise 40 per cent more pigs and they will grow faster and make more pork in a given time than any other breed.

Also BULLS, YOUNG COWS and HEIFERS from our great JERSEY COWS.

BOWMONT FARMS. Salem, Va.

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 Highc're and Sunrise.

—DORSET SHEEP—

B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

...Jersey and Guernsey Heifers...

FOR SALE

Berkshire sows due to farrow in April and May, several boars large enough for service, pigs in pairs or trios not akin.

EGGS FOR HATCHING from Bronze turkeys, Pekin ducks, B. P. Rock and Brown Leghorn fowls. A few trios for sale, also a fine lot of Fox Terrier puppies by imported Rozanne.

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

When corresponding with our advertisers always mention the SOUTHERN PLANTER.

To Stock Raisers and Dealers.

I can furnish you on short notice with any number of
Stock or Breeding Ewes.

REASONABLE TERMS TO RESPONSIBLE PARTIES.

Breeding ewes from \$2.50 each for a plain class, up to \$4.50 each for a fancy, high bred black-faced class. Can sell a good, strong, young, serviceable class of Ewes at \$3 to \$3.50 each. I will have during August and September a grand lot of STOCK RAMS, from \$7 to \$15 each, according to age, breeding and quality; a few fancy yearling Shropshires at \$20 each.

Write me what you want either in stock sheep or stock and feeding cattle. I can fill your order, and will please you.

**Cattle, Sheep, Lambs, Calves and Hogs Sold on Commission.
HIGHEST MARKET VALUES GUARANTEED.**

All consignments receive my strict personal attention.

ROBERT C. BRAUER, Successor to Brauer Cattle Co., **Richmond, Va.**



Accurate weekly quotations. Address: P. O. Box 204. Pens: Union Stock Yards, Richmond, Va. Office at Union Stock Yards.

identified with that city in her youth, having received her education there, and lived there during the war.

Richmond has at least a half claim to Amelie Rives, she having been born in that city in August, 1863, and her mother (Miss Sarah McMurdo) having been a native and resident of the place. Amelie Rives is undoubtedly a writer of great versatility, and of tropically rich gifts. She has not only made her mark as a novelist and writer of short stories, but she has also a rich vein of talent as a poet and a dramatist.

Amongst the literati, who though not native to Richmond, have taken up their residence there and identified themselves with the place and people, I might mention Captain W. Gordon McCabe, one of the prominent educators of the South—a man of high scholarship and marked literary talent.

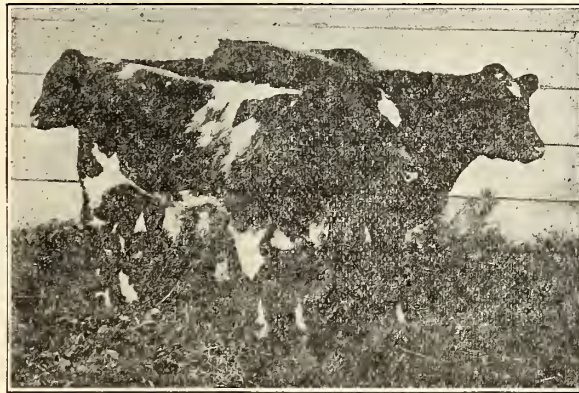
THE FINEST HEREFORD BULL IN VIRGINIA.

In this issue will be found an advertisement offering Lars, Jr., the finest Hereford bull in the State for sale. He is not only royally bred, but has been developed with the best of care and attention in the celebrated herd of Mr. Murray Boocock. He is in the prime of life and good for many years' service. We should not like to see this bull go out of the State, and would urge some of our enterprising breeders to avail themselves of the opportunity of securing him. He cannot fail to be a most profitable investment. Look up the advertisement and attend to the matter at once, as there are certain to be many parties after him.

JUST SO.

"In some respects rats are much wiser than human beings. They— Really he did not look it; but then, you know, you can never tell when some people are loaded; "—always gnaw a good thing when they see it."—August Woman's Home Companion.

Mrs. Auger—I can't see why my husband should be jealous of me.
Her Friend—No one can, my dear.



Glen Farm

Importer and Breeder of
Polled Durham Cattle
Southdown Sheep
and Poland China Hogs.

Polled Durhams are Short-horns with the horns bred off. They are all either red or roan. Buy a polled Durham and lay aside the bloody dehorner.

JOHN S. FUNK,
Singers Glen,
Rockingham Co., Va.

SUNNY HOME HERD OF Aberdeen Angus Cattle

has been reinforced for sale by the **WILLOW OAKS HERD** (property of Mr. T. B. Fitzgerald, former President of Riverside Cotton Mills, Danville, Va). This herd was founded in 1902 by the purchase of a car load of the best females money would buy in Central Illinois. One of our customers writes as follows:

UNION, S. C., June 4, 1904.
DEAR FRENCH,—I have been at my farm and have taken several good looks at the two heifers. They are beauties, especially Miss Stubbs 2nd, and I am proud of them. Enclosed is my check for \$ 00 in payment for them. The bull, Carolina's Gay Lad, that you sent me last fall is one of the finest looking fellows I ever saw—is a daisy. Very truly,
W. R. WALKER.

Mr. Walker owns the largest herd of Angus in South Carolina. We make it a point to furnish the above-described sort of cattle. Write for circular and prices to

A. L. FRENCH, Byrdville, Va.

Station, Fitzgerald, N. C., on D. & W. Railway, 24 miles from Danville.

HIGHLAND STOCK FARM.

PURE-BRED STOCK A SPECIALTY.

SPECIAL PRICES for this month on

Shorthorn Cattle, POLAND CHINA PIGS, SCOTCH COLLIE PUPS.

All Stock Recorded. - - - Write for Prices.

HENRY S. BOWEN.

Witten's Mills, Tazewell Co., Va.

MAGAZINES.

The August Century is in fact as well as in name a Midsummer Holiday Number, being pervaded with the holiday and outdoor spirit. Eight colored insets present Italian villas by Parrish, Bermuda submarine life by Knight, an old-time croquet party by Miss Betts (who made the much-admired color drawing, "The Easter Bonnet"), and a newly discovered natural bridge by Fenn.

The last of these illustrates a great "find," being one of three pictures of colossal natural bridges accompanying an account by W. W. Dyar of a recent discovery in Southeastern Utah, which has excited a veritable sensation among the few geographers and others to whom it has been known. These bridges are of much greater proportions than the Natural Bridge of Virginia, and they have not before been pictured nor described in print.

Castaigne, whose pictures of the Chicago, Paris and Buffalo Expositions appeared in The Century, contributes a group of drawings of the Louisiana Purchase in his usual vivid and picturesque style.

"Summer Splendors of the Chinese Court" is an illustrated personal narrative, by Minnie Norton Wood, of a reception by the Empress Dowager at the summer palace near Peking—the summer function of the sort to which foreigners have been admitted.

The number is crowded with holiday features: "The New Coney Island," by Albert Bigelow Paine, with drawings by Yohn; "Visiting in Country Houses," by Eliot Gregory, with drawings by Charlotte Harding; "The Old and Novel Sport of Archery," by A. B. Casselman, apropos of the Olympic Games at St. Louis, illustrated; "Lombard Villas," by Edith Wharton, with Parrish's pictures; "What Do Animals Know?" by John Burroughs. Six or seven poems add further to the seasonable character of the number. There is also a continuation of Andrew D. White's anecdotal recollections of "Russia in War Time," and a reproduction of Volk's handsome painting, "The Belle of the Colony."

Commencement of a promising new serial and the conclusion of B. L. Farjeon's quaintly entertaining "A Comedy in Wax" mark the August St. Nicholas. The new story, which will run till November, is "Elinor Arden, Royalist," from the pen of Mary Constance Du Bois, and is said to be based upon an actual historical incident. The tale deals with a dear little maid and her stirring adventures in the time of the Cavaliers and Roundheads, and has many illustrations by Benda. The number, too, has the second installment of the unique Japanese serial, "Kibun Daizin, or From Shark-Boy to Merchant Prince," by the Japanese writer, Gensai Murai. There is another good story of 'varsity life and baseball, "The Out-Curve," by Leslie W. Quirk, who has written before, and

Large English Berkshires.

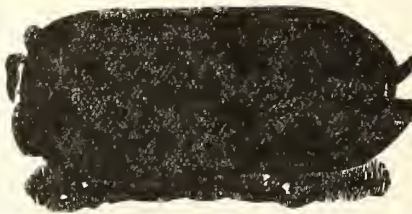
BOARS ready for service.

Pigs ready to ship.

Bred Gilts.

Forest Home Farm,
Purcellville, Va.

86 BERKSHIRE PIGS



now ready for shipment; 10 to 12 weeks old, from directly imported sows or from sows of imported blood on both sides; sired by my 4 UNSURPASSED HERD HEADER BOARS from N. Benjafield, C. Collins Smith, James Lawrence and R. W. Hudson all of England. BRED SOWS, GILTS and ready-for-service BOARS. Prices as low or lower than

those of any other STANDARD breeders, novices not reckoned.

THOS. S. WHITE, Fassifer² Stock Farm, LEXINGTON, VIRGINIA.

Duntreath

"Bred-in-the-Purple."

"The
Very Best."—
The whole story in
three words!

Berkshires...

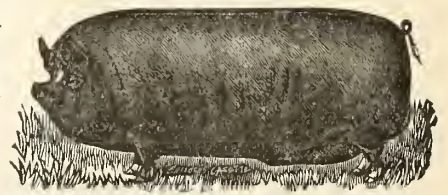
Extra Choice Young Stock now ready for Shipment.
Large number of Litters of the best English and American breeding. MONEY CANNOT BUY BETTER!

DUNTREATH STOCK FARM, RICHMOND, VIRGINIA.

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.



Reg. Poland Chinas and English Berkshires

FROM THE VERY BEST STRAINS.

Barred and Buff Plymouth Rocks.

Homer Pigeons and Pedigreed Belgians Hares.

I breed nothing but the best and guarantee satisfaction or your Money refunded. C. M. REAVES, MULLINS, S. C.

IS YOUR FARM FOR SALE?

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

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

ANNEFIELD FARMS

BERKSHIRES AND HEREFORDS

PLACE ORDERS NOW FOR SPRING PIGS

and get choice selections. A few Fall pigs at a bargain if sold at once. Prices reasonable. *o o o o o o*

EDWARD G. BUTLER. = = Briggs, Clarke Co., Virginia.

always acceptably, for the boys who read St. Nicholas. "Stories of my Pets," Don the bullfinch, Dick the cat, and Lady, a fine saddle horse, recounts interesting anecdotes of Helen Harcourt's pets; and F. E. Hawson, tells about "When the Birds Were Our Guests," a true and charming incident. Not stories, but as interesting as fiction, are W. J. Henderson's "A Naval Boat Drill" and Charlotte C. Parsons' "A Summer Day at Innsbruck."

A cousin of the President's, Maude Roosevelt, is, in the matter of strenuousness, evidently a disciple of her distinguished relative. She contributes to the August Lippincott's Magazine the leading novelette, entitled "Social Logic." This is naughty enough to engross without being naughty enough to repel. It is a tale of gay New York and gayer Paris as it follows the fortunes of two attractive girls of good family, but small means, who drift together in a boarding house. In device and characterization Miss Roosevelt shows equal facility and feeling. She is at present finishing her studies for Grand Opera under Marchesi at Paris, and not very long ago her name appeared in the James K. Hackett theatre company touring in America. Such is her versatility! The short stories of the month appeal both for their variety and liveliness. An especially clever and timely tale by Eleanor A. Hallowell is called "Old Home Week in Bohemia." It makes the reader wish he could have been one of the rollicking reunion. Seumas MacManus, sans dialect, is pre-eminently fine. His story, "The Sacrifice of Nabla," which is a brilliant example of this style, excels in power and pathos. Vincent Harper, a Canadian writer, contributes a sprightly summer story of Bar Harbor doings under the title of "Appendix B." It contains an ingenious hit at the prevailing "appendicitis habit." A little story by Emanuel Lissner called "A Piute Tragedy—or Comedy" shows well-concentrated artistic quality. The "summer widowers" and their invisible wives should not fail to read Mary Moss' acute tale called "Marooned." It might be labelled "Cure for Heart-ache—if taken in time." The Baroness von Hutten's third appearance in

Bacon Hall Farm.

Hereford Cattle :- Berkshire Hogs

REGISTERED—ALL AGES.

Toulouse Geese, Muscovy Ducks.


MOTTO: Satisfaction or no sale.

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

ROSEMONT HEREFORDS.

HEADED BY
THE FAMOUS

ACROBAT 68460,

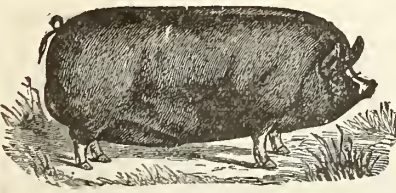


Choice young stock for sale at all times. Visitors welcome.
Come and inspect the best herd in the South

ROSEMONT FARM. Berryville, Clarke Co., Va.

HEREFORD CATTLE. MURRAY BOOCOCK

KESWICK, VA.



GLENBURN FARM BERKSHIRES

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

THE - OAKS - STOCK - FARM.

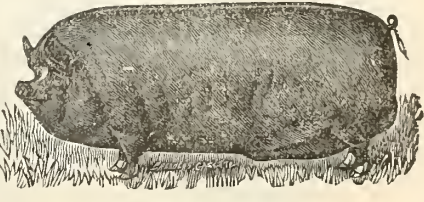
A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

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

Large ENGLISH BERKSHIRES

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

ALEX. HARMAN, Mgr., Lexington, Va.



Mike—Are ye much hurted, Pat? Do ye want a docthor
Pat—A docthor, ye fule! Aftther bein' runned over by a trolley car? Phwat oi want is a lawyer.

WANTED,

A mahogany, carved Post Tester Bed. Address, with price, "M.," Box 485, Richmond, Va.

State College, Pa. Bulletin 67. Variety Tests of Wheat.
 South Carolina Experiment Station, Clemson College, S. C. Bulletin 88. Sorghum as a Syrup Plant. Bulletin 89. Sanitary Conditions in the Home and on the Farm.
 South Dakota Experiment Station, Brookings, S. Dak. Bulletin 83. Millet for Fattening Swine. Bulletin 86. Fattening Range Lambs.
 Virginia Department of Agriculture, Richmond, Va. Quarterly Bulletin, May, 1904. Analysis of Fertilizers.
 Virginia Weather Service, Richmond, Va. Report for June, 1904.
 Imperial Department of Agriculture for West Indies, Barbadoes, W. I. Manurial Experiments with Sugar Cane.

GETTING RID OF HOUSEHOLD PESTS.

Rats and Mice—Peppermint sprigs laid around shelves and places these pests frequent will drive them away. Chloride of lime sprinkled about is also effective.

Ants and Roaches—Powdered borax scattered in their haunts is a "sure cure." One teaspoonful of tartar emetic mixed with one teaspoonful of sugar, and put where ants are troublesome, will drive them away in a day.

Fleas—These may be driven away by scattering either lime or cayenne pepper in the places which they frequent. Oil of pennyroyal is also good.

Moths—These may be prevented by the use of moth-balls, or bags made of crushed lavender and lemon-verbena with clover and other pungent spice. Powdered borax, camphor and cedar dust are all effective.

Flies and Mosquitoes—The best preventive is tight screens and constant vigilance. Mosquitoes dislike lavender and green walnut. Fly paper is made as follows: Take equal parts of melted resin and castor oil, and spread while warm on strong, thick paper. Or use four ounces of quassia chips boiled in one pint of water. When cold strain, then add water to make one pint, and two ounces of alcohol. Sweeten with sugar, and pour in saucers.

Bedbugs—Use turpentine, corrosive sublimate, etc., but the surest method is to fumigate with sulphur.—August Woman's Home Companion.

HIS INQUIRY.

"The wife of that feller that just sung the sailor song," whispered the landlord of the Pruntytown tavern to the drummer who had accompanied him to the home talent entertainment in the village theatre, "is suing him for divorce."

"That so?" was the reply. "Has she any other grievance besides his singing?"—August Woman's Home Companion.

St Albans School



SITUATED ON A
 SUNNY HEADLAND
 ABOVE THE
 BANKS OF NEW RIVER,
 IN THE
 BLUE GRASS REGION
 OF VIRGINIA

**Prepares Boys
 FOR UNIVERSITY OR
 FOR BUSINESS**

SEND FOR ANNUAL CATALOGUE, IN WHICH IS
 PUBLISHED "PLAN OF ST. ALBANS SCHOOL."

Address, W. H. RANDOLPH,
 Head Master,
 RADFORD, - - - VIRGINIA.

Smithdeal Business College
 Broad & 9th Sts., RICHMOND, VA.

Commercial, Stenographic, Telegraphic and Eng. Depts. Ladies & gentlemen. No vacations. "It is the leading Business College south of the Potomac River."—PHILA. STENOGRAPHER. "When I reached Richmond, I inquired of several business men for the best Business College in the city, and, without exception, they all recommended Smithdeal's as the best"—W. E. ROSS, LAW STENOGRAPHER, Richmond. Bookkeeping, Shorthand, Writing, taught by mail.

CHARTERED 1870.

MERCHANTS NATIONAL BANK

OF RICHMOND, VIRGINIA.

CAPITAL, - - - \$200,000.00.
 SURPLUS, - - - \$300,000.00.
 UNDIVIDED PROFITS, - \$361,000.00.

Depository of the United States, State of Virginia, City of Richmond.
 Being the Largest Depository for Banks between Baltimore and New Orleans, we offer superior facilities for direct and quick collections; accounts solicited.

JNO. P. BRANCH, Pres. JNO. K. BRANCH, Vice-Pres. JOHN F. GLENN, Cash
 Assistant Cashiers; J. R. PERDUE, THOS. B. McADAMS, GEO. H. KEESEE.



A Washing Machine is as great a necessity in the house as a wringer

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 woodenware 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.

THE RICHMOND CEDAR WORKS, Richmond, Va.

IMPROVING RURAL DELIVERY.

Only within a few years have some of us heard of Rural delivery the first time. Now it is in operation all over the country, and people are heard to say: "Why did we not have it long ago? We could not do without it."

Great as is the blessing of rural delivery, yet it could be improved. When it was first introduced we were told that each mail box would be a private post-office, and this is the idea exactly. Why cannot every mail box be numbered and a number be placed thereon, just as the boxes are numbered in a postoffice. The only reason it has not been done before this, is that we have thought the mail man the only one to be benefited thereby; but this a false idea, for the advantages would be great to the resident as well as to the carrier. It is much easier to remember a number than a name, much more to remember a dozen names, as is necessary in the case of Farmer Taylor, with his wife, his ten sons and daughters, his two hired hands, and the cook. But think of it, this is only one among the scores of families that live on a single rural route. It is claimed by some that this numbering system would be impracticable, but why should it be? Suppose that your box is No. 42, on route No. 3, the address could be written thus: R. Route No. 3—42. What could be easier than this? In case the number is omitted in the address, the mail man could look on his indexed list and see at once, to which box the mail belongs. Not only would the adoption of this numbering system (1) greatly lessen the care on the mail man, but also (2) it would make the proper delivery of the mail doubly sure; (3) it would lessen greatly the amount of writing necessarily contained in the address; (4) it would render it possible for persons to advertise and correspond without the embarrassment of having their names appear in public print, besides conferring other benefits, the value of which we cannot now realize.

Is this a false theory, or is it sound doctrine? Whichever it be, is it not worthy of the attention of those who have the management of the R. F. D. system in hand? "THREE'S."

MR. J. T. DUNN IS NOW WITH MR. ASHTON STARKE.

Mr. J. T. Dunn, who was formerly with the Farmers' Supply Company, and more recently with the Richmond Buggy and Wagon Company, has connected himself with the Ashton Starke Implement House, 1422 E. Main street, Richmond, Va., where he will be pleased to see and serve his friends.

Hostess—Won't you sing something for us, Miss Screecher?

Miss Screecher—Why, er, most of the guests have gone home, have they not?


Hostess—Yes; but some of them seem inclined to stay here all night.

Best Machine on the Farm



Farmers who have used the Improved Low Down Pennsylvania Force Feed Fertilizer Grain Drill will use no other kind. The general verdict is that it is the best machine on the farm. Made in various sizes with either hop or disc. We will send you FREE a special book telling all about it and what it has done to make better paying crops. Adapts itself to all conditions. Address A. B. FARQUHAR CO., Ltd., York, Pa.

SUCCESS Manure Spreader



Leads every other machine for the mechanical spreading of manure. Its superiority appears in the fact that it is a distinct improvement on the Kemp Spreader, which we still manufacture and which has been the typical Spreader for 25 years. Spreads all manures of every character and condition and all commercial fertilizers. Pulverizes and spreads evenly, thick or thin, broadcast or drills in rows, any desired quantity per acre, unloading the largest load in 3 to 5 minutes; apron automatically returns to position in the next 65 feet driven.

A SPECIAL FEATURED MACHINE for convenience of handling and perfection of work. Notably superior in its Beater Freeing device, Direct Chain Beater Gear, Speed Regulation and Automatic Return of Apron. Positive and dependable in all movements. Simplest in gear, lightest in draft, least chance for breakage. The driver never dismounts for any purpose but controls everything from his seat. Made in four sizes and sold under strongest guarantee as to materials, workmanship and duty. Investigate fully before buying. Catalogue with valuable chapter on farm fertilizing mailed free.

KEMP & BURPEE MANUFACTURING CO. BOX 205. SYRACUSE, N. Y.

Made for the Man Who Wants the Best.

The Endless Apron Great Western Manure Spreader.



SPREADS and pulverizes all kinds of manure, fresh, well rotted, mixed, full of straw or cornstalks, sheep manure. No matter how tough, we guarantee our spreader to spread it so evenly that one load will do more good than three spread by hand. Endless Apron is always ready to load. No turning back after each load is spread. Front wheels cut under and machine can be turned in its own length. **REGULATED** while in motion to spread thick or thin. Our non-bunchable rake holds all large chunks on top of beater until they are thoroughly pulverized. Combined Hood and End Gate keeps manure away from beater while loading and acts as wind hood in spreading. **LIGHTEST DRAFT** ever produced on a manure spreader, because front and rear wheels track and the load is nearly equally balanced on front and rear axles which brings load up close to horses. Made in 4 sizes: 30, 50, 70 and 100 bushels capacity. Inquire of your dealer or send to us for catalogue.

SMITH MANURE SPREADER CO. 16 & 18 SOUTH CLINTON ST. CHICAGO, ILL.

Steam is the Best



After all, the best most reliable, most efficient and in the end the cheapest power is steam. Wind is whimsical and unreliable; water power can only be used a few months each year at best; gasoline powers are out of order more than half the time and electric current itself depends on steam power. The sure power is a

Leffel Engine and Boiler.

This outfit is detached—boiler mounted on skids and engine on separate base. Engine can go on either side of boiler and any reasonable distance away. Large or small pulley and belt on either end of engine shaft. A highly efficient, quick steaming, high power developing outfit. Suited to any work, any fuel, anywhere. We make many other kinds and styles of Leffel engines and boilers. Book "Power Economy and Efficiency," free. **ASHTON STARKE**, So. Sales Agt. James Leffel & Co., Box 134, Springfield, Ohio. Richmond, Va.

..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARS, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

AMERICAN BREEDERS' ASSOCIATION.

The general chairman of the membership committee of the American Breeders' Association, Mr. Eugene D. Funk, Bloomington, Illinois, is progressing with his campaign for a large membership for that new organization. The State chairmen in the various States, and other State committeemen, are inviting thousands of animal breeders, plant breeders, scientists interested in heredity and evolution, and others who are interested in plant and animal improvement to become members. The secretary, Prof. W. M. Mays, St. Anthony Park, Minnesota, to whom all remittances are made, reports daily responses in the way of remittances for membership. Some have expressed the belief that the annual membership at \$1.00 is too low. A number of life-memberships at \$20.00 have been received, among them one from Philip de Vilmorin, head of the great seed house of Paris, France, and another from the Zoological Laboratory, Naples, Italy. A number of annual foreign memberships at \$2.00 have also been received.

Animal breeders especially commend the proposed scheme of a directory of breeders, showing classes of live stock and plants for sale by breeders, and showing specialties of scientists interested in breeding. Physicians and teachers are taking an interest in this association, that they may know more about the general subject of heredity.

There is a wide range of interests represented by those who join this new association. Not only is the number of breeders of different kinds of animals in America increasing, but the field crops and many of the horticultural crops are being taken up by breeders who are improving them by systematic breeding. The work of the experiment stations and the U. S. Department of Agriculture is especially effective in reducing breeding to more of a science.

THE DIFFERENCE.

"Far as I can learn," said the Pruntytown philosopher, with his usual raspishness, "the only difference—excepting, of course, in the size of their bills—between the fashionable city physician, with several mysterious initials after his name, and the plain, every-day village doctor, who is commonly called 'Doc,' and swaps horses on the side, is that the former diagnoses your malady and the latter simply tells you what's the matter—that is, you s'pose they do."—August Woman's Companion.

She—And are you really so much better since you returned from your trip abroad?

He—Yes, indeed! I'm quite another man, I assure you.

She—Well, I'm sure all your friends will be delighted to hear it.



"ELI" Against the Field.

It leads in power, in speed, in safety, in convenience and ease of operation and makes compact and shapeliest bales.

HAY BALER WITH A RECORD,

the pride of shippers. Steel or Wood, Horse or Steam Power. Such automatic features as self-feeding, block placing, hay condensing, bell ringing, etc. 38 styles and sizes. Get free Eli catalog

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EDGEWOOD STOCK FARM DORSETS! DORSETS!

You men in the early lamb business need Dorset blood. No lamb grows like a grade Dorset. Grade Dorset ewes will lamb in December.

One cross will bring results. Try a Dorset ram. Our fall lambs are beauties. Write us or come to see them.

J. D. and H. B. ARBUCKLE, Maxwelton, Greenbrier, Co., W. Va.

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.

ORGANIZED 1832.

ASSETS, \$932,050.00.

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Insurance Company, of Richmond, Va.

Insures Against Fire and Lightning.

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How are Your Eyes?

We are the largest optical establishment South, and give proper adjustment of SPECTACLES and EYE GLASSES. Complete manufacturing plant on the premises. Mail us the pieces and we will, from them, duplicate your Glasses. Glasses by mail our specialty.

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is also complete with CAMERAS, KODAKS and PHOTO SUPPLIES, developing and printing finely executed.

Our line of OPERA GLASSES, FIELD GLASSES, Incubator and Dairy THERMOMETERS, etc., etc, is also complete. Lowest charges in all cases.

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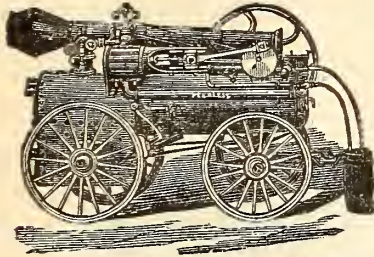
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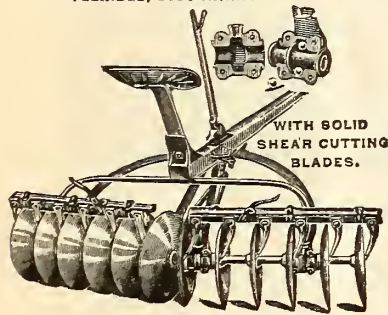
15th & Franklin and 14th & Main Sts., Richmond, Va.

**Agricultural Implements,
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Harness.**

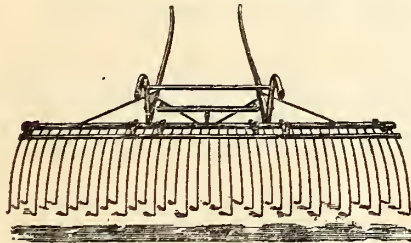


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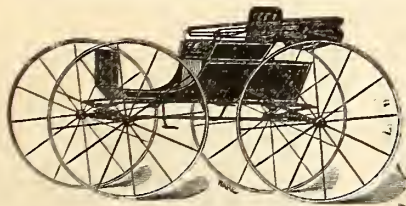
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WITH SOLID SHEAR CUTTING BLADES.



BEMENT IMPROVED WEEDER.



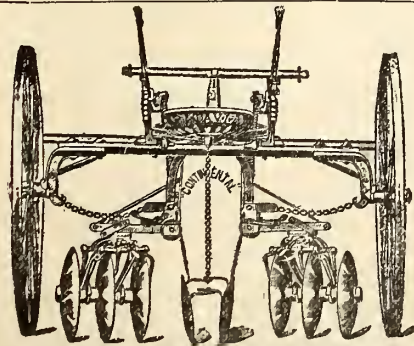
ALL STYLES OF BUGGIES.



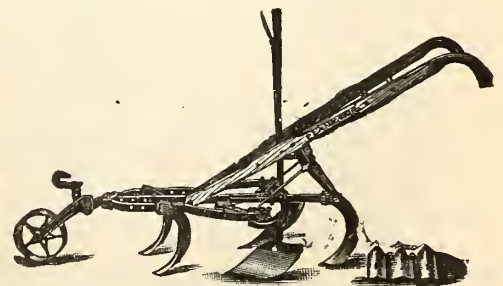
SPIKE TOOTH HARROW.



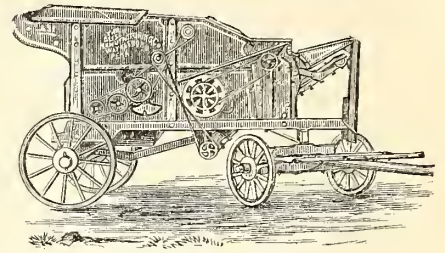
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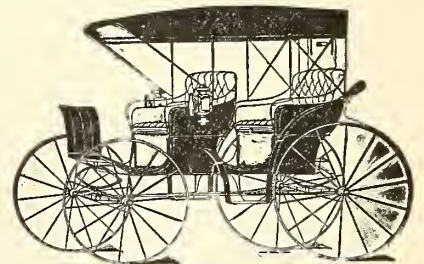
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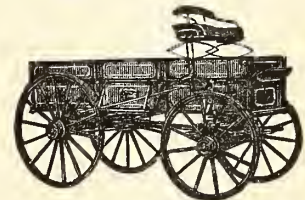
COMBINED CULTIVATOR, AND HORSE HOE.



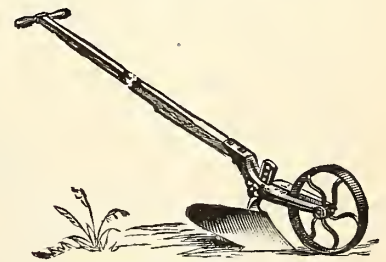
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EXTENSION TOP SURREY.



FISH AND WEBER WAGONS.



FIREFLY GARDEN PLOW.

A full stock always on hand, and prompt shipments guaranteed. South Bend, Dixie and Farmer's Friend Plows and repairs. The Hancock Rotary Disc Plow, warranted to go in the ground where all others fall.

A large and complete stock of open and top buggies, surreys and spring wagons. Fish, Weber and Columbus two-horse Farm Wagons. Champion and Hickory one-horse Wagons. John Deere and Continental Disc Cultivator. Roderick Lean Land Rollers.

Hocking Valley Feed Cutters, Cyclone Shredders, Smalley Feed Cutters, Dain Corn Cutters. Equal to any made. Staver Buckeye Feed Mill and Horse Power Combined.

Whitman All-Steel, full circle Hay Presses. George Ertel Company's full circle Hay Presses. Rapid Fire Horse Power Hay Press, for one horse, a good, cheap press. Will put up from 150 to 200 bales a day. The well known Minnich Hand Baling Presses.

Hocking Valley Wine and Cider Mills. Hard wood rollers. The best mill made.

Hocking Valley Corn Shellers, for hand or power. Smalley Electric Pole and Wood Saws, for steam or horse power. Peerless Engines and Saw Mills always in stock. Several good second-hand Engines and other second-hand machinery for sale. "Pittsburgh Perfect" fencing, electrically welded. Barb Wire, Plain Galvanized Wire, Baling Wire, and Bale Ties. Continental Disc Harrows, Buffalo Pitts and Lean Spike Harrows.

A full line of Planet Jr., Garden Tools.

We will be glad to mail you a copy of our new catalogue.

THE WATT PLOW CO.,

15th and Franklin and 14th and Main Streets - - RICHMOND, VA

AS TO ADVERTISING.

If you toot your little tooter and then
lay aside your horn,
In ten short days there's not a soul
will know that you were born;
The man who gathers pumpkins is
the man who plows all day,
And the man who keeps a-humping is
the man who makes it pay.
The man who advertises with a short
and sudden jerk
Is the man who blames the editor be-
cause it didn't work;
The man who gets the business has a
long and steady pull,
And keeps his ad a-running from
week to week quite full.

He plans his advertising in a thought-
ful sort of way,
And keeps forever at it until he makes
it pay;
He has faith in all the future, can
withstand a sudden shock,
And, like the man of scripture, plants
his business on a rock.

If he can't write good copy, he em-
ploys a man who can,
And the other fellow in his line is
classed as "also ran."
You can't fool people always—they've
been a long time born,
And most folks know the man is slow
who tooteth not his horn.

A \$75,000.00 PRIZE.

Some public spirited men in St. Louis, to promote interest in the great World's Fair which opens in May, have organized a contest which is open to everyone in the world, as to the number in attendance at the fair.

A fac-simile letter from the treasurer of the Missouri Trust Co., of St. Louis, in the possession of the publisher of this paper:

"Certifies that the World's Fair Contest Company, incorporated, has this day deposited with this company \$75,000.00 in gold for the payment of the awards in its contest on a total paid attendance at the Louisiana Purchase Exposition, 1904, and that such deposit is held in trust by this company, to be paid by it to such successful contestants as the Committee of Awards may direct."

The judges and other officials of the contest are men who are high in financial and business circles, and men who are prominently connected with the fair as officers, and also directors and officials in prominent banking institutions in St. Louis.

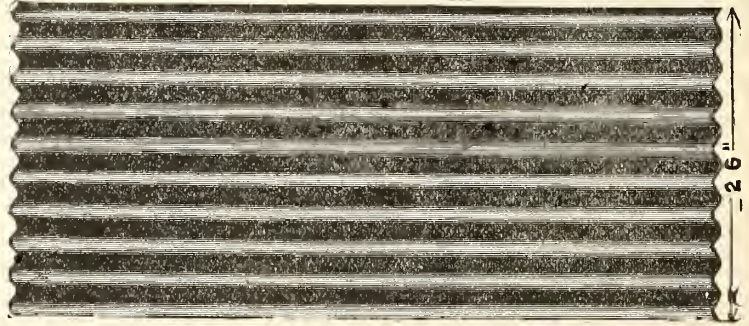
It is quite an interesting contest, and we suggest that any of our readers interested write to the World's Fair Contest Co. for full information, addressing your letters to St. Louis, U. S. A.

"Your husband," said Mrs. Oldcastle, "seems to be so altruistic."

"Yes, I know it. But Josiah always was a great hand to overeat, and I think that must be what gives it to him."

ROOFING OF ALL KINDS.

Painted Corrugated Roofing, Painted V. Crimp Roofing, Roofing Tin in boxes or rolls, Tarred Roofing Felt, Perfected Granite Roofing. ✂ ✂



Send us the DIMENSIONS OF YOUR ROOF, stating KIND OF ROOFING wanted, and we will quote you on sufficient quantity to cover it.

You can ADD YEARS to the life of your roof by painting it with our

Magnet Red Roofing Paint.

1 gallon will cover 2½ squares. Can furnish in any size package, 1 gallon up. Only the very HIGHEST GRADE material enters into the manufacture of this paint. Write for prices.

We also carry a complete stock of Conductor Pipe and Gutter, Solders and Metals; Galvanized and Black Sheet Iron, etc.

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1323 East Main Street,

RICHMOND, VIRGINIA

The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and

THROUGH ITS CONNECTIONS....

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus;

THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE.

To STAUNTON, LYNCHBURG, CHARLOTTESVILLE, RICHMOND, PETER-BURG, NORFOLK, And Principal Virginia Points.

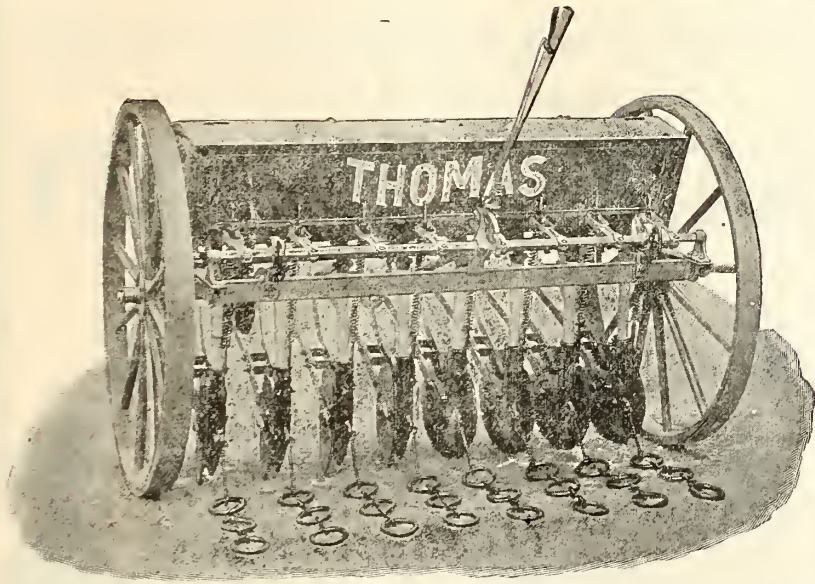
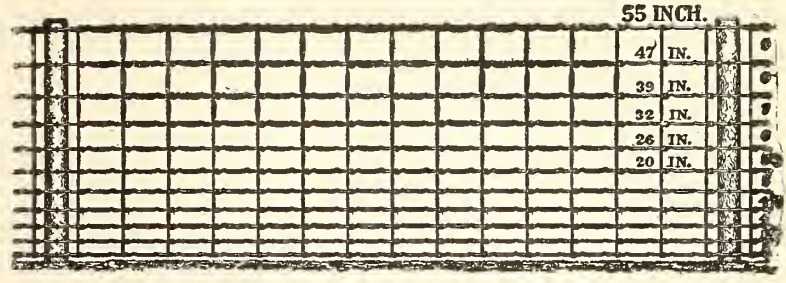
H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

The American Field Fence

is the most economical fence that can be erected. Its cost

is even less than barb wire or wood and when erected is practically everlasting. Furnished in various heights and styles.

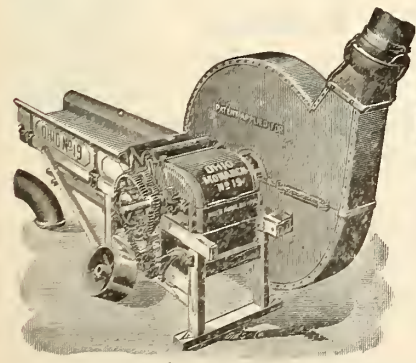
Write for special catalogue and prices.



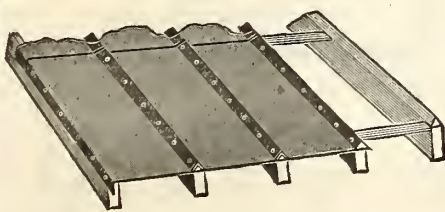
THE THOMAS DISC GRAIN DRILL will drill perfectly WHEAT, OATS, CORN, PEAS and BEANS as well as grass seed of all kinds. With or without fertilizer attachment.



WOOD'S PATENT SWING CHURN. The quickest and cleanest butter maker known. The frame is made of Hollow Steel Pipe, very light and strong, and easily forms a useful table. The churns are furnished of either wood or heavy tin.



OHIO FEED CUTTERS for hand or power. A comparison with others will convince you it is the strongest, simplest and best made. The power machines are furnished with blower or carrier if so wanted. Prices very low.



V CRIMP STEEL ROOFING. The most economical roof made. Does not require a carpenter to put it on. Furnished in all lengths from 5 to 10 feet long.



THE EMPIRE CREAM SEPARATOR should be on every farm where three or more cows are kept. It will save its cost many times in one year. It is the simplest one ever manufactured and can be cleaned without trouble to any one. Write us for particulars.

SINGLE AND DOUBLE CIDER MILLS. All sizes and capacities at low prices.

BIRDSSELL STEEL SKEIN FARM WAGONS, MITCHELL FARM WAGONS, BUGGIES, CARRIAGES, HARNESS, ROBES, BARB AND PLAIN WIRE, POULTRY NETTING AND LAWN FENCING, CORN SHELLERS, FEED CUTTERS, GRAIN DRILLS, WOOD SAWS, MOWERS, BINDERS, HAY RAKES.

All kinds of Agricultural Implements and Machines. Catalogue mailed free.

THE IMPLEMENT CO., 1302 and 1304 E. Main St., Richmond, Va.

EXTERMINATING MOTHS.

The most effectual method of rendering a house moth-proof is thorough spring and fall cleaning. Two of the arch-enemies of moths are cleanliness and light. Attics and storage-rooms require light and ventilation. The cedar chest or closet ranks first as a preventive. Moth balls are efficacious, but one prefers the moth almost. Furs, especially, fascinate moths. The preliminary step is a thorough combing with a dressing comb; next, beat well, and air in the sunshine; next, sprinkle with gum camphor, cedar dust or tobacco leaves. Place the furs in paper sacks, turn the edges over, and paste down with a strip of muslin. Printers' ink is obnoxious to moths. Balls of cotton wadding saturated in oil of cedar are effectual in trunks. Remember this, oil stains. Carpets, if infested, must come up, be beaten and cleaned. Wash the floor with benzine, then sprinkle with cayenne pepper. Tack down the carpet, and sponge with a solution of one quart of water to one tablespoonful of turpentine, changing the water frequently. A preventive is to press every inch of the edge of the carpet, first dampening, then pressing with a hot iron. Lay a damp towel on the carpet, over this a paper to retain the steam, then iron. Steam destroys.—August Woman's Home Companion.

A sentry, an Irisman, was on post duty for the first time at night, when the officer of the day approached. He called:

"Who comes there?"

"Officer of the day," was the reply.

"Then what are yez doin' out at night?" asked the sentry.—London Fun.

Hewitt—So we have hugged the same girl.

Jewitt—Yes, I suppose she looks upon us as members of the associated press.

"Br'er Thomas, you spends 'bout half yo' time cussin' out de devil."

"Well, ain't dat right? What you 'spect me ter do?"

"Take a recess, en praise de Lawd some!"

Magistrate: Have I not seen you twice under the influence of liquor?

Prisoner: If you were in that condition, your honor, probably you did see me twice.

Police Captain—So you shot the dog. Was he mad?

Officer Grogan—No, sor; but th' ledy that owned him was.—Epworth Herald.

"Daddy's in jail fer moonshinin'," explained the Georgia youngster, "but he's got terbacky, religion, an' his ole time fiddle!"

Best for medicinal uses

Your physician will tell you that you should always have some good whiskey in the house. For accidents, fainting spells, exhaustion, and other emergency cases, it relieves and revives. But you must have good whiskey, pure whiskey, for poor whiskey, adulterated whiskey, may do decided harm. HAYNER WHISKEY is just what you need for it goes direct from our own distillery to you, with all its original strength, richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE of PURITY and AGE and saving the dealers' enormous profits. We have over a quarter of a million satisfied customers, exclusively family trade, who know it is best for medicinal purposes and prefer it for other uses. That's why YOU should try it. Your money back if you are not satisfied.

Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

4 FULL QUARTS \$3.20 EXPRESS PREPAID

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as you ever used or can buy from anybody else at any price, send it back at our expense and your \$3.20 will be returned to you by next mail. Just think that offer over. How could it be fairer? If you are not perfectly satisfied you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. Shipment made in a plain sealed case with no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo. must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

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ESTABLISHED 1866.



THE SEABOARD AIR LINE RAILWAY

OFFERS

PROFITABLE

INVESTMENTS

THE MANUFACTURER,

THE STOCK RAISER,

THE DAIRYMAN,

THE FRUIT GROWER,

THE TRUCKER.

TO

WHERE YOUR LABOR IS NOT IN VAIN.

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE,
Gen. Industrial Agt., Portsmouth, Va.

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Traffic Mgr.

CHARLES B. RYAN,
Gen. Pass. Agt., Portsmouth, Va.



.....LAIDLAW'S.....
**Concentrated Tobacco Powder,
 Sheep Dip and Cattle Wash.**

A SURE CURE FOR THE EXTERMINATION OF

Scab and Tick in Sheep. Lice on Horses and Cattle.
 Lice on Hogs. Mange on Dogs.

Kills all vermin. Allays all irritation. Promotes growth of wool. Makes animal feel well and take on flesh.
 ABSOLUTELY NON-POISONOUS.

PRICES: 5-lb. bag, 75c.; 10-lb. bag, \$1.25; 25-lb. bag, \$2.60; 50-lb. bag, \$5.00.

One 50-lb. bag makes 500 gallons Dip for Scab, and 1000 gallons for Tick, etc.

SOLE MANUFACTURERS,

LAIDLAW, MACKILL & CO., Limited, Richmond, Va., U. S. A.

To be Had at all Leading Drug Stores.

GROCERIES FOR FAMILY USE

A few articles quoted below will convince you that for cash you can live cheaply by dealing with us. We have a complete line of groceries, feed and liquors. Should you need anything not quoted here, write for prices. These prices are subject to changes in the market. We charge 10c. per gallon extra for jugs. Our goods guaranteed to be first-class. Goods delivered free of drayage to any depot. All prices f. o. b. here.

Granulated Sugar, per lb.....	5c.	Bran, per ton	24.00
Arbuckle's Coffee, per lb.....	11½c.	Ship Stuff, per ton.....	25.50
Best Meal, per peck, 18c.; or, per bushel.....	70c.	Old Crown Rye, 5 years old, per gallon.....	3.00
Pride of Richmond Flour, per sack, 35c.; or, per bbl.....	\$5.40	Old Keystone Rye, 4 years old, per gallon	2.50
Daisy Flour, per sack, 33c.; per bbl.....	5.25	Old Excelsior Rye, 3 years old, per gallon.....	2.00
Good Green Coffee, per lb.....	9c.	Old Capitol Rye, 2 years old, per gallon.....	1.50
Best Salt Pork, per lb.....	10c.	Pure N. C. Corn Whiskey, 2 years old, per gallon.....	2.00
Good Salt Pork, per lb.....	7c. & 9c.	Pure N. C. Corn Whiskey, 5 years old, per gallon....	2.50
Best Butcher's Lard, per lb.....	10c.	Duffy's Malt Whiskey, per bottle.....	80c.
Good Lard, 3 lbs. for.....	25c.	O'Grady's Malt Whiskey, per bottle.....	75c.
Green, Black and Mixed Tea, per lb.....	35c., 40c. & 50c.	Apple Brandy, 3 years old, per gallon.....	2.50
Best Cheese, per lb.....	12½c.	Virginia Apple Brandy, 5 years old, per gallon.....	3.00
Best Cut Herrings, 3 dozen for.....	25c.	Geneva Gin, 3 years old, per gallon.....	2.00
Best Roe Herrings, per dozen.....	18c.	London Dock Gin, 5 years old, per gallon.....	2.50
Heavy Bright Syrup, per gallon.....	35c.	Wilson Whiskey, per bottle	1.00
Best Genuine N. O. Molasses, per gallon.....	60c.	Buchu Gin, for kidneys, per bottle.....	1.00
Good Dark Molasses, per gallon.....	25c. & 35c.	Catawba Wine, per gallon.....	50c.
Soaps, 8, 7, 6, 10 and 11 bars for.....	25c.	Blackberry Wine, per gallon.....	50c.
Large Cans Tomatoes, per can.....	7c.	California Sherry Wine, per gallon.....	1.00
Large Cans Table Peaches, per can.....	12c.	(Sacks for corn and oats, 5c. extra.)	
3 Plugs Grape, Peach, Apple, Plum, Reynolds' Sun		Half bbls. Roe Herrings.....	2.75
Cured Tobacco for	25c.	Coarse Meal, per ton.....	25.00
Best Lemons, per dozen	12c.	Cut Herrings in one-half bbls.....	2.00
Good Corn, per bushel	65c.	Chop Food, per ton.....	25.00
Good Oats, per bushel	48c.	California Hame, per lb.....	10c.
Best Timothy Hay, per ton.....	17.00	Dunlop Flour, per bbl.....	5.50
No. 1 Mixed Hay, per ton.....	16.00	Obelisk Flour, per bbl.....	5.50
No. 1 Clover, per ton.....	16.00		

Remittance must accompany all orders. Send P. O. or Exp. Order, Rtg. Letters, for what you want.

J. S. MOORE'S SONS, Inc.,

No. 1724 East Main Street,
 RICHMOND, VA.
 'Phone 507.

A CANNY SCOTCHMAN.

There was a certain Scottish minister in a West Highland parish who has never yet been known to permit a stranger to occupy his pulpit. Lately, however, an Edinburgh divinity student was spending a few days in the parish, and on Saturday he called at the manse and asked the minister to be allowed to preach the following day. "My dear young man," said the minister, laying a hand gently on the young man's shoulder, "gin I lat ye preach the morn, and ye gie a better sermon than me, my fowk wad never again be satisfied wi' my preaching, and gin ye're nae a better preacher than me, ye're no' worth listening tae!"

Hawkins—My wife never gossips.

Robbins—Neither does mine. By the way, what does your wife call it?

THE NEW YORK FARMERS.—We are in receipt of the report of the 1903-1904 meetings of this celebrated Farmers' Club, the membership of which consists of millionaires sufficient to buy up all the farms and farmers in Virginia. They always secure some notable speakers for their meetings, and thus make the proceedings both interesting and useful. Amongst the speakers at the last meeting we notice the Hon. Henry Fairfax, of Virginia, who discussed the question of the influence of the Hackney upon the heavy harness horse of to-day—a subject upon which he was very competent to offer an opinion as one of the oldest Hackney breeders in the country, and one of the most successful.

Newrich—A man can get along without ancestors.

Mack—True. But his children can't.

CATALOGUES AND PREMIUM LISTS.

Prize list and Rules and Regulations for the government of and awarding of prizes in the Department of Live Stock at the Universal Exposition, St. Louis. The total amount of prize money offered is \$438,702.25, a sum never before exceeded at any Exposition or Fair. For copy of list and further information, apply to Col. Chas. F. Mills, Chief of Department of Live Stock, World's Fair, St. Louis, Mo.

"Name the world's greatest composer," said the musical instructor.

"Chloroform," promptly replied the young man who had studied medicine.

"Mr. Smith had a hard time to get his daughters off his hands."

"Yes, and I hear he has to keep their husbands on their feet."

An Atchison husband hovered at death's door so long his wife remarked that she supposed he was having his usual trouble finding the keyhole.

A PHILADELPHIA FEAR.

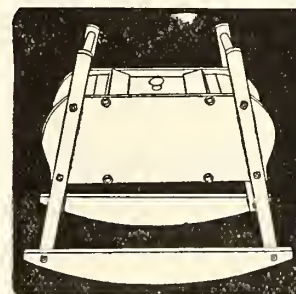
"Your husband has water on the brain," announced the doctor.

"Dear me!" she said. "I hope it has been boiled."—May Lippincott's Magazine.

"How fast can you go in that automobile?"

"Oh, three times as fast as the law allows."

Junior Partner—Young Jones has overstayed his vacation five days. Shall we fire him? "No; promote him, that shows he ain't afraid of hard work."

The **ROCKER CHURN**

Gets the butter from the cream down to the one thousandth part. Made of tasteless wood and the churning process is entirely the result of its own motion—no machinery inside or out to get out of order or require oiling.

Its Special Advantages

are: 1—Simplicity. 2—Least friction. 3—Gravity does the churning; a child can operate it. 4—Absolutely no adjustments, always ready. 5—Nothing but the churn box to clean, easily accessible. 6—Violent agitation of cream without paddles or dashers. 7—Gives the finest grade of butter of any churn on the market. **WE PAY THE FREIGHT.**

Your money back if not satisfied. In eight convenient sizes, 8 to 60 gallons. Price as right as the quality. Illustrated circulars free.

Rocker Churn Mfg. Company, Forsyth, Georgia.

DO YOUR TRADING

Where an established reputation warrants continued confidence. The name of LUMSDEN on anything in the **JEWELRY** or **SILVERWARE** line is a STANDARD of QUALITY.

**FINE GOLD AND DIAMOND JEWELRY; ;
STERLING SILVERWARE AND CUT GLASS.**

SIX SOLID STERLING SILVER TEA SPOONS, \$3.30. Write for our catalogue; it contains many articles on which we can save you money.

C. LUMSDEN & SON, Established 1835, 731 East Main Street, Richmond, Va.

**GENUINE OLIVER CHILLED
STEEL BEAM
PLOW**



AND REPAIRS.

This far-famed and world-renowned Plow we guarantee you is worthy of all that is said in praise of it. Wood Beam also furnished. Write for large Illustrated Catalogue.

We are general distributors of the **GENUINE ONLY**.

Farm Tools and Supplies

Large Illustrated Catalogue for 1904 just issued, embracing Hand, Horse and Power Labor-Saving Implements.

You must save as well as make money.

Write for this **FREE** catalogue at once.

NORFOLK FARM SUPPLY CO.

Implements
Poultry Supplies

Fertilizers
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**THE GROWLS OF A GRIZZLED
BACHELOR.**

Faint heart in time may save a
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It is unsafe to make love out of an
ink bottle—or any other way.

He thinks he is marrying his ideal,
but she sometimes turns out to be his
ordeal.

Some women's love is about as full
of warmth and truth as the epitaph
on a lawyer's tombstone.

The only appreciable difference be-
tween a woman and a girl is that the
woman is a little more so.—August
Woman's Home Companion.

Foozle—Do you think it wrong to
play golf on Sunday?

Niblick—I think it wrong to play
such a game as you do on any day of
the week.

"Poor Giblets!" "What now?" "He
has been off on a vacation for a month
and the doctor ordered him to go back
to work for his health."

Nor clothes nor riches makes the man,
'Tis more than this that makes him;
But whatsoe'er it be, we know
'Tis woman fair that breaks him.

Mr. A. L. French, of the Sunny
Home Herd of Angus Cattle, Fitz-

gerald, N. C., calls attention in a cir-
cular to the breeding of his herd,
which is second to none in this coun-
try.

Young Cubber—By George! I see
that Brown, the millionaire, has been
stabbed.

Old Grovehy—How sad! How very
sad! It has put the market down two
points.

She—Is it really true that the blind
can determine color by the sense of
touch?

He—Sure; I once knew a blind man
who was able to tell a red-hot stove
by merely putting his finger on it.

Mrs. Newbride—See here! when I
gave you that pie you promised to saw
some wood.

Hungry Hank—Well, you oughtn't
to've gave the pie first, lady. I just
ruined the saw tryin' to cut de pie.

FOR SALE

1 Reg. Holstein Fresian

Bull 3 1-2 years old; weight about 1,200 lbs.
Price, \$40. 2 HOLSTEIN FRIESIAN Heifer
calves, 8 months old, \$25 each. A few very
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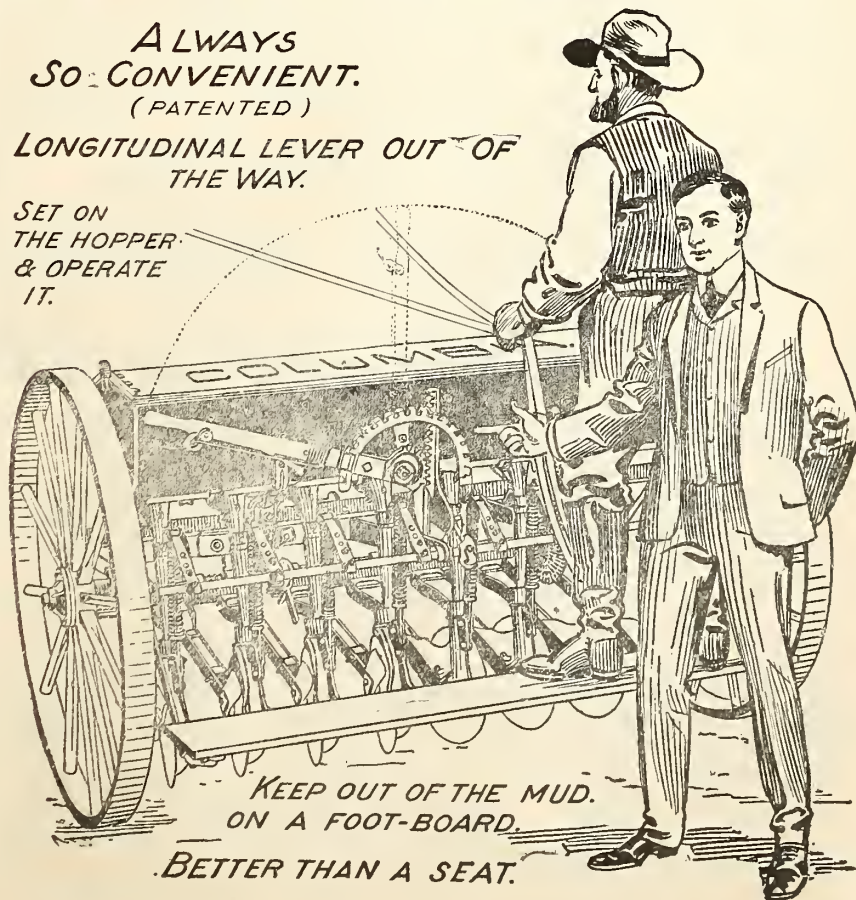
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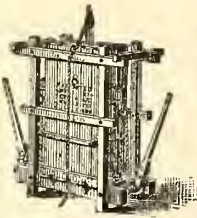
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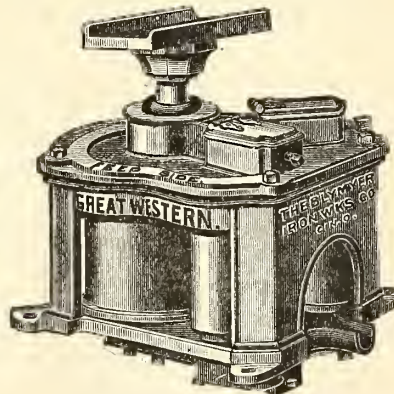
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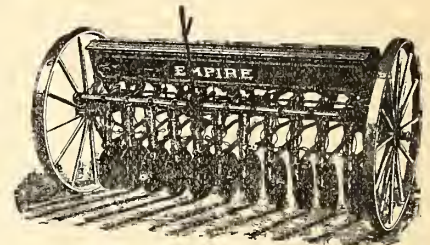
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No. 1. WOOD BURNT LIME, in car lots at lowest market price from the kilns.

If you wish to **IMPROVE** your land, use a ton of **PREPARED LIME** 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 place with litter from the barnyard or forest using the same quantity, and sow winter **OATS** and **CLOVER**,

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WHAT AN OLD-READER OF THE PLANTER SAYS OF IT.

Editor Southern Planter:

Who is "running" the PLANTER? It seems as if it gets better and better. I thought I knew it all, but it looks as if you are springing something on me every issue that I did not know. I do not see how any farmer can read one number and not subscribe, if he is not a subscriber already, when he can get the paper for 50c. or three for one dollar. This paper has saved me many times its cost. I often see articles worth 50c. to me. Then it has saved me in not making experiments that sometimes I make, and generally get left. Your article on tile draining is all right, and it pays from the start. I have done it, but I would not advise any one to borrow money to do it, for he will find a mortgage is the hardest thing he ever tried to raise. Such is my experience. Now, I am not kicking on your article on tile draining, and as you are a hard horse to ride, I guess I'll get out of the saddle.

L. H. CARLTON.

GENERAL SERMAN'S SENSE.

At the unveiling ceremony of the famous Bartholdi statue the clergyman who offered the opening prayer was inclined to spin out his petition. General Sherman was sitting beside him, and at length, quietly putting out a

hand, he pulled the reverend gentleman by the coat-tails gently back into his seat. When asked about the incident the General coolly replied—

"I thought he'd told God about all He wanted to know for one time, and others were waiting their turn at the public."—August Lippincott's.

UNNATURAL HISTORY.

During the opening days of Kindergarten the family life was being discussed with the tots in the circle as directly appealing to the little ones fresh from home.

"Now, children, we have talked about our own homes and little bird and squirrel families that have their homes in trees and on top of the ground; can you tell me any animals that have their homes in the ground?"

Up jumped curly-headed Barnett, enthusiastically, crying:

"Yes'm, Satan!"—Lippincott's.

THE DOCTOR ENLIGHTENED.

Representative Livingston, of Georgia, repeats a story that was told him by a physician on duty at a hospital in Atlanta.

One day there entered the hospital a young colored woman badly bitten in the neck just back of the ear. The doctor who dressed the wound said to the patient:

"It perplexes me to determine just

what sort of an animal bit you. This wound is too small to have been made by a horse and too large to have been inflicted by a dog or a cat."

The colored woman grinned. "Sho', Doctor, it wa'n't any animal dat bit me, it war a lady, sah!"—Edwin Tarrisse, in August Lippincott's.

A GOOD SHOT.

The foreman of the Minnie Healy mine, at Butte, Mon., noticed an apparently suspicious man standing day after day near the shaft-house silently gazing eastward where the Great Northern Railroad tunnel pierces the main divide of the Rocky Mountains. Approaching him one day, he said: "My man, what are you doing here?" "Faith, Jack Kane," answered the man, "I hove been here ivery day for the last thirty days, watchin' them enjines and cars goin' along that trail towards thot hole in the mountain, and, be gobs, not wan of thim hove missed the hole yet."—W. I. Lippincott, in August Lippincott's.

AN OBJECT LESSON.

A teacher in an East Side school, in trying to explain the meaning of the word slowly, illustrated it by walking across the floor. When he asked the class to tell him how he walked, a boy at the foot of the class shouted, "Bow-legged, sir."—Lippincott's.

FOR SALE.

Standard and Registered Trotting Mare,

rich bay, elegantly bred, young and sound. She is well made, speedy looking, with full mane and tail. Bred in 1904 to Kelly, 2:27. Address

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Winner of the Criterion Stakes, Pelham Handicap, Brooklyn Derby, Belmont, Trial and Tidal Stakes. Black horse, by Powhatan, dam imp. Invercauld, by St. Albans; 2d dam imp. Eleanor, by Voltigeur; 3d Themis, by Touchstone; 4th dam Rectitude (dam of Latus, Dr. Caius, Chivalry and Aristides), by Lottery; 5th dam Decision (dam of Brown Stout XXX and Silvio), by Magistrate, etc., etc. BURLINGTON will make the season of 1904 at J. E. Lane's above named farms at Falmont, Albemarle county, Va. Usual return privilege if horse is alive and in my possession. For particulars address

J. E. LANE, Esmont, Albemarle County, Va.

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CHORISTER

Bay horse, 16.1; weight, 1,300 lbs.; sired by Falsetto; dam, Addie C., by King Alfonso; 2d dam Aereolite, by Lexington; 3d dam, Florine, by imp. Glencoe. "One of the handsomest thoroughbreds in America, and a sure success as a getter of race horses."—Major Daingerfield. Chorister held the world's record for a mile as a three year old. He is the sire of "Corruscate," who holds the mile record for Canada—1:38%. All his get win, and are racing up to 8, 9 and 11 years of age. They won over \$30,000 in one season.

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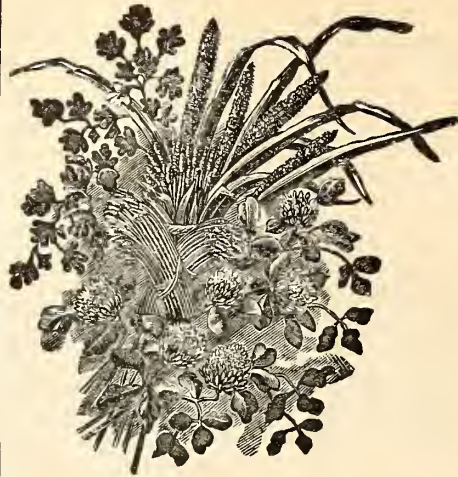
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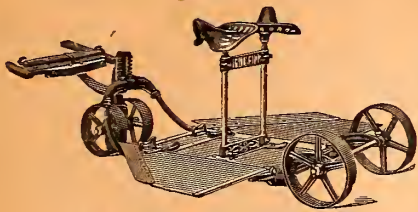
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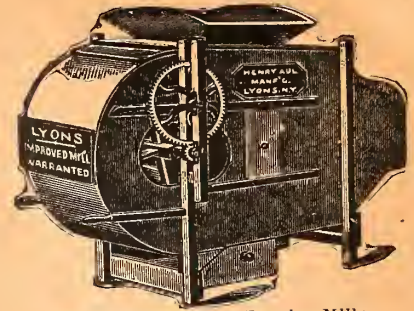
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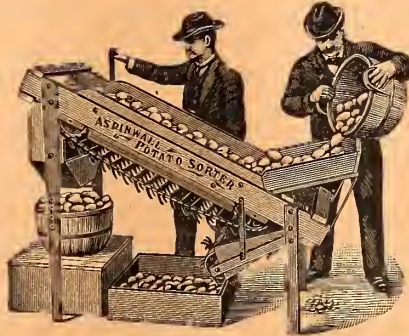
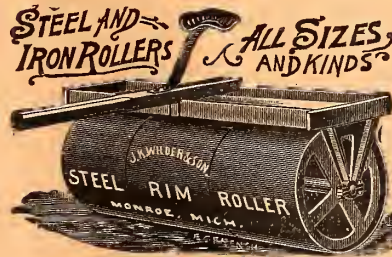


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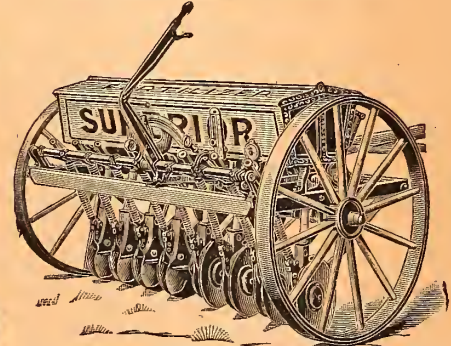


ROSS

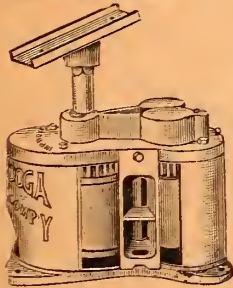
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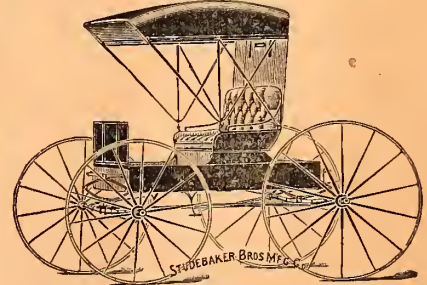
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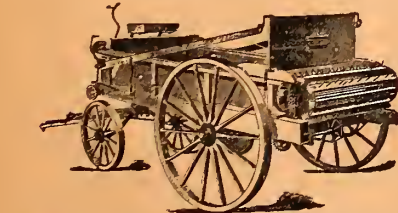
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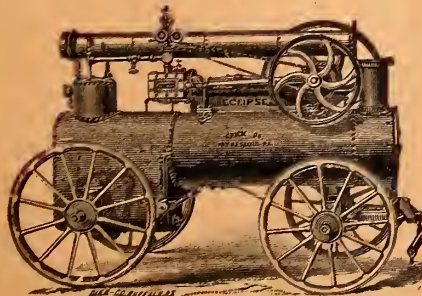
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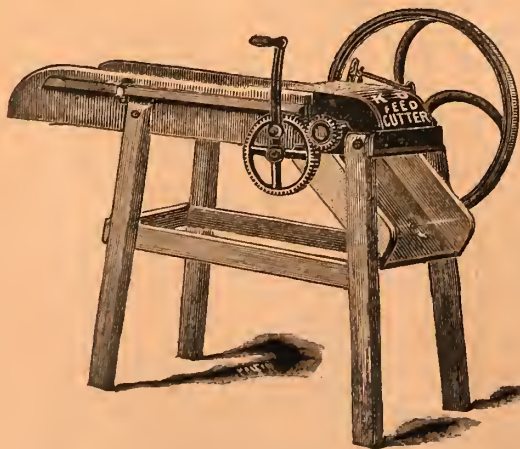
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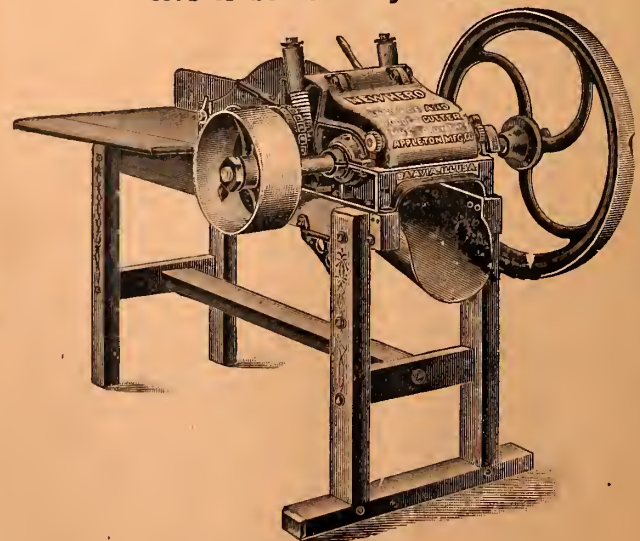
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