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DEVOTED TO

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

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5.

CONTENTS.

FARM MANAGEMENT:

- Editorial—Work for the Month..... 314
- Some Thoughts on the April Planter..... 317
- Sorghum as a Forage Crop..... 318
- Cow Peas as a Hay Crop..... 319
- Enquirers' Column (Detail Index, page 345).. 320

TRUCKING, GARDEN AND ORCHARD:

- Editorial—Work for the Month..... 329
- “ Tomato Growing for the Canneries. 330
- Cultivating and Manuring Orchards..... 331
- Fighting Plant Diseases and Injurious Insects. 332
- Combining Poultry and Fruit..... 332

LIVE STOCK AND DAIRY:

- Sheep Dipping at Edgewood..... 333
- Always Two Sides to a Question..... 334
- Texas Fever 335
- Hay Substitutes for Stock Feeding..... 335
- A Few Live Stock Remedies from Practical
Stockmen 335

THE POULTRY YARD:

- Brooding and Care of Brooder Chicks..... 336
- Chicks Need Ash and Grit..... 336

THE HORSE:

- Notes 337

MISCELLANEOUS:

- Levees and Irrigation 338
- Birds and the Farmers 338
- Disposal of the Bodies of Dead Animals..... 339
- Good Roads 340
- Bone Meal as a Fertilizer 340
- Preserving Eggs in Water Glass..... 341
- To Keep Insects from Meat..... 341
- What Have Clubs and Institutes Done For Us?. 342

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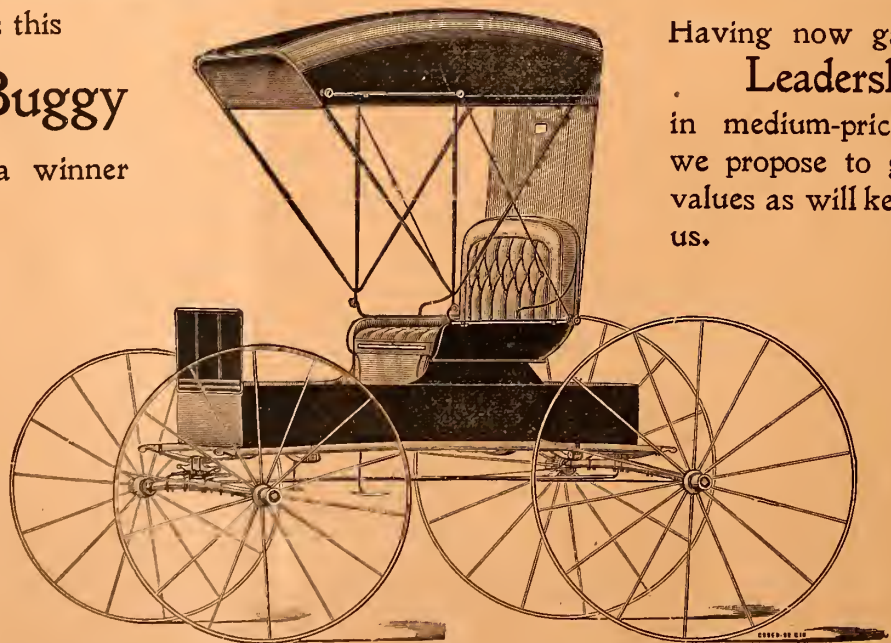
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

65th Year.

Richmond, May, 1904.

No. 5.

Farm Management.

WORK FOR THE MONTH.

The cold, ungenial weather which has characterized the past six months all over the South, and indeed to a great extent all the country, still continues. Up to this writings (20th April) we have had really no Southern spring weather. The wind persistently stays in the northwest, north or northeast, and feels all the time as though it came over the snow and ice, and the sun with all its acquired power can do little more than moderate this iciness, it cannot overcome it so as to give us genial growing weather. Added to this condition we have a continuance of the abnormal dryness which has now lasted for five months. As a result of these conditions, fall sown crops and grass have made but little growth, and but slow progress has been made in fitting and preparing the land and in planting spring crops. The Government report on the condition of the winter wheat crop is distinctly discouraging, showing that the South has not been alone in having a hard winter. The average condition of the crop for the whole country is only 76.5 per cent., as against 97.3 per cent. at the same time last year, and 84.1 per cent., the average for ten years. In Virginia the condition is 69, as against 103 last year. In North Carolina 84, as against 100 last year. In Maryland 71, as against 99 last year, and in South Carolina 82, as against 93 last year. The reports we receive as to the winter oat crop in the South are also very unsatisfactory. Much of the crop has been killed outright, whilst a large proportion of the remainder is seriously damaged. Spring oats are making but slow growth, and we are of opin-

ion from reports made to us that the crop will be a small one in the South, and that the farmers will have to look to summer forage crops for feed for the stock.

In our last issue we wrote fully on the subject of the preparation of the land for the corn crop, and as to the food requirements of the crop, and to that issue we refer our readers. We would again emphasize the point there made that the yield of the crop will depend much more on the perfect preparation of the land than upon any fertilizer that may be used. What the land of the South most needs is humus (vegetable matter) and deep and perfect preparation before the planting of the crop. This makes it retentive of moisture, prevents baking and crusting of the soil, and if these conditions are maintained, the corn crop, with its immense root system, will forage for food and secure it although no commercial fertilizer be applied. Wherever peas or any other of the leguminous crops have been grown last year the effect on the corn crop will be very apparent. We have known a single crop of cow peas grown and plowed under to increase the yield of the corn crop following from 10 to 20 bushels to the acre. In one case within our experience where a crop of cow peas was grown and plowed down in the fall and the land dressed with 25 bushels of lime to the acre, the yield of the corn crop the following year was 36 bushels to the acre, as against a previous yield of 10 bushels to the acre. Deep and perfect cultivation of the soil and the application of lime will make avail-

able the great natural stores of phosphoric acid and potash in the soil even of old cultivated land, and the only other requisite then needed for a good crop is retention of moisture. Do not be in too great haste in planting the crop, but devote the time until the soil is warmed by the sun to making the seed bed more perfect. Corn will not germinate and grow off well in cold land, and the corn crop that does not grow off right away from the day it is planted is not going to make a great yield. Better wait a week or ten days and have the land warm and in fine condition before planting. Do not plant a greater area than you can find time and team to cultivate well and frequently throughout the growing season. We have seen many a promising crop lost from want of frequent cultivation.

The cultivation of the corn crop is a subject that does not usually receive half of the attention it deserves. Many farmers altogether miss the great object of cultivation. They regard the killing of weeds as the prime object. This is not so. Whilst the killing of weeds is important, it is much more important that the soil should be so frequently stirred as to prevent their growth, and to so thoroughly arate it as to render available the plant food in the soil and permit of the fine rootlets of the plants permeating every foot of the land and gathering from it the food needed for the growth of the crop. It is much easier to prevent the growth of weeds than to destroy them after they are grown. When the soil is so frequently stirred as to prevent a growth of weeds the germinating weed seeds are killed before there is time for the weeds to rob the corn plants of food and moisture. Every day weeds are permitted to grow they are robbing the soil of food and moisture and decreasing the supply for the corn crop. Cultivation, when properly done, conserves moisture and prevents weed growth. The cultivation which meets these requirements is not deep plowing with a turn plow—plowing off the soil from the plant and then turning it back again at the next working. A turning plow has no place in a corn field after the crop has been planted. All its work should have been done before the planting of the crop. Its use afterwards simply means the tearing of the fine rootlets of the plants and injury to the crop. The implement needed is a harrow or weeder for the first two or three workings, and a cultivator for the later workings, and these should not be set to disturb more than the top three inches of soil. Land cultivated in this way, kept level, and covered with a fine mulch of soil, will retain moisture

to the surface and thus conduce to the rapid growth of the crop. Let the first cultivation be given with the harrow or weeder, running the same over all the land and not merely between the rows, before the plants break through the soil or immediately they have begun to appear, and especially is this important when a rain has fallen after the seed has been planted, but before it has had time to break through the surface. This system of cultivation with the weeder or harrow can, with advantage, be continued until the plants are six or eight inches high. Deep cultivation with the plow as compared with shallow, level cultivation with a cultivator has been tested at many of the Experiment Stations, and the results have been invariably in favor of shallow, level cultivation. At the Illinois Station in 1893 the yield per acre of corn on land cultivated shallow and with a careful avoidance of root injury or disturbance was 100 bushels to the acre, as against 78 bushels per acre on land where the roots were disturbed and pruned by deep cultivation. Let the cultivation of the crop be continued as long as it is practicable to go through the rows without doing injury to the stalks, and previous to the last cultivation sow either cow peas, crimson clover or sapling clover broadcast and work in with the cultivator. Do not follow the old practice of throwing a hill to the corn at this last working. It only tends to reduce the moisture content of the soil by leaving a larger surface exposed to the sun's rays. It is of importance to conserve this moisture and not to waste it. The idea that a furrow thrown to the row will hold up the corn is a fallacious one. It might have been true, when under the old system of cultivation with a plow, the roots had been badly cut off in the working of the crop, but under a system of shallow, level cultivation the roots of the crop will be so widely extended as to run across from row to row, and the stalks are sufficiently braced in all directions as to need no support from soil thrown to them.

The cultivation of the cotton crop should be on the same general lines laid down for the corn crop, except that we would not use a harrow or weeder for the first two cultivations. Cotton plants are too tender to be treated in this way. The cultivation should be done by a weeder or cultivator running only between the rows. The cultivation in the rows is done by the hoe when chopping the crop to a stand. The importance of shallow, frequent cultivation is as great for the cotton crop as for the corn crop. At the last working sow crimson clover in the cotton. This will

make a cover for the land in the winter and thus improve it by supplying humus making matter, besides making some feed for stock.

The preparation of the land for the planting of the tobacco crop should have attention, as the plants should be set out in the latter part of the month or the first week in June. The late cold spring has caused much delay in raising plants, and we hear that they are still very small, and will not be ready to set out as early as usual. Let the land be well and finely broken, and especially well fitted so that the small plants may have a chance to immediately take hold and commence growth. In our last issue we gave advice as to the fertilizer to use on this crop, and to that issue we refer our readers. We would like to see Virginia tobacco growers make an effort to produce a particularly good crop this year, as we believe that it will pay them to do so. The high price of cotton will cause many tobacco growers in the Carolinas to abandon the crop and plant cotton in its place. This will make a better market for our tobacco, and if the quality made is only good we are of opinion that it will sell for a paying price. To make a heavy crop of good tobacco calls for plenty of rich fertilizer in the soil and a well prepared soil. In the Northern tobacco sections it is quite a common practice to apply from 1,000 to 1,500 pounds of a high grade tobacco fertilizer to the acre, and from such fertilizing heavy crops of fine tobacco are made. We would like to see experiments made on this line here. We believe that it would pay upon the dark heavy shipping types of tobacco. Let the fertilizer used be rich in potash and nitrogen, so as to give quality and size to the leaf, but keep down the phosphoric acid so as to avoid coarseness.

The peanut crop is becoming one of increasing importance in the South, and especially in this State. The average crop grown here is over 3,000,000 bushels every year, and this is also the case in North Carolina. The consumption of nuts is constantly increasing, and last year's crop failed to meet the market's requirement, and prices have advanced all through the winter and spring, and the market is reported bare of stock. With more attention given to the preparation of the land and the adoption of a system of rotation by which the crop shall only come on the land every three or four years instead of every year or every other year, as has been the case in the past, we believe that the growing of peanuts can be made a profitable business in our light Tide-

water section soils. The average crop made is only about 30 bushels to the acre. This should be doubled, and can be easily done with a proper system of rotation by which the soil shall be kept filled with humus, and the use of lime to render the plant food in the soil available and to keep the soil free from acidity, and cause the nuts to fill well. In our March issue, in reply to an enquirer, we gave advice as to a proper fertilizer to use for the crop. Unfortunately by a printer's error a cypher was left off one of the constituents, and this was not detected until too late to correct the same in the April issue. The fertilizer advised should read 300 pounds cotton seed meal, 80 pounds acid phosphate, and 240 pounds of kainit per acre. If cow peas or crimson clover have been grown on the land, the quantity of cotton seed meal may be reduced to 150 pounds. The nuts should be planted this month.

When the staple crops—corn, cotton and tobacco—have been planted and started on their growth time should be taken to plant forage crops to supplement the pastures and to make feed for stock during the winter. The importance of these crops has been emphasized by the long winter through which we have just passed. On hundreds of farms throughout the South where no special provision had been made by means of forage crops for the feeding of the stock, but the old custom of relying on the fodder from the corn crops and such hay as had been saved had been followed, the stock have had to go short of feed and have come through the winter in worse condition and are worth less money now than when they went into winter quarters. This is poor farming and bad economy. To keep stock without its constantly improving in weight and value is a waste of food and time and a loss of interest on the money invested in the animals. To merely keep them to make manure is not sufficient, especially when that manure is made only from shortened rations of no high nutritive value. It cannot under such circumstances be of anything like the value for the improvement of the land which it ought to be. Where stock are well fed on rations rich in protein and carbohydrates the manure made will largely pay for the cost of keeping the animals, and will with the increase in weight of the animals make stock keeping a profitable business, and result in a farm highly improved in productive capacity by the application of the manure to the land. Such manure will return to the soil not merely the vegetable refuse which makes humus, but will also return to the soil something like 75 per cent. of the

nitrogen and mineral fertility contained in the food. Now that the South is becoming so much more largely a stock keeping country the necessity for the making of forage crops is a subject demanding attention. There is no section of the whole country where forage crops of so great variety and of such great luxuriance of growth can be made as in the South. Whilst some other sections can make as fine hay crops, nowhere else can such enormous yields of forage and so many crops be made in the time as in the South. In making choice of the crops to be grown, attention should be given to the feeding value of the same. Some are rich in protein, the muscle and flesh forming elements, whilst others are rich in the carbo-hydrates, the makers of fat and heat. There should be selection made from both types, so that the animals may be fed a balanced ration, and thus be enabled to make growth and fat. Feeding only one kind cannot result in that success which ought to be secured. Amongst the most valuable protein crops are cow peas and soy beans, amongst the carbo-hydrate crops are corn fodder, sorghum, Kaffir corn, teocinte and the millets. In addition to these strictly forage crops, crimson clover, red and sapling clover and alfalfa, vetches and rape can be grown to supplement the pastures or provide winter and spring grazing. Where all these crops receive that attention which they ought to have, and are some or all of them produced on the farm, stock can be kept in growing and feeding condition without much, if any, recourse to the corn crib. *A ton of cow pea hay is worth as much as a stock food as a ton of wheat bran*, and more if a fair quantity of peas are saved with the hay. The clovers, alfalfa, vetches and rape being strictly crops for fall seeding, we do not propose now to say more about them, but invite attention to the others we have named. Let land be well prepared for cow peas, soy beans, sorghum, Kaffir corn, and corn for fodder and the silo, and also for some of the millets for cutting for green feed to supplement the pastures and for hay. All the leguminous crops like cow peas and soy beans are great consumers of the mineral fertilizers, phosphates and potash, and should, unless the land is fertile, have the help of 200 or 300 pounds to the acre of acid phosphate at least, and on light, sandy land of 50 pounds of muriate of potash per acre. They will well pay for this outlay, as it enables them to make a quick, luxuriant growth, and thus become so much better able to gather nitrogen from the atmosphere for the enrichment of the crop and the soil. Whilst all these crops may be sown broadcast with a considerable degree of success,

yet experiments have conclusively proved that they make a better return when planted in rows and cultivated once or twice. Cow peas which are usually very largely grown sown broadcast are this year high in price, and we would therefore suggest that this practice be not followed, but that they be drilled in rows 2 feet or 2 feet 6 inches apart. Planted in this way a peck or a peck and a half will plant an acre and a better crop be made than with a bushel or a bushel and a half sown broadcast. We are strongly in favor of mixing cow peas and sorghum together, using say a peck of cow peas and half a peck of sorghum seed per acre. This makes an excellent, well-balanced feed for stock, and the hay is easier to cure than that of cow peas alone. Talking a few days ago with the owner of a large plantation, who keeps a heavy head of stock, on this subject of forage crops, he remarked that after making experiments with nearly every variety of them he had concluded that cow peas and sorghum sown together made the best crop and the finest feed of any, and that he grew a large acreage of this every year, upon which his stock always did well in winter. Sorghum, of which the Early Amber and Early Orange are the best varieties, may be sown either in drill or broadcast. If intended for hay, it should be sown thickly broadcast, so that the stalks may be small, say at the rate of one bushel to the acre. We prefer, however, to grow it in rows 2 feet 6 inches apart, and let it stand two or three inches apart in the rows. A peck of seed will sow an acre in this way. It should then be harvested like corn, and be set up in shocks to cure. Kaffir corn is a non-saccharine sorghum, and whilst not so valuable as a feed as the saccharine sorghums, ought not to be overlooked, as it stands a drouth better than any other variety. Sow like sorghum. Soy beans may be sown either broadcast or in rows, but we advise that they be planted in rows 2 feet 6 inches apart, and be cultivated like corn. A peck of seed will sow an acre in this way. They will in good land meet in the rows and make a fine crop for winter feeding cut when the earliest pods are just ripening, or they may be allowed to ripen the seed and be threshed for the peas, and the stock will eat up the stalks and hulls clean. South of the James river teocinte may be sown for forage. It will not mature seed in this State, but makes an immense growth of forage, which will spring up again from the stocks after being cut off once or twice. It is valuable to use as a green forage crop, and makes fair dry feed, though not so nutritious as corn or sorghum. Cat tail and German millet may be sown to supplement

the hay crop or for green feed. Sow broadcast at the rate of a bushel per acre on finely prepared land.

Corn for the silo should be planted not later than the end of June. Plant in rows 3 feet apart, leaving the stalks 6 inches apart in the rows. Planted in this way the crop will make a fair proportion of ears, and the stalks will mature well and make good, sweet silage. On good land from 10 to 15 tons to the acre can be made in this way, and as a feed for stock of all kinds nothing can excel it in winter, as it retains its succulency and palatability. It is a great milk making food. As a feed, it may be greatly improved by growing cow peas in the rows along with the corn. The peas, either the Clay or Whippoorwill, are best, as they keep closer to the corn stalks and are less troublesome to harvest than the Black or other rampant vine makers, should be planted alongside the corn rows at the second cultivation, and will then sufficiently mature at the same time as the corn. This combination makes a better balanced silage than corn alone, and a greater weight of feed can be put into the silo in the same space.

When planting the corn, don't forget to sow some pumpkin seeds along with it. They will grow together without injury to each other, and the pumpkins are good feed for cattle and hogs in the winter. Sow a couple of pounds of the Virginia Mammoth to the acre. They can be mixed with the corn in the drill.

SOME THOUGHTS ON THE APRIL PLANTER.

DRAINING WITH POLES.

Editor Southern Planter:

What Mr. Thomas says in regard to pine pole drains is perfectly correct. Over sixteen years ago I drained a cove in a river bottom in Albemarle, which was surrounded by high hills and covered with bunches of willow. Water formerly stood over it all winter, and ice was cut from it. I cut a ditch around next the hills to cut off the springs, and from this ditches parallel to each other and straight to the branch. All the ditches were laid with skinned pine poles covered with pine straw and filled up. Poles were laid on each side the ditch bottom and another made the cover between them, being larger than the others. The next season I had fine clover on the ground, having, of course, cleared off the willows. I saw that piece of land two years ago, and the pole drains were still working all right.

LIME.

Mr. Hull is evidently an enthusiast in lime. Doubtless in the red clay lands of the Piedmont section lime has a great value even as a mechanical agent in the mellowing of the soil, and a fine action also in sweetening the soil for clover. Lime is a great aid in the improvement of the soil when properly used, but the man who thinks that, because he gets good results at once from an application of lime, lime is a manure, and that all that is necessary to make his land rich and richer is to keep putting lime on it, will find after a while that lime has helped him to reduce the plant food in the soil, and will have to go to work to replace it. Lime in connection with clover can be made the most efficient agent in the restoration of the old red hills. I formerly used a great deal of lime in Virginia (Piedmont), but I practiced a different method from that Mr. Hull uses, and I think a better one. I bought fresh, unslaked lime in carload lots. Hauled it and piled it in a heap, and then slaked it at once with water to a fine powder. This was hauled and spread from the wagon direct, and there were no overlimed spots as there will be where it is left weeks in piles, and it is far easier to spread from the wagon after measuring the wagon box and laying off the land in acres. Lime is a great aid in an improving rotation, but used with the notion that it will make poor land rich of itself will lead to exhaustion. In Dr. Fisher's experience it is shown that lime helped, but he got a great deal of humus making material on the land before making the big crop of corn. Keep up the humus and lime will help very greatly in its nitrification.

SACCHALINE.

Mr. Rice is mistaken in saying that this plant is no relation to buckwheat. It belongs to the same botanical family as buckwheat, and is no sort of a relative to dock, though somewhat similar in its growth to dock. But it is not worth any more than dock, and we hope that we are not going to have a revival of it.

NITROGEN IN LEGUMES.

N says that a ton of green pea vines contain five pounds of nitrogen. The best analysis I have at hand makes a ton of green pea vines contain between 29 and 30 pounds of nitrogen and a ton of green alfalfa 45 pounds. I am glad to see that he is figuring on the feeding value of these things. I have no objection to alfalfa, and every one should have a piece. But the peas will come into the regular farm rotation while the alfalfa will not, and therefore both are needed for feeding and soil improvement. But

the one who supposes that a plot of alfalfa can be kept producing large crops without fertilization will soon find that he is mistaken. Lime every five or six years and phosphate and potash every year will pay well on the alfalfa.

ROOT GRAFTED TREES.

The talk that has been made by many nurserymen in regard to the greater value of whole roots in grafting trees is largely an advertising dodge, for no one ever uses really the whole root. The seedlings come with roots, straight tap roots over a foot long. Now, as the graft must be set just below the surface of the soil, what are you going to do with that long root? It simply must be shortened for planting. It may be that the graft on the crown of the root is best, but it is entirely impracticable to use the whole root, and in my experience the piece cut off will make just as good a graft as any, and I have so used it.

JAPAN CLOVER AND BROOMSEDGE.

You say that it will not destroy broomsedge. It certainly did for me, and it is doing it in large sections of Western North Carolina and here.

ARTICHOKES FOR HOGS.

Doubtless the hogs will like the artichokes, but I do not think the man who plants them will like them long. I tried once to get rid of them in a piece of strong limestone clay loam many years ago, and I believe they are there yet. There are so many things we can plant for the hogs that are not vile weeds that I never advise the artichokes. Hogs may get them out of sandy soil, but never from a clay one.

VELVET BEANS.

These are being found valuable in sandy soil in the far southeast corner of this State, but are worthless from the middle section north, especially on a clay soil. About the town of Magnolia on the Atlantic Coast Line R. R. they are using them in preference to peas.

ASHES AND GUANO.

I would like to add to what you say to Mr. Spencer, as I am writing to numerous correspondents who ask the same question, that mixing ashes with fertilizers will injure the fertilizer by driving off the ammonia and reverting the phosphoric acid through the action of the lime in the ashes. There is no one question that comes up more frequently than this from people who happen to have some ashes, and imagine that they can be used in a mixed fertilizer with commercial fertilizers or home made manures, and no matter how often we tell them of the risk the next day some one else comes with the same query, though reading the same paper where the previous

reply was given. The fact is that few farmers seem to read their papers carefully or listen and take in what is told by Institute lectures.

ASPARAGUS FROM SEED.

I am glad to find that Mr. Allen has found out the advantage of sowing the seed of asparagus where it is to stand. I have been advocating this plan for thirty years, and you will find my method fully detailed in the recent bulletin of the Department of Agriculture of North Carolina on garden vegetables, which I prepared. But the making of trenches three feet deep is needless, for manure packed down that deep will never be used by the plants. A deeply prepared soil well filled with manure is all that is needed. I prefer to cut my asparagus at the surface and get all tender. The new Columbian asparagus, which keeps white till several inches high, will please those who want it white. I have sown asparagus seed and cut good asparagus from it the following spring. The thinnings can be transplanted like cabbage plants.

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

Whilst our own experience has not convinced us that Japan clover will destroy broomsedge, a friend of ours confirms what Prof. Massey says. He has killed out the broomsedge on part of his farm with Japan clover. He says also that by heavily manuring the land with barnyard manure he has killed it out.—Ed

SORGHUM AS A FORAGE CROP.

Editor Southern Planter:

As May is the time to plant sorghum, I will give the readers of the *PLANTER* the benefit of what I have seen and heard about this crop in the States west and south of Virginia. While travelling in Kentucky several years ago I found field after field of it shocked up as other corn, and upon inquiry I was told it was to feed horses, cattle, hogs, etc. Whilst in North Carolina this winter I spent several days with a stock dealer, and I noticed that he fed his horses and mules (which he handled by the car load) on sorghum cane which was given them just as it came from the shocks in the field. It was five or six feet tall, and the stalks were the size of your fingers, and perhaps a little larger. It was bright, sweet, and in perfect keeping order, and relished heartily by all stock, they frequently leaving grain untouched to eat it. I went to the twelve acre lot where it was grown and found the shocks just as they had been set up after the crop had been cut by the corn harvester. These were set up the day the crop was cut.

I found it had been sown in rows about four feet apart and cultivated as we do corn. It stood thick in the drill, which is necessary to keep the stalks from growing too large. I talked with half a dozen or more farmers in the neighborhood, and they all agreed that it was the greatest forage crop that could be raised, and that one acre of it was worth more than four acres in corn on the same character of land. It should not be harvested until it heads out, and the seed is pretty well matured. It has then reached the point of its highest value. It will keep all winter in perfect condition in shocks of three to four feet in diameter, but will mould and sour if packed away in the house in a horizontal position. As Virginia is rapidly becoming a stock raising State, and as forage for winter is a vital question, I believe that stock men will find in sorghum cane just the thing for their horses, cattle, hogs and sheep, for it not only furnishes a large yield per acre, but is very nutritious.

I found in Georgia this winter that sorghum hay was raised by sowing two bushels and a half of seed to the acre, which made it very thick on the land and the stalks were very little larger than wheat straws. It was cut with the mower after heading and allowed to lie on the ground for ten days. Rain will not hurt it. It is then raked up and stored away with perfect safety in the barn or in stacks. One other advantage it has is the second crop which will come immediately from the stubble, and I was told that this is more valuable as feed than the first.

I shall plant about ten acres of sorghum in rows to be cultivated, and will sow broadcast about two acres this year as an experiment. C. G. SNEAD.

Fluvanna Co., Va.

COW PEAS AS A HAY CROP.

We take the following from a bulletin just issued by the Arkansas Experiment Station:

The intelligent production of hay is a profitable industry in many localities of the State. According to the U. S. Census report the average hay yield of the United States for the past ten years has been 1.32 tons per acre, and for Arkansas the same report gives a ten years' average of 1.35 tons per acre, of .03 above the average for the whole country. Exclusive of peas and hulls cow pea hay grown on the station grounds the past five years has ranged from .37 of a ton to 4 tons per acre, the average of all plots of all varieties being 1.58 tons per acre. The above refers to cow peas grown principally for experimental purposes. On larger areas and where the hay was

grown primarily for feed and from varieties well suited to the production of hay, the average yield has been well above two tons per acre, not including peas or hulls, and when the peas were harvested with the vines the average has been approximately three tons per acre.

In 1902 and again in 1903, more than 300 plots of cow peas were grown and harvested under field conditions. In 1902 the yield of hay from 141 plots was recorded and from 153 plots in 1903. Of these 294 plots only eleven gave less than 1,000 pounds of hay per acre (exclusive of peas), 87 plots gave between one and two thousand pounds per acre, 108 gave between two and four thousand pounds per acre, and 88 plots more than four thousand pounds. The average yields of cow pea hay for the past five years as computed from all plots of all varieties of which a record was made, are as follows:

	lbs. hay per acre.
1899	3,183
1900	2,773
1901	3,369
1902	3,609
1903	2,913

Five years' average.....3,169.4

With the exception of a very few cases these averages do not include the weight of either peas or hulls. When the pods were harvested with the hay the yield of peas was light. Usually the harvesting of the hay was delayed until the peas could be gathered. In many cases this necessarily reduced the yield of hay, many leaves having fallen from a number of varieties before all the peas were sufficiently ripe to be gathered.

In 1902, sixteen plots produced more than 6,000 pounds of hay per acre, eight of which ripened no peas, or so small a quantity that they were not worth the gathering. The highest acreage yield recorded in 1902 was 8,750 pounds made by the variety Clay. This 8,750 pounds of hay bore only 2.9 bushels of shelled peas. The lowest yield of hay was 750 pounds per acre produced by one plot each of New Era and Extra Early Black Eye. These two plots yielded respectively 1,337.5 and 1,025 pounds of shelled peas per acre. The weight of the peas and hulls produced by these two varieties in this instance was double the weight of the cured vines that bore the peas and hulls. One plot of Wonderful (or Unknown) yielded 8,350 pounds of hay per acre and no blossoms had appeared upon the vines when harvested in October. Two other plots of this variety ripened no peas. Two plots of Clay produced 8,250 and 7,540 pounds of hay per acre and no peas worth gathering.

These great varietal differences have an import-

ant bearing upon the selection of varieties to be grown for whatever purpose, and particularly when the prime object of their culture is the production of hay. Lack of recognition of these differences in the habits of varieties is a fruitful source of failure, or of at least unsatisfactory results and of disappointment. On the other hand, a due consideration of these varietal variations will enable the grower to select varieties well suited to each of the various purposes for which the cow pea is grown.

Since the summer of 1898 more than 550 plots of cow pea vines have been cut for hay, including about 50 varieties. A number of these varieties, and particularly those of dissimilar characters, were grown in multiple plots, cut at various degrees of maturity and under a variety of weather conditions. The results of attempts to cure these various lots of hay range from perfect success to complete failure. A review of the results of these tests extending through five years seems to warrant these conclusions:

(a) Cow peas of any variety harvested while young or in vigorous growth are difficult to cure into hay no matter how favorable the weather conditions.

(b) Mature vines are cured with little difficulty in favorable weather, and usually cure in fair to excellent condition after an exposure of two to four days of rain and cloudy weather.

(c) Varieties producing the heaviest yield of peas are most easily cured into hay, while those producing a few peas, or none at all, were the most difficult to cure, since they habitually continue in vigorous growth until checked by frost.

(d) Late, shallow cultivation prolongs the period of growth and makes the vines more difficult to cure. Cultivation should cease when the first pods appear if the crop is intended for hay.

(e) Vines bearing a fair or full crop of peas that ripen well together are easily cured when one-fourth or more of the peas are thoroughly ripe and no second growth of vine has been induced by excessive moisture.

(f) Vines bearing a fair or full crop of peas ripening through a prolonged period through which the plants continue in vigorous growth are usually difficult to cure in other than the most favorable weather.

The numerous varieties of cow peas differ so widely in various respects that their peculiarities must be considered when the crop is grown for hay and the time of mowing, treatment while in the swathe, in wind-rows and in cocks adjusted not only to the condition of the weather, but also the peculiarities of the variety, and to variations due to climate and soil.

When corresponding with advertisers, kindly mention the SOUTHERN PLANTER.

ENQUIRERS' COLUMN.

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

Duroc Hogs.

Please give your opinion on the Duroc hogs. Are they as good or better for this section than Poland-Chinas or Berkshires? How would they cross on either of these breeds? W. S. D.

Lancaster Co., Va.

The Duroc Jersey Hogs are an improved breed of the old Jersey Red Hogs, and are a good breed of bacon hogs. They are very largely bred in some of the Western States, and highly spoken of as profitable hogs. We doubt, however, whether they are equal to the Berkshires for the South. We would not advise crossing them on either of the breeds named. In our last issue we gave our opinion on this question of crossing pure bred hogs.—We are decidedly against it.—ED.

Pip in Chickens.

What can you give young chicks when first hatched to prevent them from having pip on the tongue, as I have lost several from it.

Caroline Co., Va.

A SUBSCRIBER.

We often hear of this supposed disease, but do not believe in it. We have kept chickens all our lives and never were troubled with it. When a boy we remember to have seen old farmers' wives scraping off the tips of the tongues of chickens to cure pip, so they said, but we never did so, and lost no more chickens than they did. We can find no mention of any such disease in our books. The chickens die from some other cause than that named. Feed them on dry grits and bread soaked in milk and squeezed dry, and let them have fine, sharp grit to pick and a little bone meal in their food once or twice a week. Soft food is the cause of more dead chickens than any disease.—ED.

Improving Land.

1. Most of my land is a sandy loam, and my neighbor has black loamy land that is always light and never bakes, but in winter it will put up icicles that are six inches long, and it raises anything planted out of the ground. I have four fields that join him. They have been rented, or rather sub-rented, for a number of years, and the ditches are stopped and the soil is dark and sticky. The soil can be worked like putty. I have opened the ditches and the land is beginning to dry and get hard. I plowed in weeds

that were 7 or 8 feet high and sowed crimson clover, but failed to get a stand on account of late seeding.

2. I have a quantity of pine sawdust on hand, and thought of putting it on the land to lighten it. Neighbors say it will ruin the land. Some do not know why, and some say there is too much acid. I have tested sawdust for acid and can't find any. Please advise me as to this land.

Princess Anne Co., Va. K. F. GRANT.

1. The land requires thorough drainage, and then to be filled with vegetable matter by the growing of humus making crops, the stubble of which should be plowed down. It is very probable that the land will be too sour to grow crops well until it has been limed. Plow it and apply 25 bushels of lime to the acre, and work in. This will not only sweeten the land, but will change the physical and mechanical condition of the soil. Recent experiments made in Illinois have proven that an application of potash to soils of this character is very beneficial. We would apply 50 pounds of muriate of potash to the acre before seeding a crop.

2. Sawdust is of no benefit whatever to land. It contains no plant food. Its application to wet land is also to be deprecated for the reason that it absorbs and holds moisture which the land does not need. Burn the sawdust and apply the ashes. These will help by supplying some potash.—Ed.

Improving Land.

I have some stiff places on my farm. The land is high land. Would sowing grain crops like peas and turning down do my land good? J. G. L.

Accomac Co., Va.

Plow the land deep, work fine and sow cow peas or cow peas and sorghum, applying 200 pounds of acid phosphate to the acre. Mow the peas for hay, leaving a tall stubble. Plow this down and apply 25 bushels of lime to the acre, and then sow crimson clover and a mixture of wheat, oats and rye. This will make a winter cover, and should be plowed down in the spring, and the land will then be lightened. If necessary, repeat again next year.—Ed.

Alfalfa.

Please advise me what to do with an acre of alfalfa that I put in September 15th last year. I have a good stand, but the plants seem to be weak, occasionally a plant looks thrifty, but the majority of it does not. Land was inoculated and 500 pounds of a 10-2 fertilizer harrowed in before seeding.

Gloucester Co., Va. C. M. S.

Apply 75 to 100 pounds of nitrate of soda broad-

cast per acre. It is probable that the bacteria has not yet sufficiently inoculated the soil. Warmer weather will cause this to spread and the nitrate of soda will help the crop until this occurs.—Ed.

Fertilizing Land for Bright Tobacco.

Can't you devote a little more space to the preparation and fertilizing of land for bright tobacco and its cultivation? It is the most important industry in this part of the State.

A. H. ZOLLINGER.

Charlotte Co., Va.

In our last issue we devoted considerable space to the question of the proper fertilizer to use for tobacco, and we refer the enquirer to that issue. The percentage of nitrogen and phosphoric acid in the fertilizer ought not to be so large for bright tobacco as for the dark, heavy shipping types, but otherwise the requirements of the crops are the same.—Ed.

Scours in Calves.

Will you please publish a cure for scours in calves and young pigs? A SUBSCRIBER.

Feed a tablespoonful of blood meal in each feed of milk and give a like quantity to the pigs in their food. Blood meal can be had from the Armour Co. and their agents.—Ed.

Diseased Apple Tree.

I enclose apple tree twig for inspection and advice. It has a scale on the bark, as you may see, and is infested from the ground to the top of the tree.

Accomac Co., Va.

A SUBSCRIBER.

The tree is infested with San Jose scale. Dig it up and burn it, and do the same with others as badly infested. Spray the rest of the orchard with the lime, sulphur and salt wash advised in recent issues of the PLANTER.—Ed.

Grass for Name.

Will you please tell me what you think of this grass which I send by mail? Our lawn is lovely, but I find this grass coming in spots, and I don't know what to think of it. In winter it looks dead. I have asked many, and they do not know if it will do well for our stock.

HOGGARD.

The grass sent being unknown to us, we referred the same to the Agrostologist of the Department of Agriculture. The following is his reply:

I have in hand yours of the 6th instant, referred to this office for attention. The grass you have sent is a grass found not uncommonly along the coast region of Florida, and there known as St. Augustine grass.

Stenotaphrum dimidiatum. In that latitude this has a considerable value for lawns on account of its strong creeping habit and rapid growth, which enables it to successfully withstand considerable adverse conditions, such as weeds and some drought. I do not know whether this would be sufficiently hardy to stand our extremes of cold as far north as Princess Anne county or not.

CARLTON R. BALL.

Ginseng.

Please advise in your next issue what character of soil and climate is best adapted to growth of "ginseng," and where I will be able to purchase the seed or the roots, as I would like to try its cultivation in Texas, and oblige an old subscriber.

Texas.

A. B. HITT.

On page 168 of the March issue you will find information as to growing ginseng. The Commercial Ginseng Co., of Crozet, Va., will very likely be able to supply seed or roots.—Ed.

Alfalfa Bacteria—Bermuda Grass—Soy Beans— StockPea—Berkshires—German Clover— Hog House.

1. What is the cost of alfalfa bacteria procured from the Department of Agriculture?

2. Will Bermuda grass grow in Norfolk county, and what soil is best?

3. Is there any difference between the soy and the soja bean?

4. Also, is there any between them and the stock pea?

5. Is there any difference in the size of the American and English Berkshire hogs, and which would you advise me to buy for breeding purposes.

6. Will German clover grow as far South as this? Is it good for hogs?

7. Please give plan for cheap hog house.

Norfolk Co., Va.

R. N.

The Department of Agriculture supplies the bacteria free, we believe.

2. Yes; a light loam soil.

3. No. Soy bean is the correct name.

4. Yes. The Stock pea is more correctly called cow pea. The two plants (soy bean and cow pea) are botanically two distinct families of plants.

5. No. The breed is an English breed, and all Berkshires are either English bred or descended from imported hogs.

6. Yes; German clover (crimson clover more commonly called) grows well all over the South.

7. In the PLANTER for November, 1903, will be found a detailed description of a good hog house,

from which any good carpenter can erect the building.—Ed.

Grain Crops for Hay.

1. Please tell me the best time to cut wheat, oats and rye for hay. Is it best to cut rye in the boot so it will not be so tough.

2. How long will herds grass and German clover come up well?

3. At what stage is it best to plow under German clover?

OLD SUBSCRIBER.

Louisa Co., Va.

1. The grain crops are best cut for hay when the grain is in the milk state—that is, just after it has formed well.

2. We do not clearly understand this question. Herds grass is a perennial grass, and will continue to grow from year to year. German clover is only an annual, and must be reseeded every year. If allowed to mature its seed before being cut it will reseed itself and come up each year if the land is in fair state of fertility.

3. German clover should be plowed under when in bloom. It is then in its greatest vigor.—Ed.

Peanut Pickers.

Will some reader, or the Editor of the SOUTHERN PLANTER, please inform me about a peanut picker. What he thinks of them as to doing good and satisfactory work. Where are they made, and are there different makes. If a man has a machine, will it pay to go around among farmers and thresh them? What is the price per bushel for thrashing, and how many can be thrashed in one day? Can one horse run the machine?

A SUBSCRIBER.

Surry Co., Va.

The Cardwell Machine Co., Richmond, and Stratton & Bragg Co., Petersburg, make and sell a peanut picker. Write them for information on the subject.—Ed.

Alfalfa.

I have a piece of land, about one-half an acre I suppose that I wish to put in alfalfa. The land has never been in cultivation—in fact there are seven white oak trees standing on the piece that I shall not cut. I have put 14 loads of stable manure on the same. Now, what must I do next. How much fertilizer and what kind? Can I get bacteria from the Agricultural Department (free), and how much will it take for one-half an acre?

G. G. TAYLOR.

We assume that you have already plowed the land before applying the manure. Work the manure into the land with a cultivator, and then sow half a bushel

of cow peas. These will make a heavy shade for the land and smother out the weeds. In July cut these for hay and work the land with a disc harrow or cultivator, but do not plow again. In August sow 15 pounds of alfalfa seed inoculated with bacteria and harrow in lightly and roll. The bacteria can be had free from the Department of Agriculture. It is supplied in cakes to infect each so many pounds of seed. It is too late now to sow alfalfa this spring, nor do we advise the seeding in spring at all.—ED.

Millet Hay.

Is there any risk in feeding millet hay to horses that was fully ripe when cut? The heads and blades brown. Please answer in your next issue.

Albemarle Co., Va.

S. C. W.

Some horses are quickly affected by millet seed, whilst others eat it apparently without injury. It has an effect on the kidneys. Millet hay to be safe for all horses ought to be cut before the seed forms. Cut when just coming into bloom.—ED.

Ewes Breeding.

Will you inform me how to manage sheep so as to get the ewes to drop their lambs in January. I keep my ewes and bucks together all the time, but the ewes never drop lambs before March, and often in April.

SUBSCRIBER.

Isle of Wight Co., Va.

This cannot be done all at once, but has to be gradually brought about by putting the lambing time back a little each year. Take the lambs off as soon as possible this year, and then put the ewes on a thin pasture until they have lost their milk. Then put them on a better pasture and get them into good breeding condition. In August put them on to a piece of good clover or pea pasture and feed them a few peas and oats every day, and after they have been there a week turn the buck to them at nights only. The buck should have been got into good condition previous to being turned to the ewes. He should not be allowed to run with them regularly. When he is turned to the ewes rub his breast with red chalk or a piece of ochre, so that the ewes will show which he has served. The habit of early breeding is an acquired one, and depends largely upon the condition of the ewe. If ewes are expected to accept service of the buck in August or September the lambs should be taken from them not later than May. The earlier the lambs are taken off the sooner the ewes are likely to be in condition to breed again. Dorset sheep are the only ones which will take the buck at almost any season of

the year, but even this breed will not accept service immediately the lambs are weaned. We have known grade Merinos to take the buck in a month or six weeks after the lambs were weaned, but in this case they were kept in a fine clover pasture and fed some grain, peas and oats.—ED.

Grass for Hill Side for Pasture.

Will you kindly tell me the best grass to put on hill side that is badly washed in gullies. The soil is red and poor. I wish it for permanent pasture for horses and cattle, and am anxious to get something that will hold the land together, and also prove not a nuisance to the adjoining fields, as I cultivate them in a three-year rotation. I wish to sow in fall. Would it be necessary to plow this land this summer and kill out other grasses, or to simply fallow in fall and sow grass? Would you apply fertilizer; if so, what kind and how much per acre? MICHEAUX.

Pittsylvania Co., Va.

We should plow this land deeply at once and work it fine and sow in cow peas or cow peas and sorghum. This will level down the gullies and kill out some of the weeds. Graze the crop off with stock and then in August work the surface fine with a disc harrow or cultivator and sow with a mixture of orchard grass, Tall meadow oat grass, Virginia blue grass, Meadow Fescue and two or three pounds of Alsike clover. Top dress in the late fall with barn yard manure. If the land is not rich it should have 200 or 300 pounds of acid phosphate to the acre before sowing the peas and 300 or 400 pounds of bone meal to the acre before sowing the grass seeds.—ED.

Minks and Weasels and Chickens.

I am very much troubled with minks and weasels. Last fall I had thirty young chickens killed.

Rockingham Co., N. C.

L. A. THORP.

Open a trench all round your chicken house close to the walls and let it be three feet deep at the least. Then buy sufficient fine meshed wire netting, say one-fourth inch mesh, 3 feet or more wide and fix this against the side of the building and ground under it, all round the building, and fill the trench with the soil taken out. This will prevent the vermin from burrowing under the building. If they then attempt to get through the walls above ground fix similar wire netting against the sides of the building.—ED.

Brick Making.

Please give in your valuable paper the method of making bricks which our fathers used in making their bricks, and say whether any one can make them

now cheaper than the bricks can be bought from a manufacturer after paying freight and the time and trouble to haul them from railroad depot?

Sussex Co., Va.

P. L. GRAVES.

The old bricks were made simply with well tempered clay very often worked with the feet to temper it, moulded in wooden moulds, dried and then well burnt with wood in clamps built out of the bricks themselves. The bricks can be made now as easily as in the old days, but whether it will be cheaper to make them than to buy them from the large makers depends on the cost of labor. We apprehend that you would have difficulty in getting brick makers willing to work without machinery now-a-days.—ED.

Cultivation of Corn—Applying Fertilizer—Lime—Dwarf Essex Rape—Pruning Fruit Trees.

1. In the level cultivation of corn we are told to harrow the corn till it is 5 or 6 inches high. Does that mean that we must ignore the row as if there were no corn there, or take out some of the teeth and straddle the row? After the corn is 5 or 6 inches high, what would be the best cultivator to use in rocky, stumpy land? Could we use any ordinary harrow in the first workings? Could we use the popular weeders, such as the Hallock, Keystone Adjustable, etc., in rough land?

2. Can we use a disk harrow in rocky land?

3. What sort of grass would be best for thin, gray uplands? It is sandy. Clover will not grow to do any good on such land.

4. Can I apply acid phosphate, nitrate of soda, and lime without a drill, and how?

5. Is there a low grade of lime we can use for fertilizing purposes?

6. Can I pasture dwarf Essex rape with milk cows?

7. How would you prune young fruit trees planted last fall?

8. Where can I get pure Western alfalfa seed?

Franklin Co., Va.

W. T. WADE.

1. Yes, ignore the rows until the corn is so tall as to be broken down by the harrow. In this and the last issue of THE PLANTER you will find a large number of cultivators by different makers advertised. Any of these will do good work in a corn crop if properly handled, though in rocky ground we should not advise the use of a disc cultivator. An ordinary harrow may be used for the first two or three workings or any of the weeders advertised, but none of the weeders will work in rocky ground with any satisfaction.

2. No; not with any degree of satisfaction.

3. Tall meadow oat grass and orchard grass mixed.

4. Yes. The acid phosphate and nitrate of soda can be sown broadcast with the hand and the lime be spread broadcast with a shovel.

5. You will find agricultural lime advertised in this issue by two or three firms.

6. Dwarf Essex Rape is not a proper pasture for milk cows, as it will taint the milk. Young cattle, sheep and hogs do well on it.

7. If the trees were properly cut back as advised in the February issue of THE PLANTER when set they should need no pruning this year. If not then cut back they should be so cut at once before any new growth is made.—ED.

Diseased Tobacco—Lime for Tobacco —Sow Eating Pigs.

1. I enclose you a leaf of tobacco, desiring you to tell me what is the cause of those white specks on the leaf. There is considerable of it in my crop of last year. I have noticed some little of it before. Advise me whether you think it is a disease or something lacking in the soil. If either one, can you prescribe a remedy?

2. Would you advise the use of lime on land which I expect to plant in tobacco this spring? Would it injure the quality of the tobacco in any way, the land having been in tobacco, wheat and clover previous to this, and the clover not cut last year?

3. Can you tell me the cause and give me any remedy for a brood sow eating her young. I have a good brood sow that has had three litters, the last one in January, thirteen in number. She ate all but four of them; would have eaten them if I had not taken them away from her. I do not like to kill her if there is anything I could feed her to prevent it.

Dinwiddie Co., Va.

A SUBSCRIBER.

As we were unable to decide what was the cause of the speckled tobacco, we sent the leaf to the Bureau of Plant Industry of the Department of Agriculture and asked for a report on the subject. The pathologist of the Bureau replied as follows:

"This disease which you report as appearing in Dinwiddie county, is one which we have known for a couple of years as occurring in Prince Edward and adjoining counties. It has also been reported from one or two places in North Carolina. It does not appear to be caused either by a fungus or any other parasite. So far as my studies go, I am inclined to believe that it is the result of certain cultural conditions. As these studies have not yet been completed, I do not care to make any definite statements as to what may be wrong with the method of treatment in this particular case, but I shall be glad to do so as soon as my experiments are concluded. I shall be

glad if you can ascertain for me the following information with regard to the tobacco which you sent here:

"1. On what kind of soil was it grown?

"2. How much and what kind of fertilizer was used?

"3. How long has this particular field been planted with tobacco?

"4. To what extent have legumes been grown on the same field?"

On receipt of this reply we sent same to our enquirer and asked for reply to the questions asked. These we have received and sent to the pathologist, and are now waiting further information on the subject.

2. We do not advise the use of lime on the land intended to be planted in tobacco at this time of the year. Tobacco is a crop not calling specially for lime in its growth, and as one effect of lime is to release and make available more fertility in the soil after it has had time to act, the effect of using it might be to prolong the growing period of the tobacco too late and result in a coarse, unripe product.

3. When a sow has once begun the practice of eating her pigs it is practically impossible to break her of it, and the wisest course is to fatten and kill her. Whilst it is impossible to say positively what causes sows to adopt this practice, yet it is undoubtedly certain that it is more frequent with young sows which have been kept on a grain ration up to the time of farrowing. They are in a fevered and excited condition, and probably the smell of the blood about the young pigs incites them to eating them, a reversion to the natural appetite of the wild animal, which is partially carnivorous in its habits. Having once tasted they cannot further resist. A hog which begins to eat chickens can rarely be broken of the practice. The best preventative is to keep the sows on a vegetable and cooling diet up to the time of farrowing, and to keep the bowels open with bran slop.—ED.

Preserving Eggs for Winter.

Can you give any successful method of preserving fresh hen eggs during the summer so they may be kept until winter? JNO. A. BROCKENBROUGH.

Lancaster Co., Va.

Eggs may be successfully preserved in several ways. The oldest method and one which even yet comes up to nearly the best of the modern methods is to pack them away in lime water in stone jars or casks and keep in a cool place. The newest method, and which has given good results, is to pack them

away in jars in a solution of water glass (sodium silicate), 1 of silicate to 5 of water. The eggs should be gathered as soon as laid and be put away at once without longer exposure to the atmosphere than necessary.—ED.

Fertilizing for Cow Peas.

I wish to put peas in the land now in wheat, just as soon as the wheat is cut. Is it necessary to use more fertilizer than was put on the land when the wheat was sown, and how many peas (Shinney) to the acre? M. C.

Northumberland Co., Va.

If the land is good and the wheat was liberally fertilized it will grow peas without further help. It is, however, always good policy to help a pea crop as the more luxuriant it is the more nitrogen it gathers and the more it enriches the land. The best fertilizer to use is acid phosphate, 200 or 300 pounds to the acre. Sow 1 bushel broadcast, or a peck if drilled.—ED.

Angora Goats.

1. What sort of fence and how high is needed for Angora goats?

2. Do they make good and prolific mothers?

3. What food or care would they require in the mountains of Southwest Virginia during winter?

4. Are they cross or gentle and docile?

5. When should the wool be clipped?

6. I have always used small sweet potatoes for seed, but a neighbor claims large ones should be chosen. Is he correct? ROANOKE.

1. A woven wire fence 4 feet or 4 feet 6 inches high is the best fence for keeping goats confined, though a plain wire fence that height with the strands of wire 6 inches apart will suffice. A plank or rail fence will also be sufficient if it is kept perfectly erect. If it leans at all they will climb over it.

2. Yes.

3. They would need a shed for protection against the winter storms and hay for feeding during stormy weather.

4. They are docile and gentle.

5. In the spring or early summer.

6. Neither the smallest nor the largest should be used. A size a little below the medium will usually make the most and strongest sprouts.—ED.

Cold Water Paint.

In your April issue I noticed a subscriber makes inquiry about "cold water paint." I bought some last year from the Chicago House Wrecking Co., and

applied it to a high board fence to test it. It seems to be as good to-day as then, and I would say that it was all they claim for it, making a cheap, lasting paint for fences and outbuildings. It is quickly prepared, easily applied, comes in a variety of colors. In ordering one must state whether wanted for inside or outside use.

A. H. LANG.

Ohio.

Another subscriber tells us that he has tested it and does not find it durable.—ED.

Chickens Eating Feathers.

My chickens are given to picking and eating their feathers. Would be much pleased to know the reason and what will be the best way to stop them.

Alexandria Co., Va.

A. E. SMOOT.

Idle hens confined in coops or yards are usually the ones that acquire this nasty habit, and when once acquired it is almost impossible to break it. The best way is to turn them loose and compel them to rustle and work for their living. Keep them on short rations and compel them to forage for themselves. If unable to do this, then spread plenty of short litter in the yards and feed all grain in this litter, thus compelling them to scratch for it, and thus find them something else to do than pick each other naked. We have heard of fanciers filing off the point of the beak, and thus making it difficult for the fowls to hold on to the feathers.—ED.

Green Fallows for Tobacco.

I have four acres in German clover, two of them have been top dressed with manure, and two of them are fresh ground, which I had tobacco on last year, which I top dressed with nitrate of soda, 100 pounds to the acre. The land is chocolate loam.

1. I want to fallow this and put it in tobacco this year. What time should I fallow it?

2. What kind of fertilizer to use on the two pieces?

3. Will it be calculated to sour the land or not?

I will give my experience with German clover and pea fallows for tobacco, and if you have room you can publish it. I had a piece of land of six acres—three and a half acres was in clover. This I fallowed when the clover was in full bloom, dragged twice and rolled with a heavy roller. In two weeks I bedded up my land and planted tobacco on the 25th of May and cut it the first week in September. It was a dark green and ripened up green. I got 3,700 pounds, which averaged 10c. per pound. Balance of the land was in peas. These I fallowed after frost, planted the piece in tobacco at the same time as the other lot, and cut both together. It ripened up yellow, and only weighed 2,200 pounds, which averaged 5c.

per pound. The land was the same and I used a fertilizer 2, 9, 2, 800 pounds to the acre, on both lots. I sowed the land in wheat and the clover part is much the better. I don't know whether this was luck or whether it is that the German clover is a better fallow. I would like to have your idea on the matter.

E. C. SPAIN.

Dinwiddie Co., Va.

1. Turn the clover under when coming into bloom.

2. In our last issue, page 239, you will find our advice as to a proper fertilizer to use for the tobacco crop. The German clover will, however, in your case supply much of the nitrogen needed, and there advised to be supplied, and you can therefore safely reduce the quantity of dried blood recommended to be used.

3. No. The land is not yet warm enough to cause this.

Your experience with German clover and cow peas is interesting. Whilst it is not easy to explain the different results reached as both the crops supply nearly the same quantity of nitrogen to the soil, though the clover supplies somewhat more potash, yet we think that the most probable cause of the difference in yield in tobacco was that the German clover covered the land all winter and up to the time when the tobacco was planted, and in this way conserved fertility and added to it, whilst the cow pea crop was plowed down in the fall and the land left bare and wasting fertility during the winter.—ED.

Rotation of Crops.

I have thirty acres that I would like to divide into three lots of ten acres each and crop them so I could get the most feed and keep up the fertility of the land. How would the following three years' rotation succeed on our land, that produces about ten barrels of corn per acre?

First Year—Manure and sow corn for silo. Sow crimson clover at last working of corn.

Second Year—Plow down the crimson clover and sow cow peas with 300 pounds of acid fertilizer per acre for hay. After hay is cut disk and sow hairy vetch and rye.

Third Year—Cut vetch and rye for hay, cover with manure, to be followed by corn the next year.

Would a little red clover sowed with the rye and vetch be any advantage?

E. THOS. MASSEY.

Kent Co., Md.

The rotation suggested would appear to be a proper one for securing the purpose aimed at, and would, we think also maintain the fertility of the land. It would no doubt be desirable to secure a cover for the land after the vetch and rye is cut for hay, say in

June, until the following spring, and this would be attained if red clover could be successfully sown with the vetches and rye. We have known this practice to succeed, but it is not always certain. If the vetches and rye make a heavy crop it is apt to smother out the clover, but the experiment is worth trying.—ED.

Bermuda Grass.

I came here last spring from Colorado, and have read several articles about Bermuda grass as a valuable pasture grass. Have asked several people around here about it, and some say it is the so-called wire grass. Please give me an answer whether this is so or not. Have also read in your valuable paper of planting Bermuda grass roots, how many bushels per acre would it take and what would be the best time for planting?

JOHN GUENTHER.

Halifax Co., Va.

Bermuda grass is commonly called wire grass in the South, but this grass is not what is known as wire grass or twitch grass in the North and West. A few bushels, probably 4 or 5, would plant an acre, as the roots should be cut up into short lengths with a feed cutter before being planted, and only a few of these be dropped in the furrow as the land is plowed, say every foot or fifteen inches. The grass should be planted in the spring.—ED.

Rotation of Crops—Lime.

I have ninety acres of land which is enclosed with woven wire fence and divided into three lots of thirty acres each. I have adopted the following rotation:

Lot No. 1—Was in cotton last year, sown to annual clover at last cultivating, clover to be plowed down in May, and land planted to corn.

Lot No. 2—Was in corn last year and sown to wheat and oats last fall, followed with peas after harvesting wheat and oats. Peas allowed to mature and cut with rake raper and threshed with shredder.

Lot No. 3—Was in wheat and oats, followed with peas, then deeply broken and subsoiled in fall and winter and will be planted to cotton this year, and so on until rotation is complete.

My soil is a heavy, gravely red clay loam, with red clay subsoil. I apply four hundred pounds of 14 per cent. acid phosphate per acre to the clover, and peas, and the manure from fifty head of stock, with nitrate of soda or cottonseed meal on wheat and oats during the winter and spring. I have read a great deal in your journal about lime. Would it pay me to buy it and haul it, my farm being fifteen miles from the railroad? Is there no other substitute which can be used in a less bulky form, which would reduce the freight and hauling? I would appre-

ciate any information you would give in regard to my rotation and the fertilizers used. I am always glad to get the *PLANTER*. W. A. McCONNELL.

Warren Co., Va.

You have adopted a rotation and a system of fertilization which is bound to result in improving the fertility of your farm, and will result in good crops. We are of opinion that a dressing of 25 bushels of lime to the acre once in each rotation would be found beneficial, as it would tend to correct any tendency to acidity and insure better stands of clover and finer wheat. There is no substitute for lime for the purposes for which it is beneficial, correcting acidity and making available inert fertility in the soil.—ED.

Navy Beans—Velvet Beans.

1. What kind of soil suits them?
2. How to fertilize?
3. How far to plant in rows?
4. How to harvest?
5. What is yield on good soil?
6. Do velvet beans make good hay cured like raw peas?

P. E. GARRETT.

King and Queen Co., Va.

1. In the North, where the Navy bean is largely grown, it is usually said that it will grow on almost any kind of soil, even on that too poor to grow other crops, but a good loamy soil not overrich is the best. When the soil is too rich the crop runs more to vine than to beans.

2. If the soil is thin and poor, give a complete fertilizer having about 2 per cent. ammonia, 7 per cent. phosphoric acid, and 6 or 7 per cent. potash. Mix 1,200 pounds acid phosphate, 500 pounds cotton seed meal, and 25 pounds muriate of potash, and apply at the rate of 300 or 400 pounds to the acre.

3. Plant in rows 2 feet 6 inches apart and 8 or 10 inches apart in the row.

4. A small crop is usually pulled or cut with a scythe or mower, and cured in ricks like peanuts. There is a bean harvester made and sold in the North specially for harvesting this crop.

5. From 20 to 40 bushels to the acre. This crop can be grown successfully in the South. It should not be planted before June. Cultivate the crop two or three times, but never when the vines are wet with rain or dew, or they will mildew. The most difficult business is the harvesting of it, as the beans are then so easily spoiled by rain, being discolored quickly and then have to be sold at a low price comparatively.

6. Velvet beans are not a desirable crop to make into hay. They make such an enormous tangled growth that neither man nor machine can handle

them. They are fit only to use as an improver of the soil—ED.

Buckwheat and Clover.

I notice in an agricultural paper a writer recommends the sowing in July of red clover and buckwheat to obtain a stand of clover. Would you advise the sowing together of these two crops in this section?

OSCAR JUSTICE.

Rutherford Co., N. C.

We know one or two farmers in Middle Virginia who sow buckwheat and crimson clover together in July, and speak well of the practice. They say that the buckwheat shades the clover and protects it from the hot sun, and that after the buckwheat is cut the clover makes rapid growth. We think the practice is worth testing with red clover as well as with the crimson.—ED.

Diseased Plum Tree.

Find enclosed a knot or growth that is ruining my blue plum trees. What is the name of disease and what is remedy for same?

H. GODWIN.

Worcester Co., Md.

The disease affecting the tree is the Black Knot. The only remedy is to cut out all parts of the trees affected. If the knots are not carefully cut out from every tree on which they appear the disease will spread and kill all the trees.—ED.

Barrenness of Fig Trees.

Noting the enquiry in a recent issue as to a cure for a barren fig tree, our subscriber, Mr. C. De Bruyn Kops, of Wake, Va., kindly sends us the following letter on the subject, which he received from Prof. Massey, of the North Carolina Experiment Station, in response to an enquiry, with permission to publish the same.—ED:

In reply to yours of the 27th, it is probable that the fig you have is a seedling from one of the imported dried figs, for the seed when scattered grow freely. Seedlings of the Smyrna fig will never hold their fruit here, as we have not the little wasp or Blastophaga which is used for setting the fruit in the south of Europe. Recently the Government has succeeded in introducing this insect into California, with the wild Capri fig, on which it mainly lives, and the California folks are growing the Smyrna fig for drying. I have grown many seedlings from the Smyrna fig here, but never had one to hold its fruit. The figs we grow here are of a different class, and are self fertile. I had at one time nearly 100 varie-

ties of figs, but many of the best ones are too tender for any location north of the orange belt, and I have run down to a few varieties. The Celestial or Chinese fig is a small and very hardy fig, which can be eaten out of hand, skin and all, when ripe, while others have an acrid juice in the skin. Of the larger figs, I find the Brunswiek the best for our use, though the Brown Turkey is grown here more than any other, and there is a large black fig grown in the eastern part of this State which is quite hardy, but of very poor quality. I received from the Department of Agriculture this spring cuttings of several new figs that are said to be fine and hardy. They are all rooted and doing well. It is useless to try to do anything with a fig that drops its fruit. Better buy trees of reliable sorts. You can get the plants in the spring from P. J. Berekmans Co., Augusta, Ga.

W. F. MASSEY.

Disease of Sheep.

I have lost several sheep this spring. They would first get poor and droopy and then die, though well fed all winter with corn and fodder. When opened, I found their intestines covered all over on the outside with little hard knots or lumps, from the size of a large shot to a pea. Can you give me the cause of this intestinal disease and the remedy?

Spotsylvania Co., Va.

D. J. WALLER.

The disease affecting the sheep is a parasitic one, technically called *Ceosophagostoma*, but commonly known as the "nodular disease" or "knotty guts." The parasite is encysted in the little nodules and cannot therefore be reached by any treatment. It is probable that the whole flock will be more or less affected with it, and the safest course is to feed them and send to the butcher. It is believed that the parasite, or its embryo, is taken in by the sheep when grazing on low, wet land. Sheep should be kept off these lands to be kept healthy.—ED.

Drying a Cow.

Please tell me how to dry a cow that is giving milk, especially if she is fresh to the pail.

Chesterfield Co., Va.

A. S. COLLIER.

A cow may soon be dried by only partially milking her for a few days, and by only milking her every other day for a time, and later by milking her only once a week just to strip out the bag for a few times. Of course a cow fresh to the pail will require more care in drying than one which has been long milking or her udder may become caked and ruined. Whilst drying her keep her on a poor pasture or dry feed and without grain feed.—ED.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The long continued cold dry weather has caused such crops as have been already planted to make very slow germination and growth, and it is well that this has been the case, as the frosts of the last few days (18th to 21st April) have been so sharp and general from the East to the West of the tier of Southern Atlantic States as to cause great destruction of such growth as had broken through the ground. Even in Tidewater Virginia close to the ocean, beans, peas, Irish potatoes and strawberries have been badly cut down, and further inland everything growing has been badly injured. Fortunately the actual amount of damage done has not been so great as would have been the case had we had a normal spring. Its lateness prevented the planting and growing of crops, and this has been the salvation of the truckers. The dry weather has, however, been of great service, as it has permitted a fine preparation of the land, and crops will now go into seed beds which will ensure early germination and quick growth as soon as the normal warmth of the season sets in. It is to be hoped that this will not now be longer delayed.

Every effort should now be made to get the crops planted as quickly as possible, and this will mean constant work from sun up to dark, in order that arrears may be caught up. Snap beans, lima and butter beans, pole beans, cucumbers, squashes, sweet corn, melons, and cucumbers may be planted and set out as the ground is got ready. Care should be taken to have all plants which have been raised in the hot beds well hardened off before they are set out or they are certain to suffer.

Beans and peas should not be planted in very rich ground, as such land has a tendency to cause them to run to vine instead of seed. It should be in a state of good fertility sufficient to cause moderate growth of vine. Successional crops of English peas should be planted as soon as possible in order that they may make their growth and seed before the hot weather sets in, as this is very liable to cause mildew in this crop. Plant all these crops in long, straight rows wide enough apart so that they can be worked with horse power. In planting lima, butter and pole beans see that the poles are well set in the ground, so that they will not be easily blown over. Dwarf lima beans will save the cost and trouble of setting poles,

and they make a good yield, but not so heavy as the climbing varieties.

Irish potatoes may still be planted for a successional crop, and sweet potatoes may be set out towards the end of the month. In planting sweet potatoes, select good, light, loamy land in a good state of fertility, but not over rich, as this has a tendency to cause the crop to make too much vine. If the land is not sufficiently fertile to supply the needed food which is mainly nitrogen and potash, a fertilizer made up of 150 pounds of muriate of soda or 350 pounds of cotton seed meal or partly of the nitrate and partly of the meal, which is better than either alone, 100 pounds of acid phosphate and 100 pounds of muriate of potash, or 350 pounds of kainit should be applied per acre, and be well worked into the land before setting out the slips. Do not be in too great a hurry to set out the slips, as they never do much growing until the ground becomes well warmed.

Successional crops of sweet corn should be planted every week or ten days up to the end of July in order to secure a succession of ears into the fall.

Cucumbers, canteloupes and melons should be planted as soon as the ground is warm. Have the land well prepared and lay off so that the hills of canteloupes and cucumbers shall be 4 feet 6 inches or 5 feet apart each way, and melons be twice this distance apart. Put a good shovelful of rotted manure or conipost into each hill and add a handful of high grade fertilizer having an analysis of 6 or 7 per cent. of ammonia, 4 per cent. of phosphoric acid, and 7 per cent. of potash, and work this into the compost and cover with 3 or 4 inches of nice light soil which make compact, and then plant 4 or 5 seeds in each hill. After the plants have got into the rough leaf thin out to two plants in each hill. Keep well cultivated until the vines begin to run. Keep a sharp look out for melon bugs. To ensure protection from these pests, the plants should be covered with plant bed muslin stretched over light frames. Dusting the plants with bone meal when wet with dew will often prevent the bugs from hurting the plants if they are not in great numbers.

Egg plants require rich, light land and a warm situation. Give plenty of well rotted manure and a

handful of good fertilizer to each plant. Look out for potato bugs on these plants. They are as destructive to them as to Irish potatoes. Paris green should be applied to both this crop and the Irish potato crop as soon as the bugs are seen. It may be applied either as powder or in water—one pound of Paris green to ten pounds of flour, or one pound of Paris green to 175 gallons of water, is about the right proportion.

Tomato plants should be hardened off and set out as soon as the ground is ready. Set in rows 3 feet apart and 3 feet apart in the rows. A light sandy loam high and well drained is the ideal land for tomatoes, and this should then have the proper plant food supplied in close touch with the plants, though well mixed with the soil. It is not desirable to encourage wide root growth of tomatoes as this tends to over-production of vines and light fruiting. The use of rotted barnyard manure is very conducive to the good growth of tomatoes, especially where the soil lacks vegetable matter in its composition. A combination of manure and fertilizer usually does best as the manure lacks sufficient nitrogen to meet the needs of the crop, which, in this respect, are large. A proper fertilizer may be made for using along with the manure of 300 pounds of acid phosphate and 150 pounds of muriate of potash, using this at the rate of 500 pounds to the acre, and mixing same with the manure and soil, and then apply 100 pounds of nitrate of soda to the acre by sprinkling a handful on each hill at the time of setting the plants. After the plants have commenced to grow freely a further application of 50 pounds of nitrate of soda to the acre on the hills may be made with advantage. Do not let the nitrate come in contact with the leaves of the plants or with the roots or it will injure them. In the foregoing we have had in mind the tomato crop in the garden for home use, and not the commercial crop as grown for the canneries. In an article in this issue we deal with this crop and refer our readers interested in the subject thereto.

Keep the cultivator running in all growing crops at every opportunity to force growth and keep down weeds.

See that crates and baskets are on hand for shipping the strawberry, dewberry and blackberry crops as they ripen, and have all arrangements made with express companies and commission men for handling the same, so that when the crops are ready for pick-

ing they may be quickly put on the markets. Ship everything in new, clean baskets and crates, and see that only the best are shipped as "prime." Let the others go plainly marked "seconds." This will ensure the best prices all round.

TOMATO GROWING FOR THE CANNERIES.

In many counties of this State and Maryland the business of canning tomatoes is becoming a large one, with the result that farmers are finding it to their advantage to give more attention to the production of the tomato than when it was grown simply for the supply of the markets as a vegetable. Whilst in producing the crop as a vegetable the first necessity is to secure an early fruiting so as to obtain the high prices of the early market, in producing for the canneries the prime object is to secure a large yield of mature fruit, ripening well all the fruit before the advent of frost. The points to be observed in raising this crop are: 1. The selection of the variety. 2. The growing of the plants. 3. The selection and preparation of the soil. 4. The fertilizing and cultivating of the crop. The first two points should already have received attention. The variety selected should be a one that produces a large smooth solid fruit though often more attention is paid to size than solidity or smoothness. Very frequently local varieties are preferred to those offered by the seedsmen as being acclimated and adapted to local conditions. The plants are raised in the same way as for the market or home crop in cool frames or in a sheltered place protected from the north and northwest winds. Care should be taken not to sow the seed too thickly so that the plants may not be drawn or spindling but have good fibrous roots. The young plants should be encouraged to grow by frequent cultivation so that they may be ready to set out in this and the following month. Any good soil adapted to the growth of Irish potatoes will grow tomatoes but if possible a clover sod or pea fallow should be selected as these crops will have enriched the soil with nitrogen and made it retentive of moisture. Deep and frequent cultivation should be given before the crop is set out in order to render available the plant food in the soil and to permit of the easy permeation of the fine rootlets of the plants. The fertilization of the land should be of such a character as will furnish an abundance of all the elements of plant food and especially of potash. A crop of 10 tons of tomatoes with the accompanying vines will contain 57 pounds of nitrogen, 16 pounds of phosphoric acid and 94 pounds of potash. A fairly good

soil will in a favourable season without the application of any fertilizer produce 5 or 6 tons to the acre and therefore to secure a maximum production an application of 500 pounds to the acre of a mixture made up of nitrate of soda 400 pounds, bone tankage 700 pounds, acid phosphate 400 pounds, and muriate of potash 500 pounds, should be made. This application will provide about one-half of the nitrogen, two-thirds as much potash and all the phosphoric acid called for by a 10-ton crop. For a poor soil 500 pounds of nitrate of soda, 500 pounds of bone tankage, 400 pounds of acid phosphate and 600 pounds of potash should be mixed and applied at the rate of from 750 pounds to 1,000 pounds to the acre. The use of nitrate of soda as the source of the nitrogen secures a quick growth of the plant and prevents a too late growth because of the exhaustion of the nitrogen from its rapid availability. If the crop is planted on a clover sod or on a pea fallow the amount of nitrate of soda used may be considerably reduced without risk to the crop. The fertilizer should be applied in the rows and be well mixed with the soil by running a cultivator through each row. The plants should be set out four feet apart each way and cultivation should begin at once and be frequent but shallow. Twenty tons to the acre have been frequently grown but the average yield is usually from 8 to 10 tons.

CULTIVATING AND MANURING ORCHARDS.

Editor Southern Planter:

Of our many sins of omission there are few that the average man is more persistent in than in neglecting his orchard. Even when the orchard is planted with the view of selling the fruit it is expected, in farm language, to find itself and give big returns or get big abuse. That is, to bear heavily without either cultivation or manuring to speak of.

Nevertheless attention given fruit trees pays as well as attention to any other part of the farm, provided always that it is judiciously given. And when it is remembered that fruit is almost, and probably equally as essential to health as meat, it will be seen that attention sufficient to keep up the orchard pays well if there is no intention of selling the fruit.

When orchards are manured, which is rarely, it is nearly always illy proportioned manure or fertilizer. Stable manure alone is most frequently used. Stable manure being rich in ammonia and comparatively poor in potash and phosphoric acid the result is much wood and little fruit or fruit that is apt to rot. That

is, I mean when the manure is liberally used which is not often the case. For rarely is any kind of manure used in sufficient quantities to affect the trees to any great extent. Still even these small applications will be profitable in proportion to their quantity by seeing that they contain in the right proportions the essential fertilizing properties of ammonia, potash and phosphoric acid. The stable manure could be most profitably used elsewhere. A crop of cow peas can be grown in the orchard sufficient to afford all the ammonia the trees will need to grow fruit well. This pea crop will need no fertilizing except potash and phosphoric acid, both of which are much cheaper than ammonia costing only about one-third as much per pound. These two are also most essential to get a crop of fine fruit.

A good plan would be to broadcast 100 pounds of sulphate of potash and 300 pounds of acid phosphate or dissolved bone to the acre, distributing them evenly over the whole ground. The land should then be broken up and cow peas sown in drills about three feet apart. It will take one bushel of peas to the acre. They will need no cultivation with the hoe and only two or three plowings with a small tooth cultivator.

While sulphate of potash is more expensive than ordinary fertilizer it is exceedingly rich in potash (about 50 per cent.) and as only a small quantity of it is to be used it is not expensive considering the splendid results it gives. It is decidedly the best form in which to apply potash to any kind of fruit, giving fine size and color. Acid phosphate or dissolved bone while not as rich in phosphoric acid as sulphate of potash is in potash is much cheaper, making the cost per pound about the same.

The peas can be saved and the vines cut for forage which should fully pay the expense of the crop. The pea stubble, which is rich in ammonia, can then be turned under, affording all the ammonia needed and also leaving the soil in most excellent mechanical condition. When the trees grow very large they will to some extent overshadow and lessen the pea crop, but if the above plan is persisted in by that time the orchard will be bearing such a fine crop of handsome fruit as to well repay all cost of manuring, etc.

Whether the orchard contains 10 trees or 10,000 it will pay to cultivate and manure it as above described. The cultivation should be shallow the plowing in the peas being done with a light, small tooth cultivator. This cultivating, if properly and timely done, will also have a wonderfully beneficial effect in conserving the moisture. An orchard of fruit in

which the crust is kept broken in a drought retains an amount of moisture above that of an uncultivated piece of ground that is simply astonishing and would be incredible if it was not an established fact proven by the most authentic tests. However, any man can establish this fact by taking the trouble during a drought to dig into a cultivated field and compare that with one on which the crust has been allowed to harden and remain unbroken.

O. W. BLACKNALL.

Kittrell, N. C.

FIGHTING PLANT DISEASES AND INJURIOUS INSECTS.

Editor Southern Planter:

During this month many of the plant parasites will begin their work of destruction upon the crops of the farmer and horticulturist. Those who have not prepared to fight these parasites will nearly always come out losers. Spraying machines should be kept in order and a supply of paris green, blue stone and lime kept on hand. Of course, for plant diseases, one or two sprayings should have been given the trees before the leaves come out, but for bitter rot of the apple, which is about the most serious disease of this fruit in the State, it may be best to wait till the fruit is well formed before spraying begins. However, it is not known yet what is the best method of treatment for this disease. The Virginia Experiment Station has just issued a good bulletin upon the subject which should be in the hands of all those who own orchards.

While pruning a neighbor's orchard recently I noticed many instances of twig blight and cankered places on young trees that had just begun to bear. All such diseased parts should be carefully taken out and burned. If this be not done and we should have anything like a wet season much of the fruit in the orchard would be damaged by bitter rot and many limbs would blight.

Twig blight of pear, apple and quince will make its appearance this month. All blighted twigs should be kept cut out some twelve inches below the diseased areas.

The tent caterpillar often does much damage to orchards. These insects can be easily destroyed if taken while very small. Early in the morning while it is cool, the insects will usually be found "at home" and can easily be "twisted out" by use of a small switch or limb and then all can then be crushed under the foot. These insects are often found in

large numbers upon wild cherry trees and scattered apple trees over the farm. These should be destroyed with as much care as those that appear in the orchard to lessen the number of "tents" that would appear in the orchard next year.

Cedar trees should be noticed for "cedar balls" which will have gummy exudations on them during damp weather in this month. Spores come from these balls to the foliage of the apple trees and cause a leaf blight. The leaves turn yellow and fall off. These "cedar balls" should be destroyed. Large knots occur on limbs of plum and cherry trees. Spores come out from them and infect other trees, frequently killing the trees entirely. These should be cut out at once and burned.

The woolly aphis is frequently found around the roots of apple trees and sometimes whole orchards are seriously affected by this insect. Tobacco dust is one of the best things to spread around the trunks of trees for this insect. If the tops of the trees have been sprayed for scale insects all forms of the woolly aphis that may have occurred in the tops of the trees were destroyed. It is very difficult to fight San Jose scale after the trees have leafed out. So much has been written about this insect that it is not necessary to write more at this time.

The roots of apple and peach trees should be examined carefully for borers. Later on borers may eat around the trees and cause them to die suddenly without warning to the orchardist.

A small sharp pointed knife is a good tool for this work. Look for saw-dust like particles or gummy exudations on the ground at the base of the trees caused by the borers.

For information concerning the preparation and application of fungicides and insecticides, the reader is referred to the spray calendar published in the March issue of the *PLANTER* this year and last year.

Montgomery Co.

R. H. PRICE.

COMBINING POULTRY AND FRUIT.

The combining of poultry and fruit raising is doubly advantageous; the poultry keeping down insects, grubs, worms that injure either the trees or the fruit, or both, and the trees furnishing much needed shade for the poultry. In the apple, pear and peach orchard the advantages gained from having the poultry run in it are very great. Not only do the fowls keep insects and worms in subjection, but the scratching and wallowing in the freshly cultivated soil keeps the droppings stirred in and mixed with the soil so the feeding roots can reach them, and it will be found that the soil will need less frequent cultivating.

Live Stock and Dairy.

SHEEP DIPPING AT EDGEWOOD.

Editor Southern Planter:

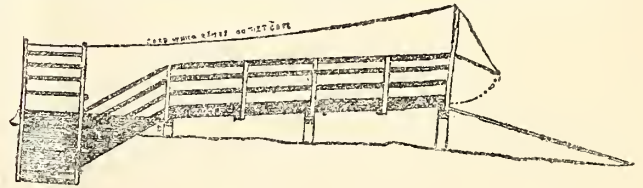
It is dreadful to think of the suffering that sheep endure from scab, ticks and lice. When it is possible to eradicate these pests it seems strange that flock owners will allow their flocks to suffer thus. Besides, it is a big expense to feed these parasites, to say nothing of losses through the poor appearance of the flock. Scab is the worst form of parasite, but fortunately it is not common in the South. The sheep tick is our most common parasite and it is the easiest to destroy. When this number of the SOUTHERN PLANTER reaches you, you will be ready to shear your sheep. When the fleece is taken off the old sheep, the ticks go to the lambs and by dipping the lambs the day after shearing you will kill nearly every tick and prepare the lambs for putting on better gains for the last month before marketing. Some prefer dipping the whole flock to make sure of the thing and I am inclined to think it is best and the plan I propose is so simple that it adds very little to the labor to put the whole flock through. In my opinion one dipping a year only holds ticks in check, as there must always be a large number of eggs present at the time of dipping. To satisfy myself on this point I took a lamb that had been dipped and examined it with the greatest care. I found on this lamb twenty eggs or tick cocoons. I may have overlooked some. These ticks are hatched out within ten days, so that a second dipping after ten days will get all of these young ticks. A third dipping in the fall will help clean out these pests. There remains much to be learned about the sheep tick. I have noticed one sheep in a large flock that had been the year before cleaned of the ticks, which was literally covered with ticks, while the rest of the flock seemed about free of them. Where did these ticks come from and why did they single out this particular sheep? I have known the same thing to be true in regard to chicken lice. This one sheep must be choice tick mutton.

I will describe our dipping outfit for the benefit of those who desire to dip their flocks this spring. This outfit has no patent on it, can be made by any good carpenter for the sum of \$12, and is very simple in the working.

I would, however, recommend that the tank that goes in the ground be ordered from some firm that manufactures galvanized troughs and tanks. It should be four feet deep, sixteen inches wide, and should have one side sloping at an angle of 60 degrees.

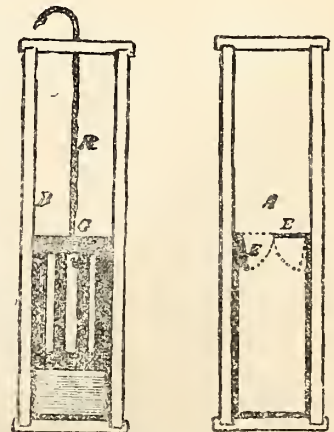
The reason I suggest the galvanized tank is that we found it very difficult to keep the wooden tank from leaking. We had our tank made of tongued and grooved stuff, but the swelling and shrinking opened the joints and we were forced to use paraffin for stopping leaks the second year. The metal tank increases the first cost, but it will save in the end and it will make an outfit that will last for years.

If you get the metal tank, the frame work over the tank, which has the trap-doors attached to it can be easily fitted right over the metal tank and the draining pen can be made to fit into the mouth of the tank. A board with cleets nailed to it can be slipped down the mouth of the tank to enable the sheep to walk out.



Referring to figure 1, you will see general plan. The offset shown in figure is not necessary, as the metal tank can slope up from the bottom. The distance from A to B is four feet. The posts A and B need be only about three feet, just high enough to keep a sheep from undertaking a jump. The trapdoors are made of inch oak and hinged with three strong hinges on each side, so that they naturally fall down on the inside of the tank. As the tank is just sixteen inches wide, the trapdoors make the opening through which the sheep drops only fourteen inches. It will take a good sheep to wedge in that opening. The tank should be narrow to prevent old sheep turning in it.

The trapdoors are shown in one part of figure 2 at E and E. These trapdoors are only eight inches wide, and are pulled up by a rope that divides and is fastened to the far end of the doors. The rope runs over a pulley above and is worked by the man who controls the trapdoors. The trapdoors are held up by



an iron plate four inches wide by six inches long, which is welded on an iron rod, which runs through

post B and the one opposite. The rod is turned by an old crank. When the trapdoors are down, the operator first lifts them into position with the rope, then with a turn of the crank brings the iron plate up under the doors. With the lever power at his disposal the operator can easily hold the weight of a one hundred and fifty pound sheep up, so he needs to hold the doors until the sheep walks on them and then by releasing the crank, the sheep takes the plunge. As is shown in figure 2 there is a sliding door, which we may call G that is held up by a rope while the sheep walks on the trapdoors and is dropped as the sheep drops to prevent him from walking right out of the tank. This should be a closed door instead of an open one, so as to prevent the sheep from putting its feet through the slats in its efforts to climb out. The draining pen is eight feet long and the bottom of it is made of tongued and grooved lumber. It is well to have this a little wider than the tank, so that a large sheep will not waste so much dip by squeezing up against the sides. In this case the end next to the tank should be narrowed down to fit the tank exactly and care must be taken to keep this draining pen nearly level, or the stream of dip rushing back towards the tank will overflow on the low side. This draining pen is a great saving of dip. By this simple arrangement it is possible to dip 200 head of sheep without refilling the tank. At the far end of the draining pen is a sliding door, which keeps the sheep in the pen for a few minutes. The man who works the trapdoors can let them out, when the pen gets full. It is a fine idea to squeeze the wool of the sheep that have heavy fleece, as you can thus save a large quantity of dip.

This tank should be sunk into the ground within one foot of the top and placed just outside the door of the sheep shed, where the sheep are in the habit of leaving the shed. A chute should be built in the shed to direct the sheep to the exit.

Fill tank to within eighteen inches of the top and get ready for business.

Fifty sheep are forced into a pen leading into the chute. A boy is needed to keep them crowded up towards the chute. A man stands just inside the chute near the door to work the sliding door that keeps sheep in the tank and to make the sheep come towards the tank one by one. Another man works the trapdoors and the door at end of draining pen. When a sheep walks on the trapdoors, the crank is released and the sheep takes a dive, generally head first, disappearing from view and rising on the swim, before it can say b-a-a. In dipping for ticks and lice the sheep

should be allowed to remain swimming in the tank for one minute. In case of scab the sheep should be rubbed with a stick or brush for three minutes before it is allowed to leave tank. The sheep go upon the trapdoors easily when they see their companions mounting to the draining pen beyond. Sometimes a sheep is ready to plunge into the foaming bath after the leader, before the trapdoors are raised. It is not hard work. In fact, we had much fun watching the different ways the sheep took the dive. It was as much fun as watching a lot of boys jumping from a spring board into the surf.

There are many good dips which mix with cold water readily, such as Daytholeum, Zenoleum, Chloronaphtholeum. These dips, especially the first, will not stain the wool and will not cause the ewes to wean their lambs. Any of them will send the tick to his eternal resting place in a few minutes, if mixed according to directions.

H. B. ARBUCKLE.

Maxwelton, W. Va.

In this issue will be found advertisements of Sheep Dips which we know to be thoroughly effective.—ED.

ALWAYS TWO SIDES TO A QUESTION.

Editor Southern Planter:

In the February PLANTER appears an article, entitled "The Large Versus the Small Dairy Cow." In this, the writer concludes that the Holstein cow is much superior to the Jersey. He quotes at some length the result of a test made by the Wisconsin Experiment Station, in which the Holstein came out with flying colors. He gives a table of figures showing the result of the test from which I take the following:

	Holstein.	Jersey.
Annual cost of food.....	\$46.46	\$35.22
Annual net profit.....	48.47	41.88

Thus the Holstein cost annually \$11.24 more than the Jersey.

Now, Mr. Editor, it occurred to me that the Jersey was not fairly treated in this test, and I set out to work out the problem in this way. I assumed that my neighbor had three Holstein cows, each of which cost him for their annual keep \$46.46, making for the three \$139.38. Each of these cows gave him a net profit over expenses of \$48.47, making for the three \$145.41.

Now, I take four small Jerseys, which nearly balance the three Holsteins in weight, and they cost me for their annual keep, according to this test, \$35.22 each, making \$140.88 for the four, \$1.50 more than

the three Holstein. They give me in net profit \$41.88 each, making for the four \$167.52. Now to recapitulate:

3 Holsteins cost for keep.....	\$139.38
4 Jerseys cost for keep.....	140.88
3 Holsteins make net profit.....	145.57
4 Jerseys make net profit.....	167.52

Which shows that while the Jerseys only cost \$1.50 more to keep, they made \$22.11 more profit. It's only a question as to which give the most work, taking care of three big Holsteins or four small Jerseys. As for the hardiness of the Jerseys, I think they are all right in this State, though they may not be able to stand the cold of Wisconsin and other Northwestern States. I do not blame them for that, I had to leave that climate myself on account of the cold.

Respectfully submitted,

I. ST. PIERRE.

Amelia Co., Va.

TEXAS FEVER.

In our last issue we published on page 264 a communication from Mr. Cobbs, of Orange county, Va., giving a receipt for the prevention of Texas fever. By some carelessness in the printing office this became so mixed up in the "make up" as to be unintelligible. It should read as follows: Salt 5 quarts, slaked lime 1 quart, sulphur 5 tablespoonsful, pulverized saltpeter 3 tablespoonsful. Mix thoroughly and give in place of salt to the cattle at least twice a week. Mr. Cobbs says that using this he never had a case of Texas fever amongst his cattle.

HAY SUBSTITUTES FOR STOCK FEEDING.

In our March issue we published the first part of an article on this subject from Prof. Nourse, of Blacksburg Experiment Station, in which was included a table giving the yield of milk at the beginning and end of the period of feeding. Unfortunately a mistake was made in the captions at the head of the columns to which our attention has been called by a subscriber. The yield is described as "per day." This should read "per week." The figures themselves are sufficient to show the existence of an error somewhere in the table, as cows giving 247 pounds of milk per day, as there recorded, are unknown. We regret that we overlooked the error in the hurry of correcting the proofs.

A FEW LIVE STOCK REMEDIES FROM PRACTICAL STOCKMEN.

Mr. J. O. Thomas, of Isle of Wight county, Va., the well-known curer of the celebrated Smithfield Hams, and himself an old farmer and hog keeper, says that he gets so much valuable information from the *PLANTER* that he feels it only right that he should contribute something that may be of service to other farmers.

FOR DISEASED HOGS.

Arsenic, he says, is one of the best medicines for hogs when threatened with cholera or when a sow is weak in the loins or cannot walk from diseased kidneys, or when she has been served and not proved with pig. He gives the arsenic in doses of a teaspoonful for a grown hog every other day until they have had three doses. He gives the arsenic on a piece of meat, buttered bread, or anything you can get the hogs to take.

FOR SCOURS IN HORSES.

Take a small bunch of sweet mint, such as you use in a julep and cut it fine on a plate, and then sprinkle it on a feed of bran, meal or oats. If given to a mare suckling a colt, it will have the desired effect on the colt, or the juice may be given with milk to a colt which is being hand raised.

Another subscriber gives the following remedies:

FOR GRUBS IN THE BACKS OF CATTLE.

Moisten a cloth with coal oil and rub every other day on the backs of the cattle, being careful to touch each place where there is a grub. This will kill all the grubs, and they can then be squeezed out with the thumb and finger. Two or three applications are sufficient.

WARTS ON HORSES.

Pure hog lard applied twice a week will remove all seed warts from horses.

SCRATCHES.

Horses suffering from scratches should have the legs washed with warm soap suds, then be rinsed with clean water and be rubbed dry. Then apply pure white lead ground in oil. Wherever the lead gets rubbed off apply again each night. Keep the horses out of mud and water and the scratches will soon disappear.

FOR REMOVING A FOREIGN SUBSTANCE FROM THE EYE OF A HORSE.

Mr. J. M. Hughes, of Surry county, says that if the depression over the eye is filled with pure hog lard at night the foreign substance in the eye will usually be released before morning, though sometimes two or three applications are needed.

The Poultry Yard.

BROODING AND CARE OF BROODER CHICKS.

Experience has taught me that common sense and judgment play an important part in the care and feeding of chicks to promote health and growth. I believe it would be a hard task to find two experienced poultrymen who care for chicks the same. I will give you a few words on my work with them. On taking the chicks from the incubators I place seventy-five in number under each hover in my hot water brooder house, the temperature in the hover being about 90 degrees. After twenty-four hours I feed them a little bread moistened with milk; at the same time a little B grade Steelcut Oat Meal (known as pinhead). They have access to sand, fine grit, charcoal and oyster shell from the start.

The first few days I feed very light; commence placing fine, dry, ground chick feed, such as oats, wheat, millet, sunflower seed, barley, corn, etc., in the litter of the pens, which is chaff about two inches deep. I follow nature as closely as possible—make the chicks work for their feed; they need the exercise. Feed four to five times daily the first two weeks, but sparingly during the day, giving them all they will eat for their supper. I feed very little soft feed. Occasionally a mash composed of fine oatmeal, corn-meal, charcoal and a little cayenne pepper. If they show any signs of bowel trouble, I substitute black pepper.

The second week I commence giving them, along with their other feed, a little green stuff, such as turnip tops, clover, cabbage, horseradish leaves, etc.; also, occasionally, fresh ground meat scraps.

When the chicks are two and a half to three weeks old, I let them in their outdoor runs a few hours each day, the weather permitting. They have access to dust boxes. The temperature under the hovers, started at 90 the first week, is gradually reduced to 85 the second week, then to about 80 the third week. Continued extreme heat causes them to feather out too soon, which weakens them. The hovers are constructed so the chicks can go out and in at will, the same as under a hen. My hovers have ventilators in the top. When chicks are too cold, they will crowd; when too warm, they will be restless and pant. At night, when you find them scattered under the hovers, lying on their little bellies, with necks stretched, you can rest assured they are comfortable and contented. After one has had a little experience with brooder chicks, he can almost tell by looking at the chicks if the temperature is about right.

Give the chicks plenty of fresh air and sunshine; also, keep fresh water before them in suitable fountains, which will prevent them getting damp. Clean

pens several times a week. Cleanliness is an absolute necessity.

I usually keep the chicks in the brooder seven weeks, the temperature having been reduced to about 75 degrees. At this time, I place them in outside houses, where they are allowed to run at will in nice weather. Their feed from this time on consists of hulled oats, whole wheat, cracked corn, etc. They get plenty of green food and bugs by having free range. These outside houses are built large enough to accommodate fifty chicks. In bad weather they are shut in and fed inside. Chicks and fowls need plenty of room. These houses are used during the summer, and until time to place the chickens in winter quarters.

Look out for lice and mites from the start. While incubator chicks do not have them to start with, there are many ways in which they get them. An ounce of preventative is worth a pound of cure. Lice put a stop to growth.

It is important to have chicks that are hatched from eggs laid by good, healthy stock. It is impossible to have strong chicks from weak stock. The best of food and care will not remedy this fault.—

H. Heath, in Poultry Success.

(Mr. Heath raises from 3,000 to 5,000 chickens every year.—Ed.)

CHICKS NEED ASH AND GRIT.

The importance of animal matter and the value of grit for growing chicks has been thoroughly investigated by W. P. Wheeler, of the New York Experiment Station, and the results published in a recent bulletin. As chicks often show a gain of 1,500 per cent. in weight in ten weeks, and ducks may add from 50 to 100 per cent. to their weight weekly, it is patent to every one that they need the proper kinds of food in order to develop properly. Something like 10 per cent. of the body of an average fowl is made up of mineral matter or "ash." Grain foods do not supply more than 3 to 6 per cent. of ash, hence the needed amount must come from other sources.

The test shows that unless sufficient bone-making material is provided, the bones will be small, soft and weak, resulting often in lameness and deformity, or the development will be slow. The necessary amount of bone-building material is easiest supplied in fine raw or cooked bone. Clean grit and sharp sand are also very useful and should always be provided in abundance. For ducks, the fastest and most profitable gains can only be made where animal matter is supplied in addition to grain.

The Horse.

NOTES.

Scarcely a day passes but that I am in receipt of evidence as to the pronounced value of THE PLANTER as an advertising medium from patrons and subscribers alike. This applies to all classes of live stock, and includes the stallions whose names appear in the advertising columns. More mares are being bred this season than during any previous year that I recall. The Spring Garden stallions, Burlingame and Lissak, are receiving patronage, as is Great Stakes, 2:20; Chorister, son of Falsetto; Kelly, 2:27, and Wealth, 2:10. Concerning the latter, Mr. Chapman writes that he has received a number of inquiries and the outlook is bright, and the same prevails in the instance of Kelly. The latter, a son of Electioneer and famous Esther, is doing a rushing business, and high class matrons are being sent to his court from various sections.

Lepanto, 577, the big, fine, standard and registered son of Petosky and a mare by Hunter's Lexington, is doing well in the stud of his owners, Rodes & Bannister, Roanoke, Va. Through his sire he gets the potent blood of George Wilkes, and with that backed up by a rich thoroughbred strain on the maternal side his pedigree is an attractive one. Lepanto stands close to 16 hands high, and weighs over 1,200 pounds. He has sired Wilkie O'Neill, 2:24 $\frac{1}{4}$, and King O'Neill, 2:31, at two years old. As a yearling Lepanto swept the show ring in Kentucky, and in his maturer years the son of Petoskey is an attractive horse to look upon, while his manners and disposition are beyond criticism.

The Virginia bred trotter, Traveller, bay gelding, 5, by Sidney Prince, dam Miss Clay, by Clay, son of Walker Morrill, is doing well in the stable of his owner, S. E. McCargo, of Philadelphia. Traveller worked a mile in 2:21 $\frac{1}{4}$ last season, and his owner looks for the son of Sidney Prince to trot in 2:12 or better this one.

Hall & Warthen, of Warren, recently shipped a carload of Virginia bred hunters, jumpers and saddle horses to Boston, where orders were received for most of them. These horses are described as a choice lot. Most of them are by thoroughbred sires from general purpose mares, and were bred in Warren and the adjoining counties.

Happy Tie, 2:25 $\frac{1}{4}$, the bay mare, by Happy Russell, dam Blanche F., dam of Bursary, 2:24 $\frac{1}{4}$, by Walker Morrill, is owned by General Nelson A. Miles, of Washington, D. C., who will drive her on

the new speedway at the National Capital. Happy Tie was bred by the late Captain Orris A. Browne, Cape Charles, Va. The daughter of Happy Russell is, however, much faster than her record indicates, as I have seen Capt. Browne drive her at a fearful clip on a trot hooked beside a runner to pole. Happy Tie is now eleven years old.

Virginia Jim, 2:12 $\frac{1}{4}$, the fast bay trotting gelding, by Leewood, dam the famous brood mare, Remembrance, dam El Banecia, 2:17 $\frac{1}{4}$, etc., by George Wilkes, who was sold recently by New York parties for export to Switzerland, is giving perfect satisfaction in that distant land. The son of Leewood is eight years old, and was bred by James A. Graham, the owner of Gould Hill Farm, Hanover C. H., Va.

Dart, bay gelding by John R. Gentry, who paced to a record of 2:08 $\frac{1}{4}$ last season, has been purchased by William J. Andrews. This horse was brought here during 1901 by the late George D. Bennett from East St. Louis, who raced him one season down the line of North Carolina fairs. Later the gelding passed to James Stackhouse, Marion, S. C., and from him to John Kinney, Hornellsville, N. Y., and from him to Andrews. Now that Dart is looked upon as the making of a real crack performer, there is some desire manifested to learn the breeding of his dam, which is in doubt. I applied to Mr. Bennett before his death for the information, and he was unable to furnish it. John R. Gentry, the reputed sire of Dart, was purchased by Holt & Scott, of Graham, N. C., during the progress of the Grand Circuit meetings of 1894, but served no mares for them until the fore part of 1905, when M. E. McHenry had him at Freeport, Ill. The famous son of Ashland Wilkes was returned to Graham after the racing season of that year had closed, and got a couple of foals, but Dart was not among them, as I understand it, so it is likely that the bay gelding was bred somewhere in the West.

July 27th and 28th are the dates fixed for the Orange Horse Show, to be held at Orange, Va. The affairs of this association are in a most prosperous condition, and a number of improvements will be made on the buildings and grounds. It has been decided to build a new judge's stand, and the seating capacity of the grand stand will be increased.

Robert Bradley, of Wilcox Wharf, Va., figured among the largest winning owners at the recent Washington Jockey Club meeting. With a stable of home bred horses, most of them by Aloha, Mr. Bradley won \$3,135.

BROAD ROCK.

Miscellaneous.

LEVEES AND IRRIGATION.

Editor Southern Planter:

Why should the Government spend millions of dollars annually in the effort to control the lower Mississippi river in order that a few people, comparatively speaking, may be benefited thereby? A careful, thoughtful examination of the subject will convince almost any one that the cultivation of large areas of bottom lands in the valley of the Mississippi was begun a thousand years or more before nature had properly fitted and prepared the same for its successful, profitable and healthful occupation by man.

The "levee" was a French idea. In purchasing the French claim to this country in 1803, the "levee"—the French idea—was one of the assets. The "levee system"—whereby it is attempted to confine the river, and prevent damage by overflow—was a premature French idea, and has cost the United States Government a few hundred millions already, with much more to follow.

If land was a scarce commodity and high in price and really needed for use, then it would pay to reclaim low lands, just as in the case of the low lands reclaimed by Holland, and other old sections of country where the population is dense and land high in price and all occupied and tilled.

But as long as there are millions upon millions of acres of low priced lands uncultivated, and yet located within easy reach of markets, it does not seem practicable, feasible or sensible to line the lower Mississippi with expensive "levees" in order that the lower bottom lands may be protected from overflow.

It is truly a "Government contract," which the Government has undertaken when it attempts to build a dam on each side of that unruly stream in order to get the surplus waters of a continent off into the sea, without overflowing the adjacent bottom lands. Man proposes, but the Mississippi river disposes.

On the other hand, the same Government is asked to spend other millions to dam the Western and Southwestern streams, so that the surplus waters can be diverted and used for "irrigation" purposes.

Now why this apparent inconsistency and this great haste to reclaim "swamp" lands, on the one hand, and arid lands, on the other, as long as they are not really needed? Spending millions to keep the Mississippi *within* its banks; and spending other millions to get the waters of other streams *out* of their banks, does not seem to be good political economy, seeing that there are millions of acres of tillable arable lands yet lying uncultivated.

If we are to dam the Mississippi and portions of other streams *in*, and dam other streams *out*, in order to reclaim lands not really needed, where, may we ask, are the dam schemes and plans to end?

Such work, on the part of the Government, should not be carried on, except in compliance with the law of "supply and demand." If lands are *needed*, then dam the rivers and reclaim the lands; if *not* needed we had better dam (restrict) Congressional appropriations therefor.

A JEFFERS.

Norfolk, Va.

BIRDS AND THE FARMERS.

Editor Southern Planter:

On page 187 (March issue, Southern Planter), I notice, under headline, "Birds and the Farmer," the following: "Some wiseacre of the Legislature wants to place a price on the scalp of the crow, and the poor hawks are already in many counties thus handicapped."

Now, Mr. Editor, I have been reading practical lessons from your pen for a quarter of a century, and at all times, with few exceptions, your views have coincided with those of practical agricultural people. This last fling, however, at the agricultural element of the Legislature, I think, demands some defense.

The farmer to whom you refer as having killed a crow, and on examination of the crop (crow) found only insects and worms, was exceedingly fortunate not to find in the same receptacle a reasonable proportion of spring chicken, raw eggs, and a gill or more of Adams Extra Early plucked in all its juicy fragrance from the growing ear.

I have observed recently a fast growing tendency for the protection of insectivorous and game birds. In this sentiment I indulge myself to some extent, but I sincerely hope that no tidal wave of sentiment will ever sweep me off of my feet and land me so high and dry in the realms of sentiment that I cannot crawl back to practicability and justice to the struggling agriculturist! Some birds are both insectivorous and pestivorous. If the pestivorous elements of the bird dominate, then he can be no longer a close friend of the farmer. The crow and the hawk is considered in the county of Princess Anne by both agriculturists and agriculturists' wives as being the most pestivorous of the winged species. They both are carnivorous at all seasons, and each of them roll the little chick as a sweet morsel under their tongue

against the earnest and fitful protest of mother hen. The crow is an adept at finding a nest of eggs which some capricious hen has deposited without the prescribed confines for her fruitful deposit.

The above observations are solely of rural experience, and will doubtless be vouched for by many farmers and farmers' wives.

Your suggestion as to the burial or creation of all animal carcasses is, I think, an eminently proper one, and although the scavengers of the air may be placed for a time on reduced rations, yet it will be infinitely better for the purification of the atmosphere and destruction of unhealthy germs.

During the legislative session of 1895-'6 a bill was introduced in the Senate of Virginia to provide this course and sent to the Committee on Agriculture (of which I was a member). My recollections are that the bill passed the Senate, but failed to pass the House.

I hope that your suggestions will be impressed on the next Legislature, and that some bill will be perfected looking to results which you desire.

GEO T. SNEAD.

Princess Anne Co., Va.

In justification of what we wrote with reference to hawks and crows in the article referred to by Dr. Snead, we append the following reported results of the examinations of the stomachs of predatory birds by the agents of the United States Department of Agriculture:

Of 107 stomachs of the long-eared marsh owl examined, one contained a game bird; fifteen, other birds; eighty-four, field mice; five, other mammals; one, insects, and fifteen were empty.

Of 101 stomachs of the short-eared marsh owls, eleven contained small birds; seven, field mice; seven, other mammals; seven, insects, and fourteen were empty.

Of 109 stomachs of the barred owl, five contained poultry or game; thirteen, other birds; forty-six, mice; eighteen, other mammals; four, frogs; one, a lizard; two, fish; fourteen, insects; two, spiders; nine, crayfish, and twenty were empty.

Of 255 stomachs of the screech owl, one contained poultry; thirty-eight, other birds; ninety-one, mice; eleven, other mammals; two, lizards; four, frogs or toads; one, fish; one hundred, insects; five, spiders; nine, crayfish; seven, miscellaneous material; two, scorpions; two, earth-worms, and forty-three were empty.

Of 127 stomachs of the great horned owl, thirty-

one contained poultry or game birds; eight, other birds; thirteen, mice; sixty-five, other mammals; one, a scorpion; one, a fish; ten, insects, and seventeen were empty.

Of 320 stomachs of the sparrow hawk, one contained a game bird; fifty-three, other birds; eighty-nine, mice; twelve, other mammals; twelve, reptiles, or Amphibians; 215, insects; twenty-nine, spiders, and twenty-nine were empty.

Of 562 stomachs of the red-tailed hawk, fifty-four were found on examination to contain poultry and game birds; fifty-one, other birds; 278, mice; 131, other mammals; thirty-seven, Amphibia, or reptiles; forty-seven, insects; eight, crayfish; one, a centipede; thirteen, offal, and eighty-nine were empty.

Of 220 stomachs of red-shouldered hawk examined, three contained poultry; 102, mice; forty, other mammals (shrews, opossum, skunk, chipmunk, mole, rabbit, squirrel, etc.); twenty, reptiles; thirty-nine, Amphibia; ninety-two, insects; sixteen, spiders; seven, crayfish; one, earthworms; two, offal; three, fish, and fourteen were empty.

Out of 103 stomachs of Cooper's hawk, thirty-four contained poultry or game birds; fifty-two, other birds; eleven, mammals; one, a frog; three, lizards; two, insects, and thirty-nine were empty.

The last three hawks are commonly spoken of as chicken hawks.

Similar examinations have been made of the stomachs of crows by agents of the Department and by officers of different States, and these all go to show that though he is sometimes guilty of committing murder and depredation upon chickens and eggs, yet that his food is largely confined to injurious grubs and insects, small mammals, with some grain, and that upon the whole is more beneficial than injurious to the farmer.—ED.

DISPOSAL OF THE BODIES OF DEAD ANIMALS.

Since we received the article "Birds and the Farmers," by Dr. Geo. T. Snead, in which the question of the disposal of the bodies of dead animals is discussed, he has sent us an advance copy of a law passed at the last sitting of the Legislature, which he has received providing for the burning of the bodies of dead animals, of which the following is a copy:

CHAP. 252.—AN ACT to amend and re-enact section 2197, chapter 99, of the Code of Virginia, in relation to burial of hogs that died from disease, as amended and re-enacted by an act approved March 30, 1890, and by an act approved February 14,

1896, so as to require the cremation or burial of all animals or fowls that die from contagious or infectious diseases, and fixing the penalties for violation thereof.

Approved March 15, 1904.

1. Be it enacted by the General Assembly of Virginia, That section twenty-one hundred and ninety-seven of the Code of Virginia, edition of eighteen hundred and eighty-seven, as amended and re-enacted by an act approved March thirtieth, eighteen hundred and ninety, and by an act approved February fourteenth, eighteen hundred and ninety-six, be amended and re-enacted so as to read as follows:

Sec. 2197. The owner of any animal or grown fowl which has died from any contagious or infectious disease, knowing of such death from such disease, shall forthwith cremate or cause to be cremated, or bury or cause to be buried, the body of such animal or grown fowl, and if he fails to do so, any justice, after notice to the owner, if he can be ascertained, shall cause any such dead animal or fowl to be cremated or buried by a constable, or other person designated for the purpose, and the constable or other person shall be entitled to recover of the owner of every such animal so cremated or buried a fee of five dollars, and of the owner of every such fowl so cremated or buried a fee of one dollar, to be recovered in the same manner as officers' fees are recovered, free from all exemptions in favor of such owner. Any person violating the provisions of this act shall be subject to a fine not exceeding twenty dollars for each offence.

2. This act shall not apply to any county until the board of supervisors thereof shall adopt the same.

3. All acts or parts of acts in conflict with this act are hereby repealed.

We are glad to know that the Legislature adopted our views on this matter, though we regret to see that the law is inoperative unless adopted by the supervisors of a county. This is a most pernicious system of legislation. If a law is good for the community it ought to be operative when enacted by the Legislature, and should not depend on consent or adoption by any one. If the question sought to be legislated upon is of doubtful expediency, then no legislation should be enacted. Laws which may be made operative or inoperative at the discretion of individual members of a community leave open too great a door for fraud and manipulation ever to be desirable.—
ED.

When corresponding with advertisers, kindly mention the SOUTHERN PLANTER.

GOOD ROADS.

Another good roads bill has been introduced, this time by Senator Latimer, of South Carolina, appropriating \$24,000,000 for co-operative road construction by the general government and the various States.

The bill provides for a Commission of Highways, under the Department of Agriculture, composed of two presidential appointees, at \$5,000 each per annum, one from each great political party and an officer from the Army Engineer Corps. The road building features are similar to those of the Brownlow bill and other "good roads" measures, and are in effect that any State desiring to co-operate with the general government in road building within its borders, can have federal assistance to the extent of one-half the cost of the construction, the State agreeing to keep the road in repair. There is no question but that the good roads propaganda is making itself felt in Congress, and if the agitation is continued by the farm and other newspapers, an entering wedge in road legislation, it is believed, can be secured comparatively soon. Last Congress the Brownlow bill was introduced and received widespread and frequent notice by the papers; the result is that half a dozen road bills have been introduced in this session. Like all such new legislation involving large appropriations, Congress will put it off as long as possible, until the demand becomes insistent and widespread. The objection raised by some that the work would be paternalistic would apply with fully as much force to the operations of the Post-office Department with its annual appropriation of about \$140,000,000, or the Weather Bureau, or half a dozen other government institutions. Federal "good roads" are coming, if the pounding upon the Congressional door is kept up with sufficient earnestness.

BONE MEAL AS A FERTILIZER,

One of our subscribers, Mr. Groome, of Warrenton, recently wrote the Bureau of Soils at Washington for an explanation of the reason for the long continued appreciable benefit derived from the application of raw bone meal as a fertilizer. The following is the reply received from the Soil Chemist and will no doubt be read with interest. We thank Mr. Groome for favoring us with this letter.

"In reply to your favor of the 12th inst., I would say that we recognize that such fertilizers as bone meal will continue to exercise an influence over crops for a considerable length of time. But taking fer-

tilizers in general and especially the more soluble ones, it seems to be a general law that they prove most beneficial in the initial stages of plant growth before the plants have developed a large and vigorous root system and are, in a sense, better adapted to looking out for their own food supplies.

Raw bone meal is essentially calcium phosphate and is slightly soluble itself. But it is one of a class of substances which is readily acted upon and decomposed by water, forming, in this case, lime and phosphoric acid; and while the lime goes into solution to but a very slight extent, a fairly large amount of phosphoric acid is dissolved. The amount that will be dissolved depends largely on the proportion of solid phosphate to the volume of water, as will be seen from the accompanying table. While it takes some days for the solution to dissolve all the phosphoric acid it can, the larger part is taken up in a few hours. Carbon dioxide, which is always present in the soil and soil moisture, helps to dissolve phosphoric acid from calcium, although this would not be expected on the basis of current theories. In five hours, at ordinary room temperature, we have found that a mixture of equal parts of lime phosphate and lime carbonate when treated with 250 times its mass of water gave about two parts per million of phosphoric acid to the water, but when carbon dioxide was also passed through the solution, about 42 parts per million, or 20 times as much, was given. Therefore, on account of the slight solubility of lime phosphate on the one hand, and its decomposition by water on the other hand, a substance containing it will yield a comparatively steady, small supply of phosphoric acid for a relatively long time, that is, until all the phosphoric acid has gradually gone into solution.

I think the above statements meet your inquiries, and I shall be glad to assist you further if you may require it.

By order of Chief of Bureau.

FRANK K. CAMERON, *Soil Chemist.*

Solubility of Calcium Phosphate ($Ca_3 P_4 O_{12}$) in water free from Carbon Dioxide (CO_2).

Parts Calcium Phosphate per 1000 of water.	Parts Phosph. Acid ($P_2 O_5$) dissolved per 1000 of water
400	0.9183
400	.6760
100	.5083
50	.2857
25	.1615
16.66	.1246
12.5	.0982

10	.0845
5	.0507
2.5	.0318

PRESERVING EGGS IN WATER GLASS.

The most simple and efficient method of preserving eggs for several months is by covering them with a solution of water glass. This preparation has been tested by various experiment stations and has proved to be the best of any methods yet discovered, except artificial cold storage. It is being used to some extent in a commercial way, as well as by many farmers and housekeepers who wish to pack away eggs in spring when they are cheap and plentiful for use during the fall and winter months.

Strictly fresh, clean eggs are necessary to put down. Stale or dirty eggs will not keep well. Eggs should not be washed. They should be packed, preferably small end down, in a stone jar or other suitable vessel, which should be placed in a cool, dark place. To ten or fifteen quarts of water, which has been boiled and cooled, add one quart water glass (sodium silicate), which may be obtained of most druggists. A good grade of water glass should be used. The vessel should be kept tightly covered to prevent evaporation. If the eggs are kept in too warm a place the silicate is deposited and the eggs are not properly protected. The solution may be prepared, placed in the jar and fresh eggs added from time to time until the jar is full, but be sure that there is fully 2 inches of the solution covering the eggs.

The eggs may be taken out from time to time as needed. They will be covered with a jelly-like solution, which is easily washed off. All packed eggs contain a little gas and in boiling the shell will crack. This may be prevented by making a pinhole in the large end of the egg before cooking. One farmer in Maine reports preserving 6,000 dozen eggs last season by this method. He sold them in December and January and received the same price that strictly fresh eggs sold for. While eggs preserved in this way are not as good as new-laid eggs, they are better than the usual run of fresh stock to be had at the stores.

TO KEEP INSECTS FROM MEAT.

When meat has been in salt long enough, and is ready to be smoked. Wash nicely in a tub of hot water, using corn shucks or coarse rag. When the water becomes too greasy throw it out and put in clean. As soon as a piece is washed, sprinkle it

lightly with borax and sift on black pepper before the meat is dry, and hang it up for smoking.

J. O. THOMAS.

Isle of Wight Co., Va.

WHAT HAVE CLUBS AND INSTITUTES DONE FOR US?

AN ESSAY READ AT A FARMERS' INSTITUTE IN FREDERICKSBURG, VA., MARCH 19, 1904, BY DR. AUG. STABLER, OF MARYLAND.

After being invited to present this subject, I made a pilgrimage to the house of the venerable secretary of our club in order to extract from the most complete and systematic records in his possession a few items of interest to other agricultural communities.

The first minute was made in 1844, as follows: "We propose forming an association for improvement in agriculture upon the sociable principle of mutual interchange of visits. For this purpose we agree to meet in the afternoon, once a month, taking each member's house in alphabetical rotation. When assembled we shall proceed to inspect the crops, stock, farm implements and contrivances, and inquire into the modes of culture and system of arrangement generally pursued by the member at whose house we may be. A free interchange of ideas upon agricultural subjects will be expected upon the part of all, and if any member is making experiments which are likely to prove useful or interesting we shall take especial care to notice their progress and results."

"We adopt for our government no rules or regulations other than those which should always prevail in good society, with the single exception that it shall be both the privilege and the duty of each member to criticize freely the arrangements that may come under his examination." This club has never changed its constitution and by-laws in sixty years, and is still as vigorous as ever. Many other similar organizations in our county and other parts of the State have been formed on the same broad lines. In the sixty years there have not been six meetings missed. Death or sickness being the only reason for passing a meeting. At the first meeting of this club the attention of the members was called to the effect of bone dust in causing a luxuriant growth of grass on a poor field. In the same year another member of the club tried the first experiment in Maryland with Peruvian Guano. Eighteen hills of corn treated with guano produced nineteen and one-half pounds of ears, while eighteen similar hills without guano produced seven and one-quarter pounds of ears. About the same time experiments with lime were in progress by the members, which produced good results on some farms and not so good on others.

In those days, before commercial fertilizers were

obtainable, or their use known, our country was very poor. Worn out fields, covered with sedge, briars, scrub pine, flint stone and gullies were the rule. Overgrown fence rows, razor back hogs, cows that made two pounds of butter a week, and corn fields that made eight barrels of corn on seven acres. This same year my father, who was a druggist in Alexandria, Va., and whose health had failed in that business, moved on to the farm where I now reside, and joined the club at its first meeting. When he took the farm there was nothing on it but an old tumble-down log cabin, no grass, no trees, nothing but sedge, briars, flint stones and gullies.

His brother, from Alexandria, came out to see him, stayed three days, and never smiled while he was there. He saw nothing but starvation ahead. Within my recollection on this same farm, father raised 40 bushels of wheat to the acre, 2½ tons of hay, 335 bushels of potatoes, and one year he obtained 750 bushels of splendid peaches from one acre, and sold them for \$2 a bushel at home. This yield of \$1,500 from one acre in a single season has so far as I know never been exceeded in our State. These maximum yields, however, have not been repeated many times on any one farm in our section, but the testimony of many impartial judges who have frequently visited our section from all parts of the country is to the effect that taking into consideration the intelligence and probity of the people the orderly well kept farms, the quantity of stock kept, and the general attractiveness of the neighborhood, the region covered by the club, and the other organizations growing out of it will compare favorably with any similar section of the United States. Last summer Mr. A. D. Shamel, of Illinois, who gave us one of his most valuable talks on corn, was surprised and charmed with the delightful social atmosphere which he found pervading the whole community. It was for many years plainly marked as an oasis in the desert.

There are now four clubs and two granges in the county, and for the last thirty-one years these organizations have joined together once a year and held a Farmer's Convention in the Lyceum at Sandy Spring. These meetings are always largely attended by old and young from far and near and bring out a large number of short, spirited talks from the many learned, practical men who are always present. On several occasions we have received the aid of experts on special subjects, but local talent is always abundant. These meetings exert a powerful uplift not only by making friends of men who did not previously know each other, and by disseminating agricultural information and the conclusions of the doctors on mooted points, but also in securing united action upon matters needing legislation. In short, here is a neighborhood where farmers have been accustomed to come together and work together on all

matters concerning their mutual interests. There is a mutual fire insurance company, the oldest and largest in the State that was wise enough to stick to country property and did not lose one dollar in the Baltimore fire. There is a savings bank that is exceedingly well conducted and flourishing, a national bank that is equally successful, and two turnpike companies that have built three parallel lines of good road to Washington. When Farmer's Institutes were started by the State about six years ago it was thought by the director that we who had so many organizations and ways of obtaining information did not need the Institutes as much as other parts of the county that had no clubs or granges. He tried hard successive years to get up meetings at other points, but his lecturers always had to talk to very small audiences. Without the clubs to pave the way and awaken a desire for up-to-date, progressive ideas no amount of advertising would bring the farmers together. Without some dry wood it is very hard to kindle a fire. *No local organization, no successful institute*, has been the invariable experience. When the Institute was held in or near Sandy Springs, however, we always had not only a good sized crowd, but a highly interesting, instructive meeting. Intelligent, practical questions from the audience kept the speakers busy, and the practical information obtained from these experts has in many cases resulted in far-reaching improvements in our farming methods. At the first Institute held here it was clearly proven as the result of a warm discussion between certain old and successful dairymen and the speaker from another State that the dairymen of this community were missing a great opportunity by not having silage. Silos of the old-fashioned type had been built years ago and abandoned as unsatisfactory. It was shown just where the trouble was, and the following year witnessed a general building of silos and a correspondingly great increase in the production of milk. We are now thoroughly convinced that four acres of corn in the silo will produce more milk and butter than five acres of the same corn field cured, and the work of harvesting and preparing the crop is all done in two or three days, instead of being strung out over two or three months. When we add to these advantages the fact that more forage can be produced on an acre intended for silage than on a similar acre intended for grain because thicker planted, and that we can grow cow peas and corn together and harvest the combined crop with the corn binder fast enough to keep a big engine and cutter busy putting it into the silo, it is evident we have made a step forward. Crimson clover is another crop which for many years was only experimentally grown by most of us, with frequent failure to secure a stand, but has now come to be one of the most valuable of our forage crops since we have learned, after

many trials, how best to manage it. To our State Experiment Station is due the credit of keeping up the cultivation of it, and repeatedly demonstrating its value. On our dry, hilly lands we frequently failed to secure good stands of it when seeded as a catch crop in growing corn. Not until we learned that it will pay to prepare land specially for it in order to get the very valuable crop of hay which, on good land, it is capable of producing, did we make a place for it in our system of forage crop rotation. With us, it is the only leguminous hay crop which can be harvested in May in time to plow and fit the land for another crop.

This second crop may be either corn and cow peas for silage or sorghum and cow peas for hay, or millet and peas, or sweet corn and peas, or peas alone. Thus on our valuable, rich land, which is close to the silo and convenient to manure from the barn, we can grow four crops in two years, all of which are fed to the cows, except the wheat, the straw of which is needed to bed them. The wheat is sold and the proceeds used to buy concentrated feeds to balance the ration. These four crops are corn and cow peas, wheat, turnips and crimson clover. The wheat stubble is plowed as soon as possible after harvest, rubbing down each afternoon what is plowed up in the morning, and harrowing when in good condition after rains till the middle of August. Then it should be fine level and solid, ready for the seed. Put on 20 pounds crimson clover seed and one-half pound Globe turnip seed to the acre. The two kinds are carefully mixed together and may be scattered with a broadcast seeder and harrowed in or it may be put in with a wheat drill. The latter method is best where fertilizer is needed, but where barn manure is applied the phosphate, preferably dissolved rock, should be mixed with the manure before it is hauled out. The turnips are harvested about December 1st, as follows: They are pulled up, thrown into piles on the ground and allowed to wither for two or three days, then when dry haul them to a convenient place near the barn and pile them, tops and all, in a long, narrow rick on both sides of a fence and cover with corn fodder. In handling the turnips we use a broad, short handled fork such as is used for moving coke, potatoes, stones, etc. They are thus forked up from the piles in the fields into a dump cart and hauled to the rick, where they are dumped and forked up into place. When feeding them to cows in winter the turnips are forked from the rick into the cart and hauled out onto a blue grass sod where they are scattered for the cows to eat in the middle of the day. It is found that even when a cow is getting everything else she needs, turnips will increase the milk. They do this not by the actual nourishment in the turnips, but by some undiscovered vital principle which aids the digestion of other food. It has long

been known that plants of the turnip family have the power of digesting the crude elements of fertility in the soil, which are made available by certain secretions of their roots, and it is probable that a similar digesting process occurs when the turnips are brought in contact with coarse fodder in the cow's milk factory, her stomach.

By making the very best use of all the home raised feeds and raising as much as possible of them we are certain that it is possible to make a herd of cows fresh in the fall, give more milk in the year than if fresh in the spring. A cow that is made comfortable in a warm, clean, well ventilated, well lighted stable, with water and salt before her, fed on corn and cow pea silage mixed with bran and cotton seed meal twice a day and with a little crimson clover hay and turnips for the noon feed, will give as much milk in January as the same cow would on the best of blue grass in June. She needs no exercise. That should be taken by the man who milks and feeds her. Some of us are trying alfalfa, but so far with rather poor success. The success with it at the Experiment Station is very encouraging. We hope that when our soils become sufficiently clean, rich and properly stocked with the right bacteria, this crop will enable us to farm with fewer horses to do the plowing, and will also enable us to avoid that other heavy expense, the buying of protein feeds."

A very lively interest was manifested on the part of the practical farmers present at the Institute, in the subjects of soil improvement and forage crops as presented by the lecturer, and many questions were asked, among which were the following: "At what stage of growth do you cut crimson clover, and how do you cure and handle the crop?" Cut it when the lower two-thirds of the flower head is dead, leaving the top third still bright red. It is harder to cure than mixed hay, and requires more time in the field and in shock before storing. When putting it into the barn it is important *not to tramp or pack it*. Let it lie as loosely as possible and not over eight or ten feet deep in one place. There are always plenty of empty mows at this season, and it is better to distribute it around to avoid the danger of mow burning. When cured it is worth \$20 a ton to the dairyman, for it has 16 per cent. protein and is just as good as bran.

How do you harvest cow pea hay? Prof. Massey's plan seldom succeeds with us, though we have frequently tried it. We reluctantly conclude that cow pea hay alone is very difficult to cure in our damp climate, though by the following method we can always save it in fair condition. Remove the track clearer from the mowing machine, and cut the peas down, then when withered and before the leaves dry enough to shatter put it together by hand into small piles. If the crop is heavy it is better not to

use a horse rake. When the top of the pile dries turn it over, but do not shake it out. This turning may be repeated as often as necessary till the whole is thoroughly cured, and then haul in and store as crimson clover, not more than eight feet thick, and avoid packing. I prefer to mix cow peas and sorghum together on good land, because of the greatly increased yield per acre, and the greater ease of curing the crop. This crop may be handled with as much certainty of results as mixed hay. The sorghum stalks prevent packing and heating in shock and stack, and when stored in small stacks, ten feet in diameter and twelve feet high, is certain to keep and prove a palatable, nutritious feed for cattle, sheep, horses and hogs. I fork it into small piles by hand, and when these are partially cured I combine them into large shocks and let stand about a week till well cured. Then make a long, low rack of poles on a four wheeled wagon and haul the shocks to the stack.

"How did your father improve his run-down farm?" He always wore a smile on his face and had lots of friends, especially among the laboring class. He used bone dust, guano, thorough cultivation, barn yard manure and brains.

"How would he do it now?" Probably with South Carolina rock, cow peas, crimson clover and stock.

You said that you were in the habit of buying concentrated feed, such as bran, linseed meal, cotton seed meal, etc., and also that crimson clover, cow peas, and alfalfa would take their place. Why do you not raise enough legumes to do without the concentrates? We ought to, but we have not always done it. Red clover, on which we formerly depended, has very generally failed of late years. Alfalfa is only in the experimental stage on our farms. Cow pea hay is hard to cure, also crimson clover. Cotton seed meal is what we buy most of. That has a decided effect in stimulating the secretion of milk, besides furnishing the protein and phosphates to balance the ration. Physicians are now successfully using it in very small quantities to increase the secretion in nursing mothers, who have not enough for their babies.

How do you plant corn and cow peas together so that they can be harvested with the corn binder? Use Wonderful Peas and White Corn. Mix together half and half and plant with a two-horse corn planter in rows four feet apart, and so that the corn plants stand eight or ten inches apart in the row. If the rows are closer than four feet, the pea vines reach across from row to row and make it somewhat harder to harvest, but with the Deering corn binder we find little trouble in cutting it fast enough. We like planting the corn and peas in the same row better than to plant the peas alongside the corn.

When writing, mention the PLANTER.

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DETAIL INDEX TO ENQUIRER'S COLUMN.

Duroc Hogs	320
Pip in Chickens	320
Improving Land	320
Improving Land	321
Alfalfa	321
Fertilizing Land for Bright Tobacco	321
Scours in Calves	321
Diseased Apple Tree	321
Grass for Name	321
Ginseng	322
Alfalfa Bacteria—Bermuda Grass—Soy Beans—Stock Pea—Berkshires—German Clover—Hog House	322
Grain Crops for Hay	322
Peanut Pickers	322
Alfalfa	322
Millet Hay	323
Ewes Breeding	323
Grass for Hill Side for Pasture	323
Minks and Weasels and Chickens	323
Brick Making	323
Cultivation of Corn—Applying Fertilizer—Lime—Dwarf Essex Rape—Pruning Fruit Trees	324
Diseased Tobacco—Lime for Tobacco—Sow Eating Pigs	324
Preserving Eggs for Winter	325
Fertilizing for Cow Peas	325
Angora Goats	325
Cold Water Paint	325
Chickens Eating Feathers	326
Green Fallows for Tobacco	326
Rotation of Crops	326
Bermuda Grass	327
Rotation of Crops—Lime	327
Navy Beans—Velvet Beans	327
Buckwheat and Clover	328
Diseased Plum Tree	328
Barrenness of Fig Trees	328
Disease of Sheep	328
Drying a Cow	328

PUBLISHER'S NOTES.

TO ADVERTISERS.

We wish to impress upon our advertisers the necessity of having ALL advertisements, no matter whether new or change of copy, in our office by the 24th of each month. Advertising forms close on the 25th. We are compelled to leave a number of advertisements out of each issue because they are received too late.

Subscription Offer.

Should any person, who is not a subscriber to the SOUTHERN PLANTER, read this notice, we beg to ask that he will take it as a personal one to himself. We want him to join the ever-increasing army of readers of the SOUTHERN PLANTER, and to that end will accept a trial subscription for the remaining numbers of this year for 25c. We hope he will find this issue so valuable and interesting that he will want to have this magazine come to him regularly. Send remittance in the most convenient form.

Whose Money?

On April 5th, we received a fifty cent piece in one of our self-addressed envelopes, without any evidence of who the sender is. As near as we can decipher it, the post mark is Blacksburg, Va. We cannot, of course, give any one credit until we know who sent the money.

A NEW BALING PRESS.

The DeLoach Mill Mfg. Co., of Atlanta, Ga., who have been advertising their saw mill machinery with us for years, have perfected a new baling press which is now on sale and will be extensively advertised in a short while. The new Triplex Baling Press is the name given it. This company started out to produce something simple, rapid and self-feeding. They claim to have accomplished all this and something more. We have not the space for a full description, but advise all interested parties to send for a descriptive circular which will be promptly mailed to all inquirers. Address Box 600, Atlanta, Ga.

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FRAZER

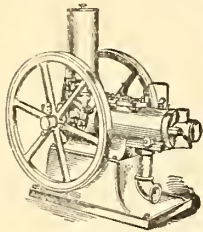
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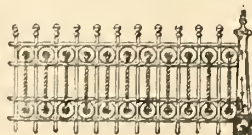
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and boilers are the standards of excellence wherever known. They find a host of uses on plantation and farm and are so reasonable in price as to come within reach of all. We make them like cut, horizontal, mounted, etc., from 3 H. P. up. Write to-day telling us what you wish a power for and we will mail you free, our book entitled, "Power Economy and Efficiency."

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THE HUMAN SIDE OF ANIMALS.

Wild animals in captivity should furnish interesting objects for the study of this question; and we are tempted in this connection to give the testimony of George Conklin, Barnum & Bailey's well-known animal trainer. He says:

All animals have a distinctly human side, but there is a striking difference in the mentality of animals of the same species, just as there is among men of the same race. Some animals of the same family are "smarter" than others. All, however, give evidence that they not only think, but also that they have their likes and dislikes, their hopes and fears, their pleasures and pains, just the same as human creatures.

No one who is at all familiar with animals questions the fact that they are capable of genuine affection and, at the same time, can hate with a vindictiveness not surpassed by men or women. I have seen lions and tigers manifest the greatest uneasiness over the absence of a familiar keeper, and the most apparent evidences of pleasure on his return—purring, licking his hand, and in other ways showing their affection. Within an hour I have seen these same animals turn upon a keeper they didn't like and nearly tear him to pieces.

Elephants are even more pronounced in their likes and dislikes. The first year the Barnum & Bailey circus was in London, we had an elephant man who had an exceptionally violent temper, and when out of humor he was inclined to be unpleasantly rough with the "bulls." I had noticed the elephants looking at this fellow and following his movements with their little beady eyes, and I never doubted but that at the first opportunity they would get even with him. The animal man's name was Cooper, and at Olympia he was usually on the night watch. One night, shortly after the show was out, I heard a commotion in the elephant pen, and running down the line of "bulls," I found Jack Mooney, one of our best elephant men, lying on the ground, with old Babe, the mother of the first baby elephant ever born in America, standing over him. There was no time for hesitation. Without thought of the possible consequences, I ran up to Babe, commanded her to move back, and pulled Mooney out of the way. It was evident that the elephant had attacked him and knocked him down, but what I couldn't understand was why, after getting the man at her mercy, Babe did not crush the life out of him. Mooney, who was only partially stunned, gave the only plausible explanation of it. Cooper had asked him as a favor to remain on watch, and had gone away. Mooney, who was a favorite with the elephants, and always careless in passing them, approached Babe in the gloom. The elephant, undoubtedly thinking it was

HENCH'S 20th Century Steel Ball Coupling Cultivator

With Double Row Corn Planter and Fertilizer Attachment Complete on One Machine.

Parallel beam movement, pivoted axle, with lateral beam movement in connection with the movable spindles, or either independent of each other. Centre lever for spreading and closing shovel gangs. The most complete cultivator on the market, having every possible movement of the shovel gangs.

Order immediately and introduce them for next season.

The HENCH & DROMGOLD CO. Mfrs., York, Pa.

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.

WARRINER'S CHAIN HANGING STANCHION

CLEAN, SAFE, COMFORTABLE.

MFG. BY W. B. CRUMB, Forestville, CONN.

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.

DEHORNER (Newton's Patent) Every Dehorner Guaranteed

THOUSANDS IN USE. Ask your hardware dealer for them or write EL. H. BROWN MFG. CO., DECATUR, ILL.

Clark's Tools for Large Hay Crops

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

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

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

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

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.

Defender Sprayer
All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer. Catalogue of Pumps and Treatise on Spraying free. AGENTS WANTED.
J. P. Gaylord, Box 82 Catskill, N. Y.

The Pump that Pumps
Ask Your DEALER
FRY'S PUMPS
Double-Acting, Lift, Power, Tank and Sprayer
Stores: Ladders, Etc. Barn Door Hangers. Aluminum Finished HAY TOOLS of all kinds. Write for Circulars and Price List.
F. W. Fry & Bro., Ashland, O.

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.

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

Cooper, and delighted to find the hated keeper off his guard, suddenly swung her trunk around and felled Mooney to the ground. The next moment the elephant man would have been crushed under the feet of the brute, but in some way Babe discovered her mistake, and, instead of further injuring the favorite keeper, gently turned him over with her trunk and sought in her dumb way to revive him.

Mooney was only half conscious of all this, and the idea was probably evolved to some extent from his knowledge of the elephant and her character; but a few minutes later, when he had sufficiently recovered from the blow he had received, he walked up to Babe, spoke soothingly to her, and put his arms around her trunk. And the way that old elephant responded to his caresses was beautiful to see. She was all contrition for what she had done—any one with half an eye could see that, while the genuine affection she had for Mooney and the delight she felt over his providential escape was evident in every movement of her great body. Just a week from that night Babe actually caught Cooper in the same way, knocked him down and nearly crushed out his life under the weight of her body. Here you have the entire gamut of human passions and emotions—love, hate, memory, calculation, regret, contrition, atonement, revenge. Absolutely nothing lacking but speech—and who ever claimed that the power to articulate was a pre-requisite to the possession of a soul?—Country Gentleman.

SCIENCE IN FARMING.

Good, hard, clear thinking is essential to success in any business and as applied to farming must go hand in hand with hard work. That the American farmer is grasping every opportunity to acquire scientific knowledge that will enable him to meet and solve the problems which every day come up in the successful operation of his farm, is a matter of note. We find several indications of it. A few years ago at the farmers' institutes, occasions on which the farmer would closely follow the lecturer with a series of searching questions were rare; to-day on the other hand, it is a common experience to hear a farmer thoroughly question the lecturer and even offer the result of his experiments. But this is not the only fact which demonstrates that the farmer is doing hard thinking. Equally as noteworthy as the above is the fact that more farmers every year realize the vast saving in time and labor that results from the use of the Champion harvesting machines. The progressive farmer knows that the Champion machines are an essential element in successful farming and consequently buys them, and the increasing number of these machines bought each year is an encouraging indication of the rapid progression of our farmers.

YOU Can Save a Lot of Work!
Can Save a Lot of Money!
Can Increase Your Comforts!
Can Increase Your Profits!

If you are interested in these things we'd like to send you our new book about

ELECTRIC STEEL Wheels
and the
ELECTRIC Handy Wagon

More than a million and a quarter of them are in use and several hundred thousand farmers say that they are the best investment they ever made. They'll save you more money, more work, give better service and greater satisfaction than any other metal wheel made—because **They're Made Better.** By every test they are the best. Spokes united to the hub. If they work loose, your money back. Don't buy wheels nor wagon until you read our book. It may save you many dollars and it's free.

ELECTRIC WHEEL CO.,
Box 146 Quincy, Ills.



GOOD TOP BUGGIES \$28.35.
Two Years Guarantee
COLUMBUS QUEEN \$49.50.
On 30 Days Free Trial Catalogue Free.



THE OHIO VEHICLE & HARNESS CO., Columbus, O.


WE'LL PAY THE FREIGHT and send 4 Buggy Wheels, Steel Tire on, - \$7.25 With Rubber Tires, \$15.00. 1 mg. 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.

FARMERS
THE FONTAINE SHOCK BINDER is used and recommended on the Test Farms of the United States, Virginia, North Carolina, and Illinois. It is a strong windlass, weighing three pounds. Saves labor. Prevents shocks falling. Keeps shocks dry inside. Sent by express prepaid for \$1.50. Write for free circular with testimonials and directions for cutting and shocking corn. Agents wanted. FONTAINE SHOCK BINDER CO., Christie, Va.

PATENT YOUR IDEAS
\$100,000 offered for one invention; \$3,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.
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Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.
HARRIS HARDWARE CO., 489 E. Broad, Richm'd, Va.

YOU CAN MAKE \$3 TO \$10 A DAY
Fitting glasses for us. Big profits. Our 24-page FREE EYE BOOK tells how. Write for it today.
JACKSONIAN OPTICAL COLLEGE, Dept. 2098, Jackson, Mich.



CREAM Separators

have been sold too much on talk. We sell ours on trial. Try it on your own farm. The American will pay for itself even though you have but a few cows. The price is remarkably low. The machine is a money maker. Write for separator book. Mailed free.

American Separator Co.,
Box 1076 Bainbridge, N.Y.

Won Medal at Paris Exposition.

If You Have Not Been Able to Get a Hydraulic Pump or Ram

and are in need of one, we are just introducing our new standard HYDRAULIC PUMPS, the simplest, best, cheapest and most convenient in every way, and you can secure one at cost by writing the

STANDARD HYDRAULIC PUMP CO.,
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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 day and night with no attention or running expense. Get our free catalogue.

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

VIRGINIA DIVISION.

FARMER'S MUTUAL BENEFIT ASSOCIATION.

Chartered by State of Virginia.

A fire Insurance Association for farmers of Eastern Virginia.

Organized January 9, 1899; amount insured January 9, 1904, \$370,000; policies secured by real and personal property, estimated value, \$1,000,000. For further information address CHAS. N. FRIEND, General Agent, Chester, Va.

THE KEELEY INSTITUTE

GREENSBORO, N.C.

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

WANTED

A single white man to take charge of the grounds of the Virginia Club, and to live on the premises. He should know something of flowers, shrubs, etc. Apply to JAS. McGRAW, 1323 E. Main street, Richmond, Va.

WORKING MANAGER

Wanted on a farm 40 miles from Richmond; must work as well as manage farm; good offer to right man; no drinking man need apply. Address Box 455, Richmond, Va.

No More Blind Horses For Specific Ophthalmia, Moon Blindness and other sore eyes, Barry Co., Iowa City, Ia, have a sure cure.

THE HARVEST.

The most vital work of the nation is that of gathering the grain. At the same time it is one of the hardest tasks as well as one of the severest tests of endurance; and strange to say the world pays little attention to this important work, for the man on the binder is a man worthy of his rank among men.

In the heated days of a long, dry summer the harvest of grain becomes a siege of endurance, which muscles cannot always withstand. With heat ranging from 80 degrees to 110 degrees the farmer steadfastly sticks to his binder day after day and never wavers, cutting away the sheaves of golden grain.

And what is the essential feature of this great work? Could it be done without a binder? And can it be done with a poor one? McCormick binders were made especially to meet the severe conditions just spoken of. Things always seem to go wrong when the mind and body are straining every nerve to accomplish a certain purpose under adverse circumstances, but the user of the McCormick binder may rest assured that trouble will never come to him when using one of these machines, no matter how hot the sun, or how tangled and heavy the grain may be, for his binder is a binder with a record.

HANDSOME HORSE PICTURE FREE.

In order to ascertain how many persons read the advertisements of the Studebaker wagons, carriages and harness, if you will write us a letter of not more than 100 words, telling us how many of our advertisements you have read, where you saw them and what you think of them, we will send you absolutely free, our beautiful water color lithograph, "Typical American Show Horses," 12x27 inches, printed in seven colors.

To the six persons sending the best letters, we will send this picture handsomely framed. All others will receive the picture ready for framing. Contest closes June 1st, when pictures will be awarded. We know you will be glad to have it. Send to-day while you think of it. Address, Studebaker Bros. Mfg. Co., South Bend, Ind.

A SHOCK BINDER.

Among the new advertisements in this issue, is that of the Fontaine Shock Binder Co. This firm is offering what seems to us to be a very useful device in the shape of a Corn Shock Binder. It is a small windlass, weighing 3 pounds, and is operated by a simple pressure of the hand which will tighten the shock so it will not fall or be blown down. The shock thus tightened will turn water a great deal better than one bound by the hand only. Look up the ad and send for a descriptive circular and testimonials.

UNION LOCK POULTRY FENCING



HAS BEEN FULLY TESTED AND FOUND SUPERIOR TO ALL OTHERS.

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

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

CASE BROS., Box 340, Colchester, Conn.



WIRE FENCE

Heavy lateral wires, heavy hard steel stays, collared 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.

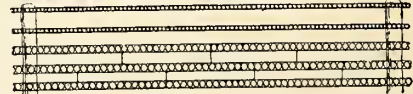


Genuine Spiral Spring Wire FENCES AND GATES

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.

THE WIRE BOARD FENCING



Strongest, most durable and economical fencing on the market. This is a strong statement, but is based on actual experience, and absolute facts. We have the proof. Write for free sample and circulars. The Truss & Cable Fence Co., 610 Cuyahoga Bldg., Cleveland, O.



PAGE

IF YOU USE

Page Stock and Farm Fence it don't matter what kind of stock you keep, they'll all be fenced.

PAGE WOVEN WIRE FENCE CO., Box 57, Adrian, Mich.



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.**




B.B. FENCE We'll tell you the cheapest and best way to build it. Of any kind of wire, for any requirement, with cheap labor, no machine and we'll tell you how to fix your old fences too. Write **B. B. FENCE CO., 142 W. 3rd St., Peru, Ind**



FENCE! STRONGEST MADE. Built strong. Chicken-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free. **COILED SPRING FENCE CO., Box 12 Winchester, Indiana, U. S. A.**

Mention THE SOUTHERN PLANTER when corresponding with advertisers.

Corn
must have a sufficient supply of
Potash
in order to develop into a crop.
No amount of Phosphoric Acid or Nitrogen can compensate for a lack of potash in fertilizers [for grain and all other crops].



We shall be glad to send free to any farmer our little book which contains valuable information about soil culture.

GERMAN KALI WORKS,
New York—83 Nassau Street, or
Atlanta, Ga.—22½ So. Broad St.

RELIABLE SEED

FOR THE FARM AND GARDEN.
Cow Peas, Soja Beans, Sorghums, Millets, Teosinte, Kaffir Corn, Field Corns, Buckwheat and all varieties of Field and Garden Seeds of the highest quality and germination. Fertilizers for all crops. Write us for quotations.

CATALOG MAILED FREE.

DIGGS & BEADLES,
1709 East Franklin Street,
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Pumpkin Seed.

VIRGINIA MAMMOTH, largest and most productive variety for table and stock. Cost nothing to grow in corn field, but price of seed, and greatly benefits corn by shading the roots. Splendid keeper. Fresh selected seed. 35c. pound delivered; 5 pounds or over, at 20c. E. C. BELLWOOD, R. F. D., No. 1, Manchester, Va.

SAFONI SEED CORN

A beautiful white variety and a wonderful yielder: 2 to 4 large ears to a stalk; don't fail to try it.

HIGH GRADE RED POLL and Aberdeen-Angus Cattle, both sexes.—Address,
LOUIS B. GILLILAND, Jr., Clarksville, Va.

BERMUDA GRASS ROOTS.

50c per bu.; 10 bus. and over, 37½c
P. N. LITTLE, Bold Spring, Ga.

"Golden Seal" as a money crop; its commercial value, cultivation and profits. Attractive booklet 25 cents.
J. HOAG, Jr., Tomhannock, N. Y.

NOVEL UNDERTAKING.

When it comes to novel and difficult feats in the engineering line, Pittsburgh easily takes the lead over any city in the country. Only a little more than a year ago the young firm of Kress-Hanlon Company successfully performed the arduous undertaking of moving one of the Standard Oil Company's great steel tanks by boats on the Allegheny river, attracting to themselves thereby the notice of engineers and of the scientific press all over the country.

The latest undertaking of this character and probably the most difficult and perilous so far attempted, will be the removal by river next week of a large two story brick building, weighing over 160 tons, from Sharpsburg, Pa., to Allegheny.

Actuated by sentimental reasons, Mr. H. J. Heinz, the founder and present head of the great Pickling and Preserving Company bearing his name, has for many years desired to bring into the midst of the company's handsome group of buildings in Allegheny, the old place built by his father fifty years ago—the building in which thirty-five years ago the business of H. J. Heinz Company was started, and there convert it into a museum for the preservation of relics and curios; but the obstacles in the way of moving it by road were insurmountable.

Mr. Heinz was unwilling to tear the building down and reconstruct it, preferring if possible, to preserve the original building intact, and various building movers were consulted as to the practicability of moving the house by river; but the difficulty of handling a brick structure safely on a swaying boat in the swift current of the Allegheny river made the risk of disaster seem too great, and nothing was done in the matter until the present spring, when the Kres-Hanlon Company, encouraged by their previous successful accomplishment, agreed to undertake the task, using the river as a highway, and about a month ago the building was lifted from its foundations and started on its journey to the river bank.

The trip down the river will be full of exciting interest, as several bridges must be passed, one of which is so low that the boats will have to be lowered several feet by scuttling, and then pumped out after the bridge is passed. Many representatives of the press will be on the tow boat as guests of the H. J. Heinz Company, when the trip is made, which if no mishap occurs, will probably require something more than half a day, including the passage of the locks just above the Heinz Plant.—Pittsburgh Press.

Daughter—Are all men bad, papa?
Father—No-no, my child; you will always be safe with your grandpa and me.

LICE.

KILL THE LICE AND MITES on your fowls and chicks with GIBSON'S LIQUID LICE KILLER, and GIBSON'S INSECT POWDER. Paint the Liquid on the roosts and bottom of Coops, and dust the Powder in the nest boxes. Both guaranteed or money refunded.

Liquid Lice Killer, \$1.00 per gallon; one-half gallon, 60c. Insect Powder, 5 oz. box, 15c.; and 16 oz. box, 40c. postpaid.

Agents wanted. Liberal terms.
GIBSON & LAMB, West Alexander, Pa.

Poultry House Swarming with Lice.
GIBSON & LAMB:

Gentlemen,—The can of liquid louse killer I obtained from you did the work most effectually. The poultry house was fairly swarming with lice, as well as the fowls. I painted the roosts and dropping boards thoroughly with the liquid, and have been unable to discover a louse since. It not only kills lice, but I consider it a disinfectant and preventive of disease. They should erect a monument in "Hen Heaven" to Gibson as being the discoverer of the greatest boon to poultry in existence.
EDWIN B. COLLINS,
Pequot Poultry Yards, Mystic, Conn.

Oh, when you want the business done

By play that's strong and steady,

Just take a look at old SLUG SHOT,

For that's the stuff that's ready.



SOLD BY THE SEED DEALERS.

For pamphlet on Bugs and Blights, address, Benj. Hammond, Fishkill-on-Hudson, N. Y.



The Only Cow Food

Which removes Garlic, Onion and Weed Taint from Milk. Send for circular to

VA. CATTLE FOOD CO.

DANVILLE, VIRGINIA.

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E. B. McGeorge, Richmond, Va.
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R. G. Hiatt, L. Richardson Drug Co., Greensboro, N. C.
Raleigh Milling Co., Raleigh, N. C.
J. M. Starr & Co., Yorkville, S. C.
T. J. Wills & Co., Charlottesville, Va.
Dr. L. S. Ricketts, Orange, Va.

MODERN CANNER FOR \$25

Complete farm canning plant, including cans, tools, etc. Write to-day. MODERN CANNER CO., Bridgeport, Alabama.

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

Northern Virginia,

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

LOUDOUN COUNTY Farms a Specialty...

Catalogue on application.

**P. B. BUELL & SON,
Real Estate Brokers,**

Herndon, Fairfax Co., 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.

..To Homeseekers..

"THE BUSINESS OF FARMING IN VIRGINIA."

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

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

...FOR SALE...

FARMS AND SUBURBAN HOMES OF EVERY DESCRIPTION.

25, 50, 100, 500, 1,000 and 2,000 acre tracts. Some of these highly improved and convenient to schools, churches, steam and trolley lines. If you want to buy or sell a Virginia farm, see Hockaday & Casselman, Richmond, Va.

J. R. HOCKADAY, Richmond, Va.; LAWRENCE CASSELMAN, Ex-Auditor McLaine Co., N. Dakota.

I Can Sell Your Farm....

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

JOHN JELINEK, 1116 Pine Alley,
Braddock, Pa.

Cultivation and Storage of Sweet Potatoes.

Instructions from start to finish thorough. Plans hold good the year round.

By mail (preferably by M. O.), 50 cents. If you register, deduct fee. BRYAN TYSON, Box, 210, Carthage, N. C.

THE BUSINESS FARMER.

It is generally conceded to-day that the successful farmer is the business farmer, the one who runs his farm on strictly business principles. He keeps careful account each year of what every department has cost him and what returns it has brought, and if the balance is not on the right side he immediately investigates. If the dairy department, for instance, does not pay he locates the leak. It may be that he has not been feeding his cattle to secure the greatest amount of butter fat in the cream, so he immediately proceeds to remedy this defect. Perhaps he has not secured the net profit which the size of his crops warranted him in expecting. This may be due to the fact that labor cost him too much or that his binder was old or too flimsy to do the work quickly and thoroughly. In the latter case he needs a new machine and the business farmer immediately proceeds to buy a Deering binder, because it is constructed to give satisfaction to the farmer. Deering harvesting machines make money for the farmer because they are durable and wear well, and consequently require few repairs, and because they are constructed on principles that are mechanically correct. Deering Ideal machines are known the world over for these sterling qualities, and they are an essential part of the farm equipment of every practical business farmer.

A PUMP A MINUTE.

The 500 expert mechanics employed by F. E. Myers & Bro., Ashland, Ohio, turn out one Myers Pump every minute of the working day, besides Myers Hay Carriers and other articles in like proportion. This is the largest plant in the United States, manufacturing pumps and hay tools exclusively, and during the twenty-five years that the co-partnership has existed its record has been most enviable in respect to the quality of its goods and the integrity of its business dealings. In soliciting the patronage of our readers, F. E. Myers & Bro. do so on the merits of their goods. "Take off your hat to the Myers" has become a phrase of more than ordinary purport to both the trade and the retail customer, and its association with the Myers pumps is immediate in every mind. Their newest catalogue of pumps and hay tools can be had for the asking.

HAMMOND'S SLUG SHOT.

Elsewhere in this issue, will be found the advertisement of B. Hammond, Fishkill, N. Y. For a great number of years, he has advertised Slug Shot in the SOUTHERN PLANTER as hundreds of our readers know. This well known insecticide has found favor with farmers, truckers and market-gardeners for about 25 years, and the army of users grows steadily each year. Write to Mr. Hammond for a free pamphlet on "Bugs and Blights."

Make Your Idle Money Earn You Interest.

Write the FIRST NATIONAL BANK of RICHMOND, VIRGINIA for information concerning its certificate of deposit, so arranged that one per cent. may be collected every FOUR MONTHS through your nearest bank or store.

Our experience proves this form for savings to be the most satisfactory plan yet devised for deposits of \$100 00 or more.

Our Capital and Surplus is

ONE MILLION DOLLARS.

VIRGINIUS NEWTON, President.

JNO. M. MILLER, Jr., Vice-Pres. & Cashier.

CHAS. R. BURNETT, Assistant Cashier.

J. C. JOPLIN, Assistant Cashier.

"In the Green Fields of Virginia."

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

MACON & CO., Orange, Va.

VIRGINIA FARMS

Nice little poultry farm, 100 acres, good house and orchard, \$500.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisville, Va.

Go South.

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

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address

ALBEMARLE IMMIGRATION CO.,
SAM'L B. WOODS, Pres. Charlottesville, Va.

VIRGINIA FARMS

All prices and sizes. Free list on application.

WM. B. PIZZINI CO., RICHMOND, VA.

VIRGINIA FARMS

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

BACK NUMBERS

WANTED. We will pay 10 cents a copy for all of last year's numbers. We have several subscribers who want various issues, and others who want the entire volume. Drop us a postal stating what numbers you are willing to dispose of. Will pay cash or credit your subscription.

SOUTHERN PLANTER, Richmond, Va.

GREAT BARGAINS IN VIRGINIA FARMS.

Below I give a few of the many choice offerings I have of Virginia Real Estate; fuller particulars, if desired.

No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

No. 16.

130 acres—20 acres hardwood, balance in good state of improvement, and a splendid quality of red clay subsoil; 50 acres in wheat and timothy; 20 acres in meadow, balance is new land, and will be for corn next spring. Situated in excellent neighborhood of refined people. Twenty-two miles from Washington, 5 miles from Herndon Station. Fronts on pike. Comfortable 4-room house and all buildings. Farm watered by large branches. Price, \$20.00 per acre. Terms, to suit purchaser.

No. 17.

80 acres—15 acres in hardwood, balance in grass, except 20 acres for corn. Fronts on pike; 5 miles from railroad station. Watered by large branch. All in good state of cultivation. No buildings. Price \$18.00 per acre. Easy terms.

No. 22.

225 acres in Loudoun county, 2 1-2 miles from railroad station, 40 acres in oak and hickory timber, soil mahogany clay, stiff clay subsoil, fine grain and grass land, all level and well drained. One to two miles from three churches and post-office. Running water in every field. Land in good state of production, free from stones. A good seven-room dwelling, dry cellar, shady lawn, a large barn, complete with stalls, grain room and driveway. Water in barn yard, double corn crib, meat and poultry house, all in good repair. Deep well at kitchen door. Situated in refined neighborhood. Price, \$20 per acre.

No. 23.

50 acres in Fairfax county, 2 miles from town, 10 acres in timber, 3 acres in apples, peaches, pears and cherries. Situated 13 miles from Washington, high state of cultivation. Operated now as a plant and market garden. Improvements, a nice two-story seven-room dwelling, barn 40x50, work shop, hog, poultry and meat houses, all in

excellent repair. Situated on macadam road. Price, \$2,650.

No. 25.

175 acres in Rockbridge county, 1 1-2 miles from Buena Vista, Va. 120 acres in blue grass, 10 acres in wheat, 15 acres for corn, balance in timber. Soil lime stone clay, high state of improvement. Land gently rolling and well fenced. New 10-room dwelling, two large porches, good 5-room tenant house and other small outbuildings, barn was burned, stone foundation 37x50 in good repair. Good spring in every field. Price \$5,300.

No. 28.

516 acres in Rockbridge county, 1 1-2 miles from town, near railroad; 300 acres of cleared land, 70 acres in wheat, 26 acres in white oak and hickory timber, 230 acres in blue grass and timothy sod, 190 acres of mineral land, 1 mile from railroad, cleared land in high state of cultivation, excellent fences. Improvements—new 10-room brick dwelling with three cellars, hot and cold water in house, telephone connections with county and long distance phones, barn 44x60, stable 30x45, sheep barn 24x15, double corn crib and granary 25x30, machine, carriage, ice and poultry houses, two 5 room tenant houses. Price, \$16,000; one-third cash and balance on 10 year time if desired.

No. 31.

2 acre lot, situated at intersection of three public highways, in a prosperous and thickly settled neighborhood. Improvements—a 2-story 6-room dwelling, a large store house, 5 rooms over the store, a feed stable 18x40, 20 feet high, blacksmith shop, wheelwright shop, and 4-room tenant house, all occupied and in excellent repair. Price, \$1,500. Fine business stand.

No. 34.

50 acres—Truck and fruit farm in Virginia, near steam and electric railroad, 12 miles from Washington, 10 acres in timber. This farm is almost covered with fruit trees, namely, peaches, pears, plums, cherries, apples, crab apples and berries. Land is smooth and gently rolling, watered by several springs. Improvements—5-room frame dwelling, barn 30x35, corn crib, granary, wagon and wood shed, hog, poultry and meat houses, all in

good repair. In excellent neighborhood. Price, \$5,000.

No. 30.

50 acres in Loudoun county, 3 1-2 miles from railroad. Land chocolate clay; 5 acres in timber, 3 acres in apple orchard 10 years old. Land in good condition. Improvements—a new 6-room dwelling not quite finished, a large stable, and other small farm buildings in fair condition. Price, \$1,600.

No. 33.

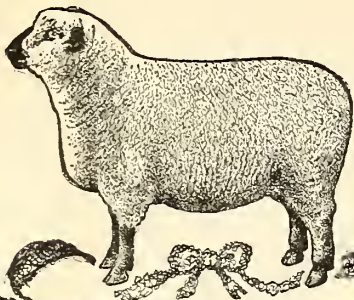
400 acres in Loudoun county, convenient to railroad, level road, 40 acres in timber, balance cleared, divided into eight fields, running water in all, good fence. Land well set in timothy and clover. Soil mahogany clay and some yellow loam, fine grain and grass land. Situated in pleasant neighborhood, 24 miles from Washington. Improvements—7-room dwelling, 1 1-2 story, new sheep barn and new cow barn, large stable for 9 horses, machine sheds, granary, corn crib, poultry house, fine spring house with large spring at edge of lawn. This farm is smooth and level. There are about 300 sheep and lambs on this farm. If farm is sold by May 20th, 1904, the farm and sheep and one-half of the lambs can be bought for \$8,500 on easy terms.

No. 35.

400 acres in Loudoun county, 26 miles from Washington, 60 acres in timber, balance cleared, smooth and just a little rolling, divided into seven fields, excellent fences, running water in all, 50 acres in wheat, 230 acres of orchard grass, blue grass, timothy and clover. Any of this land will grow from 40 to 50 bushels of corn to the acre without fertilizer. Improvements—handsome 8-room dwelling with closets, pantry and cellar, two long porches, new barn 30x100 feet, stalls for 12 horses and 50 big cattle, 4-room tenant house, granary and all other necessary small farm houses in excellent repair, large store house near dwelling, post-office in store, telephone in house. There are 30 three year old cattle on this farm. If farm is sold by the 20th of May, 1904, the farm and 30 cattle can be bought for \$9,000; one-third cash, balance to suit the purchaser.

I have a number of other good farms for sale, both large and small, Write me description of what you want, and I shall be more than pleased to serve you.

W. E. MILLER, Herndon, Va.



All Sheep

are a prey to scab, lice, ticks, etc. You should act promptly with the sovereign remedy. Don't experiment; others have done it for you. The result is they all endorse

Zenoleum

Used exclusively by Government Experiment Stations, Agricultural Colleges and leading sheep men everywhere. Relieves from ticks, red lice, and maggots, removes intestinal worms, heals wounds and sores, and prevents contagion among all animals.

"The Great Coal Tar Carbolic Disinfectant Dip."

Mixed with water only, requires no chemicals. One gallon makes 100 gallons of dip.

Sample gal., express prepaid, \$1.50.

Five gallons, freight prepaid, \$6.25.

Send for booklets, "Veterinary Adviser" and "Piggie's Troubles." Both free.

Zenner Disinfectant Co.
93 Bates St.
Detroit, Michigan.



COOPER SHEEP DIP

Standard of the World

for 60 years. Used on 250 millions annually. One dipping kills Ticks, Lice and Nits. No smell. Keeps flock clean a long time. Increases growth of wool.

Dipping Tanks at cost.

Send for Pamphlet to Chicago.

If local druggists cannot supply, send \$1.75 for \$2.00 (100 gal.) pkt. to JOHNSON & STOKES, Philadelphia, Pa. G. A. KELLY & CO., Pittsburg, Pa. WM. COOPER & NEPHEWS, Chicago, 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.

THE ADVANTAGES OF A WATER TELEGRAPH.

MARY WASHINGTON.

Nothing is more essential to the comfort and well-being of a household than an abundant supply of water, fresh, pure water, but it is often quite a serious problem to country people how they are to get this. Most persons living in the country build (or inherit from their ancestors) their dwelling house on a hill, partly for the sake of health, and partly for the sake of the view, and as springs have a perverse way of having a low location, it is often a perplexing matter to us how we are to get an unstinted supply of water for drinking, cooking and bathing purposes. In slavery times, we had relays of little negroes, whose chief duty in life was to "tote" fresh water from the spring, and this they did, at short intervals throughout the day, so we were not subjected to any stint or inconvenience about our water supply, no matter how far off the spring might be. The little negroes who used to be such good water carriers are now turned into poor scholars, staggering under the weight of their school books, or else they are scattered far and wide by the migrations of their parents, or even if at hand, they are no longer available to us.

In view of the changed condition of things, we are compelled to call in the aid of machinery of some kind to make good the shortage in our water supply. There are several expedients to which we may resort. In the first place, we may dig a well, but in some localities, this is very difficult and expensive, owing to the nature of the soil and in some cases it is almost impossible to strike water. Again, if a person is in easy circumstances, not hampered by a mortgage or any pressing debt, it is an excellent plan to have a wind mill, if we have a favorable location for one. A wind mill is undoubtedly a great boon to a household, and it is also of the greatest utility about the flower garden, vegetable garden, lawn and stables, if you have pipes laid to convey the water to these different points. I have seen it tried with signal success; the vegetables thrive, the flowers flourished luxuriantly, the grass kept green throughout the heat and drought of summer, and moreover, the family could indulge in unlimited bathing by means of the water conveyed into their dwelling whenever the wind blew, enabling them vividly to appreciate the force of the proverb that "it is an ill wind that blows no good."

But the drawback about a wind mill is that it is not within the compass of every one's means, especially when you add the adjunct of piping, and therefore I have an alternative to propose; a water telegraph. This is really the most feasible and practicable scheme I have seen proposed. It is so simple and inexpensive that it is eas-

No good grocer sells a lamp-chimney without MACBETH on it

You need to know how to manage your lamps to have comfort with them at small cost.

Better read my Index; I send it free.

MACBETH, Pittsburgh.

Kills 'em Quick



Magic Death Powder

NOT A POISON, but a remarkable discovery which is very effective in causing stupefaction and death to all kinds of Insects infesting Poultry, Animals, Plants and Houses. Put up in a box ingeniously arranged for conveniently dusting or blowing the powder where wanted.

Send 25c. to MAGIC FOOD CO., Chattanooga, Tenn., and get a book by mail. A beautiful picture in colors suitable for framing given FREE with each order during the next 30 days. Rid your Chickens of Lice, Pet Animals of Fleas, etc. Your House of Bed Bugs, Flies and Mosquitoes, by the use of MAGIC DEATH POWDER.

200,000

Cabbage Plants.

ALL HEAD, SUCCESSION, and CHARLESTON, nice stalky outdoor grown, 25c. per 100; \$1.50 per 1,000. Now is the time to plant my fine collection of mixed Dahlias, 75c. per 12; \$5.00 per 100; \$40 per M. Yellow Cannas, 50c. per 12; \$4.00 per 100, all by express. By mail, 4 of my best varieties of Hardy Chrysanthemums 50c. per 12 Strawberry plants. Mark T. Thompson, Rio Vista Va.

WANTED!

ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

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

CECIL FRENCH,

718 Twelfth St. N.W., Washington, D. C.

Spavin

Bone Spavin, Bog Spavin, Ringbone or any kind of blemish—we have what you need to make a certain cure. Guaranteed always—money right back if it ever fails.

Fleming's Spavin Cure (Liquid)

for the soft bunches—Paste for the hard ones. A 45-minute application and the lameness goes. Lots of blemish information in the free book we send.



Fistula and Poll Evil

Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

Fleming's Fistula & Poll Evil Cure

is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Write for our free book on diseases and blemishes of horses.

FLEMING BROS., Chemists, 280 Union Stock Yards, Chicago, Ill.



IT'S GOOD

For every horse, cow, hog or sheep, and it is the only remedy which they take voluntarily and relish.

Blackman's Medicated Salt Brick

is the best stock remedy made (being the formula of a celebrated veterinarian) and being so pleasant to take, on account of the salt taste, does away with all trouble of dosing, drenching and mixing with feed. It is unequalled as a blood purifier, aider of digestion and general system regulator. Thousands endorse it.

Special Offer—We will send four brick, prepaid to any address upon receipt of \$1.00, which will be cheerfully refunded if you are not in every way pleased.

Sold by dealers. BLACKMAN STOCK REMEDY CO., 927 Highland Park, Chattanooga, Tenn.



USE FOUTZ'S HORSE AND CATTLE POWDER

A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore lost Appetite, expel Worms and cure Chronic Cough, Heaves, Influenza, Distemper, Hidebound, Indigestion, Constipation, Flatulency and all Stomach and Bowel trouble.

The finest of all animal vitalizers and tonics and the only one which increases the coefficient of digestibility of protein.

Get the Genuine or send to us. Pamphlet No. 9 Free.

DAVID E. FOUTZ BALTIMORE, MD.

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




DEATH TO HEAVES Guaranteed
NEWTON'S Heave, Cough, Distemper and indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strong recommends. \$1.00 per can. Dealers. Mail or Ex. paid. The Newton Remedy Co., Toledo, Ohio.

ily within the reach of persons of moderate, or even small means. Ten dollars will cover every expense connected with putting up one, nor is its cheapness its chief, or only desideratum. It is extremely useful and efficacious, and its working is so easy and simple that a child of ten years old can readily draw water by means of it. It is an inestimable treasure to a person whose house is perched on a high hill, with the spring at the foot of it; especially in winter when the hill is frequently cased in ice, snow or sleet, or else miry from long rainy spells. You build a little lodge on the brow of the hill exactly opposite to the spring, so as to have a place to put the windlass and other fixtures needed for the water telegraph, and to enable persons to draw water under shelter when it is raining or snowing. Of course, you have an opening on the side through which the bucket has to pass. Then you have a row of posts about 12 feet high and 20 yards apart, extending between the little lodge and the spring. An iron bracket hook is inserted in the right side of each of these posts, and over these is tightly stretched the wire cable over which the bucket passes. The bracket hook is placed lower in each successive post so as to gradually bring the wire low enough as it approaches the spring for the bucket to dip in the water. Finally the wire after crossing the spring finds its terminus in the ground a little farther on. The bucket is lowered and drawn up by means of a rope. It should be of block tin, holding from two to three gallons. About once a month, it is well to apply machine oil to the machinery of the water telegraph to keep it from creaking and working stiffly. Your correspondent has been using one of these water telegraphs for three years, so she is in a position to judge of their merits and great utility. I believe it would be impossible to get any other contrivance at once so simple and inexpensive, and yet so efficacious and useful. They are not new fangled inventions. I have a distinct recollection of seeing one of them in use in my early childhood, before the war.

The commencement exercises of Littleton Female College, Littleton, N. C., will begin on Sunday, May the 22d, with a sermon before the faculty and students of the College, by Rev. G. F. Smith, Presiding Elder of the Warrenton District. On Wednesday, the 25th, Dr. C. W. Byrd, of Atlanta, will preach the annual sermon in the College chapel. The commencement address will be delivered on Thursday the 26th, by Rev. R. D. Smart, D. D., of Norfolk, Va. In place of the usual annual address on missions before the Y. M. C. A., there will be, this year, a series of three addresses on missions. These will be delivered by Bishop A. W. Wilson, of Baltimore, Md., on the evenings of April 12th, 13th and 14th.

Warranted to give satisfaction.



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

INCUBATORS - ON - 30 - DAYS - TRIAL.



A certain and never failing Business Hatcher. Reasonable in price; best in quality, and always reliable. Thousands of these machines are in successful operation here at home and abroad. Our handsome catalogue is free for the asking, send for a copy at once, before you select a machine and make a mistake. Address The Standard F. C. Incubator Co., Dept. 23, Rochester, N. Y. Mention this Journal.

“Crop Growing and Crop Feeding.”

BY PROF. W. F. MASSEY.
383 Pp. Cloth, \$1.00; Paper, 50c.

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

Southern Planter and Cloth Bound Volume, \$1.25.
Southern Planter and Paper Bound Volume, 90c.
Old or new subscriptions.

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

Get the shaving habit and use Williams' Shaving Soap. It pays.

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

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



SILVER-LACED WYANDOTTES.

Eggs For Hatching.
\$1.00 per 15 from strong and healthy birds of leading strains. A few choice pullets at \$1 each. Pure-bred Poland China Pigs at \$5.00 each.

Dr. H. H. LEE,
R. F. D. 2. Lexington, Va.

WALSH'S Barred Plymouth Rocks

High class combination utility and exhibition stock. Best blood. Bred from prolific layers of large brown eggs. Eggs, \$1.50 per 15.

L. W. WALSH,
Lynchburg, Va.
Box 194.

CHOICE FOR HATCHING.

Of 40 Varieties Best Poultry. Fine, large illustrated descriptive Poultry Book postpaid, only 6c. Price list FREE. Write now. JOHN E. HEATWOLE, Prop. Valley Poultry Farms, Harrisonburg, Va.

Partridge Cochins,

BLACK BREASTED RED GAMES, S. C. RHODE ISLAND REDS, S. C. WHITE LEGHORNS.

Eggs, \$1.25 per 15; \$2.00 per 30. If we do not have what you want, write us and we will tell you where to get it. RIVERSIDE POULTRY FARM, J. B. COFFMAN & SONS, Dayton, Va.

Barred Plymouth Rocks

PRIZE WINNERS, THOROUGHbred. The matchless F. F. V. strain founded on Bradley Bros., Thompson and others Plymouth Rocks, are recognized as the best general purpose fowl. Improve your stock by new blood. Fancy stock for show room. Large, vigorous birds for farm. Eggs, \$1.50 to \$3 for 15. Circular free. VIRGINIA HILL POULTRY FARM, Bristol, Va.-Tenn.

BARRED PLYMOUTH ROCK EGGS.

for HATCHING, carefully packed for \$1 per setting of 15. Reduction on large orders. M. B. ROWE & CO., Fredericksburg, Va.

JOE CHAMBERLAIN'S PLAN.

England seems to listen with rapt attention to Mr. Chamberlain's arguments in favor of a protective tariff which will mean, among other things, discrimination against American food stuffs in favor of those of the British colonies. Should Mr. Chamberlain ultimately win out, as it seems probable that he will, American food stuffs must find another market; so we have been turning our eyes toward Asia. The possibilities of our Asiatic trade are stupendous, and it seems only reasonable to presume that the Orient will gladly receive all the American farmer can produce. Wheat and flour have been shipped from Minneapolis to Hong Kong for approximately \$8 per ton, the cheapest rate known in the history of transportation. Cheap rates coupled with the determined Asiatic policy of our government, which insures a free field and equal opportunities to all, will stimulate the American farmer to increase the productive capacity of his land. No single circumstance affects this condition as much as improved labor saving farm machinery. Save time, save labor, save products by using the Milwaukee machines. Constructed to endure and give satisfaction, Milwaukee machines will be found to meet every requirement of the farmer, and enable him to supply the increasing demand for American products.

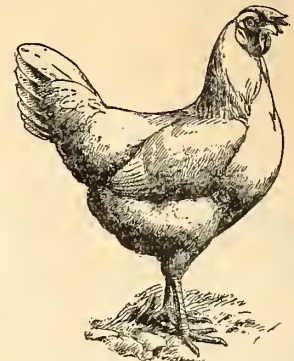
FARMING IN THEODOSIA.

A competent authority in Theodosia writes to a prominent English agricultural journal regarding the condition of agriculture and the sale of agricultural implements as follows:

"American makers of hatching machines are fast monopolizing this branch; their machines, being much lighter than British makes, are more suitable to the country and the small breed of horses. Most American farms have their own depots in Russia and their own people to manage them; these central depots appoint agents in different towns, and they also have travellers and specialists travelling to find out in what way their machines require altering to suit the country. If British makers wish to compete and get a firm hold of this market, they must adopt some of the ways of their rivals, otherwise I am afraid British machines in a few years will be completely ousted from this country."

The above opinion illustrates the thoroughness with which the American manufacturer carries out an undertaking, sparing no expense to produce a perfect product. The farmer in Theodosia, where Plano harvesting machines at work in the field are a common sight, like the farmer in this country points to his Plano binder as an example of American ingenuity and progressiveness, which the authority says above, is rapidly ousting English machines in Russia.

White Leghorns.



Eggs \$2.00 per 15; \$5.00 per 60; \$7.50 per 100. Circular shows winnings.

C. G. M. Fink, R. F. D. 2,
Richmond, Va.

WINTER LAYERS

for Southern farmers. Ten years' experience with fowls has taught me that WYANDOTTES and BUFF ORPINGTONS excel in winter laying. Blue grass S. C. ORPINGTONS (from imported stock). Eggs, \$1.50 per 13. First class BUFF and WHITE WYANDOTTE. Eggs, \$1.00 per 13. M. B. TURKEYS IN FALL. HUGUENOT POULTRY YARDS, Dublin, Va.

BUFF ORPINGTON EGGS. POLAND-CHINA PIGS.

Book your orders early for eggs from our solid Buff Orpingtons. Orders can only be filled in turn. Sold out on cockerels long ago, and no stock till fall. Eggs, \$1.50 per 15. Orpingtons only. Poland China pigs, \$7 for pair; \$3.75 for one.

OCCONEECHEE FARM,
Mecklenburg Co. JEFFERSON, VA.:ESS

PEKIN DUCK, S. C. B. LEGHORN, and B. P. ROCK Eggs \$1.00 per 20.

Scotch Collie Pups,

Pedigreed, \$5.00 each.

C. H. BENNETT, Goodman, Va.

PIT GAMES

Black Devils and Red Cubans.

These cocks won 90 per cent. of battles fought in 1902 and 1903, and have never lost a battle when gameness and cutting qualities could win. Eggs \$2 per 15; stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

For Pure-bred

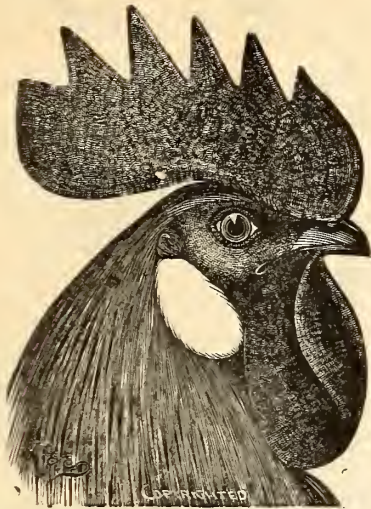
WHITE LEGHORN

Eggs at 75c. per sitting and Cockerels at \$1 each, Address MRS. W. P. ALLEN, Walnut Hill, Va.

Fresh Laid Eggs

of Mammoth Bronze Turkeys, Barred Plymouth Rock, White Wyandotte and S. C. B. Leghorn Chickens. Safe delivery insured. Prices reasonable. MISS CLARA L. SMITH, Croxton, Caroline Co., Va.

LEGHORN POULTRY FARM



Has for sale a limited number of S. C. BROWN and S. C. WHITE LEGHORN Pullets and Roosters. Best layers known, Prize Winning Stock. Price, \$1.00, \$1.50 each. Eggs in season at \$1.00 for 16; \$2.50 for 50; \$5.00 per 100. Satisfaction guaranteed.

Address A. T. MATTHEWS, Box 36, Parksley, Va

EGGS from Fine Fowls.

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

◆◆◆ 15 FOR \$1.00 ◆◆◆

except the Wyandottes w h are \$2.00 for 15
No stock except a few B. P. Rocks and Light Brahmas. C. J. WARINER, Mgr., Ruffin, N. C.
OAKLAND POULTRY FARM.

Farm-Raised Poultry.

Two distinct flocks of Mammoth Bronze Turkeys from which we make matings for breeding purposes at reasonable prices. Eggs in season.

BARRED PLYMOUTH ROCKS,
WHITE PLYMOUTH ROCKS.
BIRDS AND EGGS.

PROGRESS FARM, Boz 52, Normandy, Tenn

EGGS for HATCHING.

75c. Per Sitting of 15.

Light Brahmas, Black Minorcas, S. L. Wyandottes, Barred and W. Rocks, Brown Leghorns S. and R. C; White Leghorns S. C.

A few more Leghorn and Minorca Cockerels left. J. B. JOHNSON, Manassas, Va. CLOVER HILL FARM.

Racket Farms, Parksley, Va.
A. S. JOHNSON, Mgr.

Toulouse Geese, Pekin Ducks,
OF LARGEST STRAINS.

RHODE ISLAND REDS, WYANDOTTES, BROWN LEGHORNS. Can furnish Leghorn birds of best quality by the hundred. Geese eggs, 6 for \$1; all others, \$1 per sitting, or \$5 per 100.

Rhode Island Reds and water fowl a speciality. Belgian Hares cheap. Satisfaction guaranteed.

INTERNATIONAL STOCK FOOD BOOMING.

Under date of April 6th, the International Stock Food Co. writes us as follows: "We have just closed the largest month in the history of our business. The year 1904 promises to be a record breaker for 'International Stock Food' as our trade is rapidly increasing from month to month. Owing to the great increase in our business, we have been compelled to put 39 additional typewriters in our office since January 1st, making a total of 106. Our office force now numbers over 200 people."

This is certainly a record of which any concern would be justly proud. There is not one concern in a thousand which uses 39 typewriters all together much less an office force of 200 people. There must be some very good reason for this very great evidence of the prosperity of the International Stock Food Co. We take it that it has a very meritorious article and that the farmers are finding it out by the thousands.

An interesting ad of this company appears on another page. Refer to it, answer the questions and send for a valuable book.

A prize of \$5 is offered the readers of the SOUTHERN PLANTER who have been mail order buyers during the past year. A large number of letters have been sent out by the Long-Critchfield Corporation, the special Agricultural Advertising Agency, to persons whose names appear in catalogues with testimonials, asking them what induced them to buy.

Was it the advertisements?

Was it the catalogues?

Did they make you a special offer?

Was it the first or second or subsequent letter you received from the firm after receiving a catalogue?

What is your opinion of follow-up letters? Do they interest you, or do you feel that you do not want to be urged to buy an article?

Would you prefer to make up your mind without such urging?

For the best answer, a prize of \$5 is to be given. While the Long-Critchfield Corporation can write only to a limited number of mail order buyers, a letter from that firm states that this announcement may be regarded as a letter to subscribers of the SOUTHERN PLANTER, and that they are eligible to compete for the prize. The only condition is that the letters be sent before May 10th. They should be addressed Long-Critchfield Corporation, Powers Building, Chicago.

A lady, having sent an order for a joint of mutton to the butcher who usually supplied the wants of her household, received the following note in reply: "Dear Mem,—I am sorry I have not killed myself this week, but you can have a leg off my brother.—Your affectionate Butcher."

...FEEDING OUR...
BABY CHICK FOOD

PRODUCES

HEALTHY CHICKS.

SAMPLE FOR THE ASKING.
INCUBATORS, :-: :-:
BROODERS AND
POULTRY SUPPLIES,
ALWAYS IN STOCK.
BIRDS, PET STOCK, GOLD FISH
EVERYTHING FOR THE FANCIER.
CATALOGUE FREE.

Having made a change in management we are better than ever, prepared to make prompt shipment.

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

Edgewood Stock Farm.

WHITE WYANDOTTES.

This month your last chance to get cockerels. Special price for three. Chickens have run of large farm, so cockerels are sure breeders. Eggs for sale at \$1 dozen. H. B. ARBUCKLE, Maxwelton, W. Va.

NOW IS THE TIME,



to set eggs. My eggs are produced from some of the best stock in the country, and will give satisfaction. Prices reasonable. G. F. POINDEXTER, Breeder of WHITE WYANDOTTES and PEKIN DUCKS, BROOK MOUND FARM, Greenlee, Rockbridge Co., Va.

EGGS

From my S. C. Black Minorcas and S. C. White Leghorns of the very best strains.

These breeds are raised on separate farms, and have free range. Eggs, 75c. per 15; \$1.50 per 35; \$4.00 per 100. I guarantee two-thirds hatch, or replace at half price.

J. MILTON GARNETT, Prop.,
Mitchell's, Va.

BROWN LEGHORNS.

Eggs for hatching from splendid layers, \$1.00 per sitting. Pens mated for best results.

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

Edgemont Poultry Yards,
Liberty Mills, Va.WHITE WYANDOTTES
and BUFF P. ROCKS.

Stock and Eggs for sale. Choice lot of Cockerels from \$1 up; eggs, \$1 for 15, or \$5 per 100. JOHN A. REEDY, Prop.

Mention THE SOUTHERN PLANTER when corresponding with advertisers.

PURE-BRED Barred Plymouth Rock Eggs,
from beautiful, well bred birds, at \$1.00 per 15.

F. Maxwell Conner, P. O. Box 316, Richmond, Va.

Pure-bred Eggs

for Hatching. BARRED PLYMOUTH ROCKS, S. C. BROWN and S. C. WHITE LEGHORNS, BLACK LANGSHANS. \$1 for 15; \$5 for 100. 400 hens. PARK POULTRY YARDS, Harrisonburg, Va.

BARRED PLYMOUTH ROCK

Eggs, \$1 for 85c.; 30 for \$1.50; Buff Cochins, 15 for \$1. Few pairs low. PEKIN DUCK EGGS 12 for \$1. One trio cheap. Incubators low. Rev. J. W. HECKMAN, Cascade, Va.

Silver Blooded Wyandottes.

No finer general purpose fowl in America. Bred for beauty and utility. Eggs from choice and pure bred stock, \$1.25 per 13; \$2.00 per 30. Twenty-three years a breeder and shipper.

S. P. YODER, Denbigh, Va.

White Minorcas.

Large well shaped birds. Prize winners and the best of Layers. Eggs supplied from the best of matings. Shipped safely anywhere. Catalog free. F. S. BULLINGTON, Box P, Richmond, Va.

BEST STRAIN

BARRED PLYMOUTH ROCKS.

The ideal farmer's fowl. Eggs, 50c per setting of 15 F. O. B. here. Mrs. WM. P. BURKS, R. F. D. 1. Bedford City, Va.

FOR SALE

B. P. ROCK eggs \$2.00 per 15. No better blooded stock. My highest aim is to treat my customers right and retain their patronage.

CHARLIE BROWN, R. F. D. 1. Cartersville, Va.

EGGS FOR HATCHING

From finest strains in America. White Wyandottes, Barred Plymouth Rocks, \$1.00 per 13. PENN LAIRD POULTRY CO., - Penn Laird, Va.

COLLIE PUPS

By Imported Sires. Sable and white and tri colors. Prices \$3 to \$15. Older ones correspondingly low. Book on Training, 50 cents; FREE if you buy a Collie. MAPLEMONT STOCK FARM Albany, Vermont

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

ANGORA GOATS

For Sale.

I can furnish bucks and does of these LAND CLEANING animals at moderate prices.

Julian N. Ruffin, Old Church, 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. Cattie Giles, Prop., Whittles Depot, Va.

Mention the SOUTHERN PLANTER in writing.

WASHINGTON NOTES.

A timely farmers' bulletin of the Department of Agriculture—No. 193—contains notes on selection of seed corn, citing experiments from State experiment stations widely distributed. Although corn culture in the United States is practically as old as American agriculture itself, it is of comparatively recent date that any scientific systems of corn judging have been devised, and it is stated that the general employment of such methods will add enormously to our annual corn yield. The average corn yield is only about twenty-seven bushels per acre. Next to the better cultivation of the soil the proper selection and production of seed corn is perhaps the strongest factor in increasing the yield.

Corn is readily affected by changes of soil and climate, and in obtaining a variety perhaps from a very different latitude its excellence is likely to be impaired until the variety, after two or three years of growth under the new environments has become acclimated.

Instances: The North Carolina Board of Agriculture obtained from the Illinois station seed of Leaming corn, one of the best varieties in Illinois, but under North Carolina conditions this corn ranked last in a test of thirteen varieties. It was the unfortunate thirteenth.

The Arkansas station made extensive tests of this character and concludes that "the results of the two years experimentation indicated that seed corn grown in the same or nearly the same latitude as that in which it is to be planted will give the best results."

The North Dakota station says that the best seed corn is usually a variety which has grown and ripened seed for the longest period of years in that locality providing it has been kept pure and true to type.

As an improvement on simple field selection the Illinois station among others recommends a special breeding field or plat, which should be surrounded by a number of rows of the same corn to prevent the plat corn becoming pollinated from outside sources. An interesting detailed description is given by the Department of Agriculture of the method of carrying out this special seed plat scheme with a view to getting only the very finest seed corn, something well worth reading by every farmer who plants corn.

The Illinois station has made a special effort and with some success of securing corn with high percentages of protein, through selection.

Seed corn should germinate at least ninety-five per cent. The vitality of corn is frequently greatly injured by improper storage. Blotting or other absorbent paper, a cigar box with a cover to keep in moisture and fifty

Filston Farm

Products Are Good.

English Berkshires

The breeding of Berkshires is one of the most important departments of the farm, and one of the most successful. Imported boars, Manor Faithful, winner of six firsts in England, and Esau II., half brother of great champion Manor Hercules. Also Loyal Berks II. and Loyal Berks III., from last litter by great imported champion Loyal Berks, dam Her Majesty.

The Filston herd contains thirty strains of the most celebrated Berkshire blood in England. Some well-grown fall pigs still in the herd. Orders for spring pigs now being booked.

Filston Collie Kennels

Stud dogs, Lord Tweedmouth, by Ch. Ormskirk Emerald, ex Ch. Barwell Mystery; Filston's Galopin, by Ch. Ormskirk Galopin, ex Newburgh Gem, and others.

Records prove conclusively the superiority of these strains for producing prize winners. Circular with pedigrees and winnings on application.

On hand, females bred to our best sires, and young puppies.

Filston Poultry

Eggs of the following varieties can be obtained: Buff and White Wyandottes, Barred and White Plymouth Rocks, Light and Dark Brahmas, White and Brown Leghorns, Mammoth Bronze and Holland White Turkeys, Toulouse Geese and Pekin Ducks.

Send for price list.

GEO. A. SWARTWOUT, Manager,
Glencoe, Maryland.

KENTUCKY JACK FARM



A fine lot of KENTUCKY bred and big BLACK SPANISH Jacks and Jennets; also 1 and 2 year old Jacks; young stock for sale at all times.

Write or see me before you buy. Come to Kentucky if you want a good Jack. JOE E. WRIGHT, Junction City, Ky.

SPECIAL BARGAIN SALE OF JACKS.



For the next 60 days, I will sell some fine Jacks at ONE-HALF their value, in order to make room for the coming importation. I will also pay the R. R. fare of buyers during this time. Come at once for a bargain.

BAKER'S JACK FARM,
Lawrence, Ind.

Jacks, Jennets and Stallions

FOR SALE. FINE JACKS A SPECIALTY. When writing state exactly what you want or come and see our stock.

W. E. KNIGHT & CO.,
Route 5. Nashville, Tenn.



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 1589, Sows of **EQUALLY NOTED** Strains. A few nice pigs for sale. Write for prices.

JNO. CALHOUN, Cllo, S. C.

BERKSHIRES

ANNEFIELD HERD

Contains the
Finest Blood Lines
in England and America.

Young Stock for Sale.
Inquiries cheerfully answered.

**SPECIAL: A few extra 6-months old pigs,
either sex.**

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

Pure Bred

Berkshire Pigs.

○ A fine lot of young Pigs ready now, six to eight weeks old. Price for either boar or sow pigs, \$5 each, crated and delivered to express company here.

HENRY W. WOOD,
Hollybrook Farm.

P. O. BOX 330, - - - RICHMOND, VA.

Big Spring Stock Farm



Pure bred **LARGE ENGLISH BERKSHIRES** and **DUROC JERSEYS.**

March and April pigs sired by best Imported stock. Nothing but the best offered, and satisfaction guaranteed. **B. E. WATSON,** Pulaski, Va.

Registered

BERKSHIRES For Sale.

Boar and Sow, price, \$25 each. Trio **MAM. BRONZE TURKEYS**, pure bred, \$10. 15 pure bred **PLYMOUTH ROCK** hens and roosters for \$20. **J. G. HARGRAVE,** Oliver, Va.

kernels of corn with a few ounces of water is all the test apparatus necessary. Five days' time will determine the matter.

The Bureau of Animal industry is preparing an instructive exhibit for the St. Louis Exposition of the renovated butter industry. Firkins, tubs and pound packages of renovated butter are being prepared in wax imitation and also various samples of the 10 pound packages used by the manufacturers for exportation, each package containing ten little pound packages. These as a rule are put up very attractively by the sixty odd renovated butter concerns operating throughout the country. The law requires the words "renovated butter" shall appear upon each package in square block letters no smaller than any other lettering upon the package. The packages are made up of card board enclosing the butter wrapped in tissue paper. Some very ingenious brands have been adopted by the makers of this renovated butter which of themselves, without the government requirement of the word "renovated" would indicate anything but a process butter, manufactured from all sorts of rancid and spoiled stock.

The renovated butter law is undoubtedly a little weak. To strictly enforce the law as regards sanitation, the Department of Agriculture must lean upon the internal revenue branch of the Treasury Department. A particular case came before Major Alvord the chief of the Dairy Division, while I was talking with him. A certain renovated butter factory has been conducting its manufacturing in a very slovenly, filthy and unsanitary manner. It has been warned several times by the government dairy inspector to "reform" but has taken this out in promises. A telegram came to Major Alvord asking for instructions as there was no question in the mind of the inspector that the product of the factory was unsanitary. The question now is what to do. If the Department of Agriculture recommends that the internal revenue office take away the license to manufacture, the company would doubtless seek redress through the local court to determine whether its product was actually unsanitary. "It might be a difficult matter," said Major Alvord, "to clearly and conclusively prove this to a jury." Not all men have very clear ideas as to the importance of a cleanliness and sanitation in such matters. With any question as to the outcome the Department of Agriculture hesitates to embroil the internal revenue office in such a fight. At the same time if inspectors are to exert any influence in remedying unsanitary conditions, they must be backed up by the government.

The most brazen and barefaced methods have been employed in Congress this year to prevent any revision of the land laws which would head off speculation in the public do-

... 40 PURE-BRED ...

POLAND CHINA

pigs, some ready for immediate delivery. My hogs are sired by such prize winners as **PERFECT I KNOW, CORRECTOR, CHIEF PERFECTION, LOOK ME OVER, ETC.**

8 RED POLL bull calves and a few heifers. Several ready for shipment. All stock registered.

PRICES REASONABLE.

S. B. WOODS,
ARROWHEAD STOCK FARM Charlottesville Virginia.

Poland Chinas!

I do not believe that anybody has any finer bred or better individuals of the breed than I am offering. It will be hard to duplicate my prices, too. Eight months old Boars and Open Gilt, crated and f. o. b. Enfield, at \$15; 2 beautiful Boar Pigs, now 5 weeks old, at \$10 when 10 or 12 weeks old. Your order will have to come quick for one of them; you never saw as pretty pigs. Also one full blood O. I. C. Boar, farrowed last July, \$20; 8 Sows and 3 Boars, of O. I. C. and P. C. and P. C. and O. I. C. cross at \$15 per pair, 12 weeks old. **C. A. WILLIAMS,** Ringwood, N. C.

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.**

BERKSHIRES.

I offer some very pretty pigs from Registered sows, farrowed February and March, 1904, 8 weeks old, at \$6 f. o. b. my express office. Nothing but Biltmore blood in my herd. **ROBERT HIBBERT,** Charlottesville, Va.

Hawksley Stock Farm
has a lot of

BERKSHIRE PIGS

ready for shipment. They are good as the best. Also young Boars ready for service. **B. P. ROCKS** and **S. C. B. LEGHORN** Eggs, \$1 for 13. **J. T. OLIVER,** Allens Level, Va.

WARNER'S

CORRESPONDENCE SCHOOL, at Bradford, Pa., teaches Shorthand, Bookkeeping and Penmanship by mail. Write now.

The Kind You Ought To Have

Is the kind that is bred at THE CEDARS P. & S. FARM, where the fashionables of the 400 in Poultry and Stockdom can always be found, and where farmers' prices get fanciers' stock. JERSEY CATTLE, DUROC JERSEYS, and POLAND CHINA SWINE, B. P. R. FOWLS, M. B. TURKEYS, ENGLISH SETTERS and BEAGLE HOUNDS. WM. G. OWENS, Midlothian, Va., The Cedars P. & S. Farm.

FINE POLAND-CHINAS.

The kind that GROW LARGE—from some of the best blood in the U. S. I have a choice lot of Spring Pigs, both sexes; also a 1/4 Hereford Bull Calf, well marked. If you want high class stock at farmer's prices, write me before placing your orders elsewhere. W. B. PAYNE, Crofton, Va. (Mention Southern Planter.)

ESSEX PIGS.



Some fine ones, 3 months old, not related; from recorded stock, also South-down and Hampshire-down Lambs. Address, L. G. JONES, Tobaccoville, N. C.

"PIGS" - "PIGS" Registered O-I-C Swine -:-FOR SALE:-:-

WM. E. HAMMOND, Mansfield Farm, Goochland C. H., Va.

TAMWORTH BOARDS Ready for Service;

Bred from Registered Stock, Imported from Canada.

I. H. LAREW, Newbern, Va.

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



Poland-Chinas and Chester Whites

AT FARMER'S PRICES.

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

Woodland Farm

offers the best lot of October dropped Dorset Ram lambs which it has ever raised.

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

...BARGAINS...

DORSETS AND HEREFORDS

H. ARMSTRONG, LANTZ MILLS, VA.

Mention the Southern Planter when corresponding with advertisers.

main. Take for instance the speeches of Representative Williamson and Representative and ex-Commissioner Hermann, both of Oregon, before the Public Lands and Irrigation Committees of the House. Both these men stated that the present land laws were highly beneficent, and an absolute necessity to the homemaking and development of the West and that the cry of fraud was false, that there were no frauds under them any more than an occasional instance such as is found under any law. The conditions of land law fraud in some of the Western States is not only notorious, but it is a coincidence that at the very time that these two hypocrites were misleading their colleagues in Congress, on April 2 the seventeen members of the Federal grand jury of the district of Oregon, chosen by lot from all portions of that State, forwarded a statement to Washington reciting the most abnormal and vicious conditions of public land affairs in Oregon resulting from the present land laws. The timber and stone act, the desert land act, and the commutation clause of the homestead act. The report is voluntarily presented as the result of the enormous amount of crime which has come before the grand jury in connection with these land laws. Perjury and subornation of perjury, it is stated, have become fine arts. Speaking of the commutation clause of the homestead law the report says that "this is another law that masquerades under the thin disguise of a boon to honest entrymen" and "the desert land law is and has been used chiefly for securing large tracts for grazing purposes. It is often more of a burlesque than the old timber culture law."

GUY E. MITCHELL.

THE NEW LEFFEL CATALOG.

The new catalog of James Leffel & Company, of Springfield, Ohio, who are advertising the famous Leffel engines and boilers in our columns, is a book that will interest many of our readers. It should interest any one who has to do with steam power. The Leffel engines are a type that is peculiarly adapted to farmers' uses. This book goes into the matter of their making and shows on what their superiority is based. The book is well gotten up, printed on heavy enameled paper, has numerous full page and many smaller illustrations and is filled with just such detailed information about engines and boilers as to make it truly valuable to engine users.

The book will be mailed free to all writing the Leffel Company for it.

Old Gentleman—And what does papa call you, Elizabeth?

Precious Infant—Papa calls me Pwe-cious.

O. G.—And what does he call mamma?

P. I.—Oh, Darling and Fool.

V. P. I. Farm Bulletin

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

Shorthorn, Hereford, Aberdeen-Angus.

Write at once for pedigrees and prices.

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

WM. T. THRASHER, Springwood, Virginia, BREEDER OF PURE BRED

Short Horn Cattle and Poland-China Hogs.

FOR SALE: 2 yearling bulls, good ones, ready for service, sired by Verben's Champion No. 129881; some younger bulls, sired by Royal Chief No. 185432; also some Fall Poland China shoats of both sexes. Come or write.



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.

ELLERSLIE FARM Thoroughbred Horses

AND SHORTHORN CATTLE, Pure Southdown Sheep and Berkshire Pigs.

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

MEADOW BROOK SHORTHORNS.

I have several very fine Shorthorn Red Bull Calves 6 to 10 months old, and several very nice yearling Shorthorn Heifers for sale at farmer's prices. C. A. SAUNDERS, Meadow Brook Stock Farm, Culpeper, Va.

WANTED 20 VIRGINIA or NORTH CAROLINA GRADE SHORTHORN

heifers, 2 to 3 years old, bred to Registered Bull, and to calve from August to January. Address, stating price, breeding on both sides, weight and age. JANNEY BROS., Gloucester, Va.

I OFFER 2 Reg. Ayrshire Bulls,

One 10 mos. oldPRICE, \$40.00. One coming 3 yrs. old.....PRICE, \$65.00. Low considering Quality.

Registered and high grade HAMPSHIREDOWN SHEEP of best breeding. Rams, Ewes and Lambs for sale. Stock and Prices will suit.

J. D. THOMAS, Round Hill Va. Meadow Brook Stock Farm.

Angus Cattle for Sale LOW.

- 1 Reg. Bull Calf, 8 mos. old.
 - 1 Reg. Heifer Calf 4 mos. old.
 - 3 7/8 Grade Angus Bull Calves.
 - 3 15-16 Grade Angus Bull Calves.
 - 1 Bull Calf out of a fine Short Horn Cow by our Angus Bull.
 - 1 15-16 Grade Angus Heifer Calf.
- These grades calves look like thoroughbreds, and will please the most fastidious.
- 2 First Class Family Milk Cows, fresh, 5 gallons per day.

W. M. Watkins & Sons, Saxe, Charlotte Co., Va.

GREENFIELD HERD OF

Aberdeen Angus Cattle.

Baron Ida, 20184 (Champion yearling, 11 firsts, 17 times in 1st prize herd, 4 firsts as produce of sire and 3 times at head of grand sweepstakes herd) at head of herd.

The females in this herd are prize winners or the immediate descendants of prize winners sired by such noted bulls as Champion Lord Hillhurst, Beau Forbes H., by Beau Bill (champion of the West for two years); Cham. Baron Ida, Ludolph 4th, Rustler 2d.

Choice calves from the above cows sired by Baron Ida, Encouragement 46382, and Erard 55380.

WARREN RICE, Winchester, Va.

H. F. COLEMAN & SONS, MULBERRY GAP, TENN..

—BREEDERS OF—

ABERDEEN-ANGUS CATTLE.

JANET'S KING, 48271, greatest son of Valiant Knight II., 29331, first prize bull at all three of the International shows, heads the herd. Visitors and correspondence invited. Young things for sale.

MONTEBELLO HERD

ABERDEEN-ANGUS CATTLE

FOR SALE—2 Registered Bulls, calved Dec. 17th, 1902, and Aug. 28th, 1903.

Berkshire Pigs,

(Biltmore Strain.)

farrowed May 1903. For terms, apply to

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, Jeffersonsonton Va.

WITH THE ADVERTISERS.

Our old friends, Wm. Cooper & Nephews, are advertising Cooper Sheep Dip again this season.

Alfalfa Bacteria, in the shape of inoculated soil, can be had of the Ewell Farm, at reasonable prices.

Last year's numbers of the Southern Planter are wanted by our Business Office. See the ad. elsewhere.

Finely bred Poland Chinas can be had of Mr. W. B. Payne. Look up his ad.

Mr. Joe E. Wright, Prop. of the Kentucky Jack Farm, is offering some choice Kentucky bred Jacks.

The O. K. Harry Steel Works has an ad. on another page of Steel Tanks, etc., all necessary and useful adjuncts to a progressive farmer.

Hydraulic Pumps are offered by the Standard Hydraulic Pump Co., Roanoke, Va.

A working Farm Manager is wanted by Box 485, Richmond, Va.

A fine lot of O. I. C. pigs at right prices can be had of the Mansfield Farm.

Parties needing all kinds of fruit and vegetable carriers, will do well to consult the advertisement of the South Side Mfg. Co.

Tamworths, the "lean bacon" hogs, are offered in another column by Mr. I. H. Larew.

The Wallerstein Produce Co. are after your wool. Look up the ad. on another page.

The Richmond Buggy & Wagon Co. are making a "Special Drive" this month in their \$50 buggy—made in Virginia.

If you need anything in the heavy machinery line, such as Threshers, Hullers, Peanut or Tobacco Machinery, better consult the Cardwell Machine Co.'s ad.

The Famous Mfg. Co. is advertising its Champion Hay Press with us again this season. We invite attention to the ad.

The Filston Farm has an attractive card in another column. Berkshires, Collies and Poultry are the offering under the legend that "Filston products are good."

The Rife Engine Co. start the season's advertising with this issue. The Hydraulic Ram of this Company is known the world over.

F. E. Myers & Bro., the well-known pump men, have a card in another column.

Dederick's Hay Presses have been offered our readers for generations. Look up the ad. elsewhere.

Notice the change in the ad. of the Blackman Stock Remedy Co.

Louisburg, N. C., Mar. 31, 1904.

Jos. Haas, V. S., Indianapolis, Ind.

Dear Sir,—You will please ship me at once one can of your Hog Remedy. I can certainly recommend it to be as you represent. Yours truly,

J. P. TIMBERLAKE.

JERSEY BARGAINS.

10 HEIFERS out of cows from the best in my herd, which I have been 30 years in building. They are the prettiest I ever saw. Price, \$30 each.

2 Reg. Bull Calves

6 wks. and 6 mos. old. Each out of a cow giving 2 pounds of butter per day, and by

Coquette's John Bull.

he out of a cow with a record of 18 pounds butter per week. Price, \$50 each. Also a U. S. SEPARATOR for sale at \$40; in good repair and cost \$125 new.

A. R. VENABLE Jr.,
Farmville, Va.

Swift Creek Stock and Dairy Farm



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

JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 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.

THOROUGH-BRED...

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centreville, Md.

Pure-bred

Red Poll Bull

For sale, or will exchange him for first-class pure bred Jersey Heifers or good grade Ewes. Dr. F. E. WILLIAMS, R. F. D., Charlottesville, 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.

—FOR SALE—

2 ABERDEEN-ANGUS HEIFERS,

Bred from "Hero of Bunker Hill," 31462, at farmer's prices. They are blocky, good bone, mealy coats, and WIDE AS A CART. J. TABB JANNEY, Van Clevesville, W. Va.

NOTICE!

S. C. Brown Leghorn Eggs for Hatching, 75c per 15, \$4.50 per 100.

W. B. GATES,
Rice's Depot, Va.

Radia

..... IS A

HOUSEHOLD Remedy



Cures

LaGrippe,
Pneumonia,
Croup,
Influenza.



GIVES
PERMANENT
RELIEF.



The Radia Company

Manufacturing Chemists,

Dept. K. DURHAM, N. C.

HELPS TO KEEP WELL.

Lettuce and celery help nervous people.

Visit your dentist every six months. Eat tomatoes, which are good for the liver.

All varieties of the onion tribe help digestion.

Don't worry unless you really enjoy worrying.

Rest for half an hour, anyway, in the middle of the day.

Spend at least an hour outdoors every day—more if possible.

Never drink water which has stood in a sleeping room all night.

Peas, beans and lentils are a very economical food, and also nourishing.

Eat an orange or an apple—two of them are better—every morning before breakfast.

Eat always less than satisfies you to repletion. Drink two quarts of water a day—eight glasses.

Don't have a light in your room at night of any kind. It takes up the oxygen of the air, and is irritating to the eyes.

The paper handkerchief is suggested by a hospital magazine as more sanitary in some kinds of contagious diseases than the linen one. It can be destroyed at once.

Air out your house thoroughly twice a day—early in the morning and before you go to bed. Then sleep with a current of air through the room. Pile on the bedding if you need it.

These few rules, observed faithfully, will make you healthy, wealthy and wise—for is not a healthy man always rich?—and his health is a sign of his wisdom. Try these for the first half of 1904, and you will need no other New Year's resolutions.—Canadian Thresherman.

EWELL FARM SALE.

The 30th Annual Sale of Ewell Farm will be held at Spring Hill, Tenn., on Friday, June 3rd. About 60 head of horses and 30 head of Jerseys will be sold. Among the sires represented will be John R. Gentry, 2:00½; Brown Hal, 2:12½; Re-Election, 2:27; McEwen, 2:18½, and other horses of note. The popular strains of Jerseys included in this sale, will be hard to beat. Capt. Geo. Campbell Brown, proprietor of Ewell Farm, is going to make this his best sale, and parties looking for bargains will do well to attend.

CORRECTION.

In our last issue, we made an error in the advertisement of Hon. G. M. Wallace, Falmouth, Va. The wording appeared as "2 Grade Cows" whereas it should have been "2 Fresh Cows." Mr. Wallace raises only pure-bred Guernseys and has not a grade on his place. We make this correction in justice to him.

THE ROCKER CHURN.

Among the new advertisers in our columns this season, is the Rocker Churn Mfg. Co., of Forsyth, Ga. As its name implies, this company makes a churn, and from the descriptive circular before us, we might say a very good and useful churn—one that saves a good deal of time and labor. It is handy, easy to operate, easy to clean and has numerous other points of merit fully described in a circular which will be sent free to all inquirers. Look up the ad and send for it.

The Zenner Disinfectant Co., which is advertising its well known disinfectant, dip and lice killer in another column, sends us the following letter recently received from Mr. Glen Fleming, Arcadia, La.:

"I have used Zenoleum Disinfectant for the past two years and find it the best thing I can get for my hogs. I find it will kill lice, ticks and fleas on my hogs and dogs. I have cured several cases of mange with it. My pointer dog had a very severe case of mange and I cured him well and clean with it. I can truly recommend it to every one to have on the place for a general disinfectant."

WANTED

25 to 50 GRADE DORSET EWES, medium price; also 1 each, good yearling DORSET and SOUTHDOWN Rams, registered, GRIMBS, BROS., Lexington, N. C.

"Feeds and Feeding"

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

Delivered anywhere for - - \$2.00

With the SOUTHERN PLANTER, 2.25

The RICHMOND, FREDERICKSBURG and POTOMAC R. R.

and WASHINGTON SOUTHERN R'Y

THE RICHMOND-WASHINGTON
LINE.

The Link Connecting the

Atlantic Coast Line R. R.,
Baltimore and Ohio R. R.,
Chesapeake and Ohio R'y,
Pennsylvania R. R.,
Seaboard Air Line R'y
and Southern R'y.

Between all Points via Richmond, Va.

Fast Mail, Passenger, Express and Freight Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo, and all points North, South, East and West.

W. D. DUKE, C. W. CULP,
General Manager. Asst. Gen'l Man.
W. P. TAYLOR, Traffic Manager.



COOPER SALE MAY 30

AT COOPERSBURG, PA.

A PLEASED BUYER IS THE BEST ADVERTISEMENT.

The imported Jersey Cattle sold at our May, 1903, Auction Sale have given universal satisfaction. My most sanguine expectations have been more than realized. How could it be otherwise? Individually, they were strictly FIRST-CLASS.

BEST OF ALL, they were bred on both dam and sire's side from animals that have made the Island cattle so famous—the blood that wins at the churn and in the show-ring.

Catalogues ready for distribution May 1, and owing to great cost publishing same, they will only be sent on application. Address

T. S. COOPER, "Linden Grove," Coopersburg, Pa.

P. S.—Would respectfully request parties who are in want of an extra fine bull calf, or a few fine heifer calves, that they send for a catalogue, which will give them full particulars, and if they are not able to attend the sale in person, that they send in their bids, and they will receive the same attention as if the buyer was a bidder himself. It is with pride that we refer to parties that have entrusted such orders to us. This will be a rare chance to get calves out of the very best cows the Island can furnish, and sired by prize winning bulls, and they will not cost you more than others that have no breeding.—T. S. C.

KELLY, 22283. Record, 2:27.

Sire of McChesney, 2:16 $\frac{3}{4}$, Etc.

Bay horse, by Electioneer 125, first dam Esther, dam of Expressive 3, 2:12 $\frac{1}{2}$; Express, 2:21, etc.; by Express, second dam, Colliseum, by Colossus.

Kelly represents the highest type of a trotter, having fine size and the form and finish of a thoroughbred.

For terms of service and keep of mare address

W. J. CARTER, Richmond, Va.

Kelly will serve at my private stables, 1102 Hull St., Manchester, Va.

GREAT STAKES, 25521.

Record, 2:20.

Sire of Captain, 2:16 $\frac{1}{2}$; Foxhall, 2:19 $\frac{1}{2}$, etc. Bay horse, by Billy Thornhill, 2:24, dam Sweetstakes, by Sweep Stakes, 2:23. Fee, \$25.00 the season.

W. H. NELSON, 1428 East Franklin St., Richmond, Va.

BURLINGAME 26235. Record, 2:18 $\frac{1}{4}$.

Brown horse, by Guy Wilkes, 2:15 $\frac{1}{2}$, dam Sable, dam of Sable Wilkes, 2:18, etc., by The Moor, 870.

N. B.—Very fast and a great show horse.

FEE, \$25.00.

LISSAK, bay horse, by Burlingame, dam Helice, dam of Clarion, 2:15 $\frac{1}{2}$, by Norval, 2:14 $\frac{1}{2}$.

FEE, \$15.00. Address,

SPRING GARDEN FARM,
Cool Well, P. O., Amherst Co., Va., or
ROBT. TAIT Norfolk Va.

W. J. CARTER, ["BROAD ROCK."] TURF JOURNALIST.

Address P. O. Box 929, - - - Richmond, Va.

Pedigrees of thoroughbred and trotting horses traced, registration matters attended to, and stallion circulars and cards prepared.

Representing the Times-Dispatch and Southern Planter, Richmond, Va.; Sports of the Times, New York; Kentucky Stock Farm, California Breeder and Sportsman, etc.

CHORISTER —BY— FALSETTO—ADDIE C.

"One of the handsomest thoroughbreds in America and a sure success as a getter of race horses."—Major Daingerfield.

Standing 16 $\frac{1}{4}$ and weighs 1,300 lbs. He held the world's record for a mile as a 3 year old and is the sire of "Corruscate" who holds the mile record for Canada 1.38 $\frac{1}{2}$. All his get win and are racing up to 8, 9 and 11 years of age, and won \$30,000 in 1902.

Fee \$50 00 cash, approved half bred mares \$20.00

All possible care taken to prevent accidents or escapes but no responsibility assumed for any that may occur.

For further particulars apply to D. K. KERR, Manager Antrim Stock Farm, Warrenton, Va.

Fine Horses and Mules for Sale.

I am offering the best lot of mules ever seen on the Richmond market. Write for prices or call at my stables.

J. S. WHALEY,
Salesman.

S. P. CLAY,
1917 E. Franklin St., Richmond, Va.

MAGAZINES.

The May number of Lippincott's is notably stirring and strong from the opening page of its novelette through to the close of the last short story. "Figs from Thistles" makes Frederic Reddale's third appearance through the medium of a long tale in this magazine, and his work may be honestly described as good, better, and best. This last shows maturity in both the plot and the handling of it. Its heroine, Janet Persis, is young and pretty, yet too prudent to marry for love alone, after an apprenticeship to poverty as one of seven daughters of a country clergyman. For this reason she falls an easy prey to the plans of an anxious mother in regard to her son, a Baronet, of splendid physique but of infantile mentality. The wedding takes place and then the real tale begins and the reader is devoured with desire to know in a hurry whether the mother's amazing scheme is to thrive or to come to naught.

Heading the list of seven short stories is "In the Springtime," by Henry Wysham Lanier, a happy mingling of spring rain and loving. A rousing sea-story by Patrick Vaux is entitled "Grit: A Tale of the Next War." "Lavender," by Lizette Woodworth Reese, is a touching story of an erring girl and a mother's faith rewarded. This is remarkably well told. Another one of Ella Middleton Tybout's parables is called "The Blast of the Trumpet," and sustains her reputation for humor.

One of the stories in the May St. Nicholas will be "The Hero of San Benito," by Rev. Charles M. Sheldon, author of the world-famous "In His Steps," telling of a lad's bravery in a theater fire and panic. The story, now made public for the first time in this country, was related to Mr. Sheldon by an Italian lady who was in the theater at the time of the fire. The young Rudolph Cluny is a real hero of flesh and blood, although he is known by another name.

The May St. Nicholas on its stamp page notes a growing difficulty in securing fine copies of the early issues of United States stamps. Poor making, careless handling, and laxness in collecting are counted the main causes of the increasing difficulty in securing these stamps in condition acceptable to careful collectors. Young collectors are advised to take special care in gathering and preserving specimens of these early United States stamps.

Additional interest is given to the entertaining account in the May St. Nicholas by Helen Dawes Brown of "Magdalen Tower and May Morning" when it is known that there is in this country a church that has not only copied the beautiful Magdalen Tower of Oxford, but for a quarter of a century has borrowed its mid-air sunrise service. There is this difference, however: the Chapel of the Good Shepherd in Chelsea Square, New York City,

Local agencies and complete repair stocks everywhere

MCCORMICK HARVESTERS

International Harvester Co. of America, Chicago, U. S. A.

Large ENGLISH BERKSHIRES.

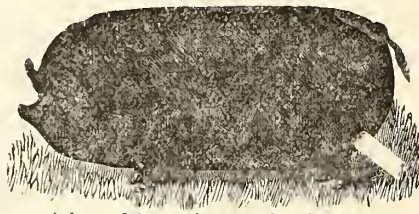
BOARS ready for service.

Pigs ready to ship.

Bred Gilts.

Forest Home Farm,
Purcellville, Va.

HILL TOP STOCK FARM.



Berkshire Hogs

— A SPECIALTY —

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

My BERKSHIRE PIGS

For this Spring delivery will weigh 100 pounds at 12 weeks of age, and for INDIVIDUAL MERIT cannot be excelled in the United States. They will make show hogs against any and all competitors and are being engaged every day. The last of my Fall and winter pigs have been sold, and orders will only be taken for Spring delivery. S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

LARGE YORKSHIRE HOGS

THE COMING BACON BREED—
THE MOST PROLIFIC BREED—

48 pigs from four litters. Pigs ready for delivery. Our prices always the lowest.

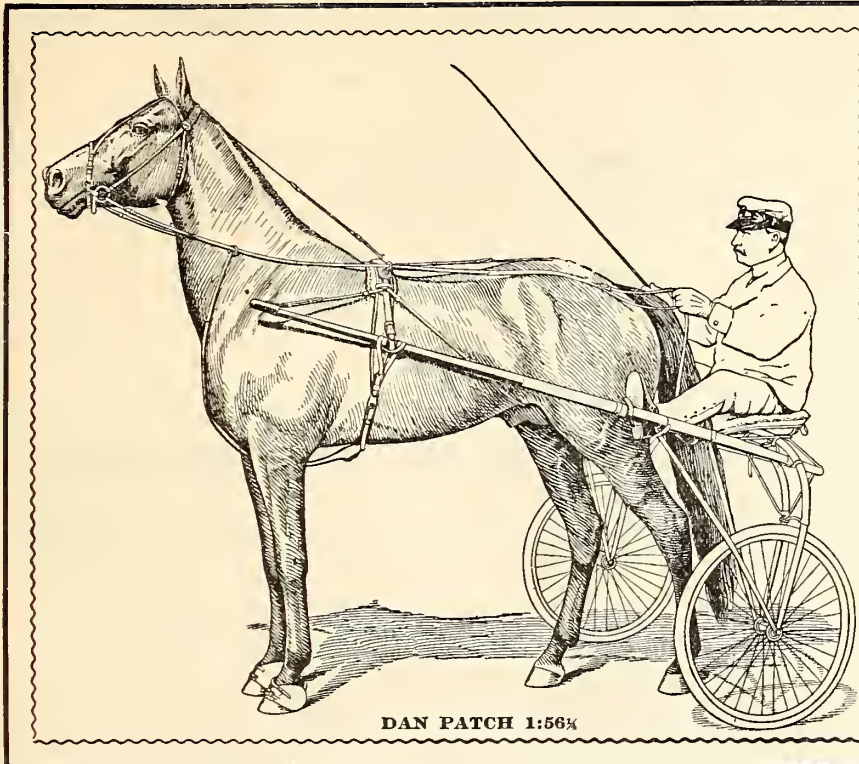
INDIAN GAMES, the fashionable table fowl.

WHITE LEGHORNS, the greatest layers.

WHITE WYANDOTTES, the best all round fowl. Also

JERSEY BULLS and HEIFERS from cows with recorded butter tests of 18 to 24 lbs. in 7 days.

BOWMONT FARMS. Salem, Va.



DAN PATCH 1:56 1/4

DAN PATCH 1:56 1/4

Fastest Harness Horse IN THE World

HOLDS FOLLOWING WORLD RECORDS:

- Mile Record, 1:56 1/4
- Half-Mile Record, 0:56
- Mile Record on Half-Mile Track, 2:03 1/4
- Mile Record to Wagon, 1:57 1/4
- Mile Record to High Wheel Sulky, 2:04 1/4
- Two-Mile Record, 4:17

HIS BEAUTIFUL COLORED PICTURE FREE

PRINTED IN SIX BRILLIANT COLORS
Size 21 by 28 inches

We own the World-Famous, Champion Pacing Stallion, Dan Patch, and have Fine Lithographs of him. They give a complete record of all his Races and Fast Miles and are Free of Advertising. The fine, large Colored Lithograph shows Dan hitched to sulky just as you see him in this engraving.

IT WILL BE MAILED TO YOU FREE

Postage Prepaid

IF YOU ANSWER THESE TWO QUESTIONS—AT ONCE

- 1st.—How Much Stock of All Kinds Do You Own?
- 2nd.—Name Paper In Which You Saw This Offer.

Write to

International Stock Food Co.

Minneapolis, Minn., U. S. A.

holds its service on Easter morning, while that of Magdalen College takes place on the first of May. It is predicted that other American churches may, if their architecture makes it possible, adopt some form of Oxford's beautiful annual service.

The present critical condition in British politics gives special timeliness to the glimpse of life in the English House of Commons announced as the subject matter of the May Century's leading article, "The Mother of Parliaments." Under this title Henry Norman, M. P., has written at length of this "place of quaint ceremonial and queer habits"; and numerous drawings by Andre Castaigne will add to the vividness of the sketch.

There will be two portraits of unusual interest in the May Century, one of Tolstoi, another of President Roosevelt. The Tolstoi likeness is from a drawing made by George T. Tobin from a photograph, and shows Tolstoi at twenty-nine, as an officer in the Crimean War. The President's portrait, in tint, will be the frontispiece of the issue, and is from a photograph taken by Arthur Hewitt at the White House, January 20, 1904.

PERFECT SATISFACTION FOR WIND GALLS.

Weems, Va., Jan. 30, 1904.

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

I used your Gombault's Caustic Balsam for reducing wind galls and got perfect satisfaction. L. T. BUCK.

EWELL FARM.

30th ANNUAL SALE OF TROTTING AND PACING

HORSES AND JERSEY CATTLE,

FRIDAY, JUNE 3RD, 1904, AT EWELL FARM, EWELL'S STATION, (SPRING HILL P. O.), MAURY CO., TENNESSEE.

Fifty horses from Ewell Farm, Piedmont Farm (W. F. Garth, Propr.), Huntsville, Ala., and Cleburne Farm (M. C. Campbell, Propr.), Spring Hill, Tenn., including youngsters with speed, and horses of suitable ages for racing, driving or riding. By such sires as JOHN R. GENTRY, 2:00 1/2; BROWN HAL, 2:12 1/4; RE-ELECTION, 2:23 1/4; MEWEN, 2:18 1/4; SENTINEL WILKES, DUPLEX, 2:17 1/4; ACTON WARD, 2:15 1/4; HAL BROWN, son of BROWN HAL, ALMONT, JR., etc.

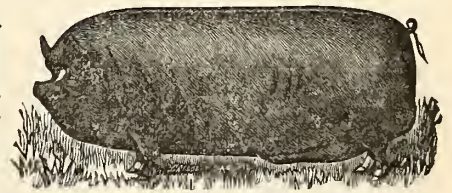
THIRTY JERSEYS, consigned by M. C. CAMPBELL, SPRING HILL, TENN., and M. M. GARDNER, NASHVILLE, TENN. All useful young animals of the best Tennessee and Imported Strains. Both of these herds are ably represented at the St. Louis Exposition.

Write for catalogue to GEO. CAMPBELL BROWN, Ewell Farm, Box L, Spring Hill, Maury county, Tenn.

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

WALTER B. FLEMING,

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



THE - OAKS - STOCK - FARM.

A. W. HARMAN, Jr., Prop.,

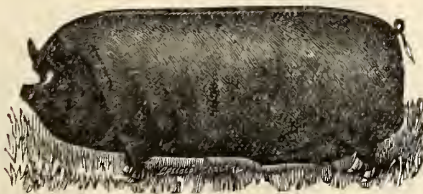
We breed and ship the best strains of

Large ENGLISH BERKSHIRES

Send us your order and get the best.

6 coming 2 year old JERSEY HEIFERS for sale; also 2 fine Jersey Cows; 1 yearling heifer, a perfect beauty. Write for price.

ALEX. HARMAN, Mgr., Lexington, Va.



REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Office of Secretary. Circular 11. Methods and benefits of growing sugar beets.
- Office of Experiment Stations. Experiment Station Record, Vol. XV, No. 8.
- Bureau of Animal Industry. Circular 44. Officials, associations and educational institutions connected with the dairy interest for the year 1904.
- Bureau of Forestry. Circular 27. Reclamation of flood damaged lands in the Kansas River Valley by forest planting.
- Forest Fires in the Adirondacks in 1903.
- Bureau of Plant Industry. Bulletin 51, Part III. Fruit trees frozen in 1904.
- Division of Foreign Markets. Bulletin 35. Foreign import tariffs on meat and meat products.
- Division of Foreign Markets. Bulletin 36. Foreign import tariffs on fruits and nuts.
- Division of Foreign Markets. Bulletin 37. Foreign import tariffs on grain and grain products.
- Office of Public Road Inquiries. Circular 37. The railroad and wagon roads.
- Bureau of Soils. Circular 13. The work of the Bureau of Soils.
- Farmers' Bulletin No. 194. Alfalfa seed.
- Farmers' Bulletin No. 195. Annual flowering plants.
- Arkansas Experiment Station, Fayetteville, Ark. Bulletin 77. Cow pea experiments.
- Bulletin 79. Peach growing in Arkansas.
- Bulletin 80. Cow pea hay.
- Cornell Experiment Station, Ithaca, N. Y. Bulletin 216. Spraying experiments.
- Illinois Experiment Station, Urbana, Ill. Bulletin 93. Soil treatment for peaty swamp lands.
- Bulletin 94. Nitrogen bacteria and legumes.
- Kansas State Board of Agriculture, Topeka, Kas. Report for quarter ending March, 1904.
- Maryland Agricultural College, College Park, Md. Quarterly, February, 1904, Fertilizer analyses.
- New York Experiment Station, Geneva, N. Y. Bulletin 242. Ash and grit for growing chickens.
- Bulletin 247. Sulphur sprays for orchard trees.
- Columbus Horticultural Society, Columbus, O. Journal of the Society, March, 1904.
- Pennsylvania Experiment Station, State College, Pa. Bulletin 65. Forage and soiling experiments 1902.
- Virginia Experiment Station, Blacksburg, Va. Bulletin 142. Orchard Studies XV. The Bitter rot of apples.
- Fourth report of State Entomologist

Local agencies and complete repair stocks everywhere

CHAMPION HARVESTERS

International Harvester Co. of America, Chicago, U. S. A.

THE GROVE STOCK FARM

—I OFFER THIS MONTH—

5 Dorset Rams,

1 YEAR OLD, REGISTERED. PRICE TO INCLUDE TRANSFER.

1 HOLSTEIN FRIESIAN Bull, 18 months old, sired by "Sir Netherland of the Grove," Dam "Floyd Reynolds." Also 3 young bulls, 9 months old, sire of these bulls has 24 of his nearest ancestors that gave 21 lbs. of butter in 7 days.

T. O. SANDY, Burkeville, Va.

N. & W. AND SOUTHERN R. R.

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.



EDGEWOOD STOCK FARM 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, Maxwellton, Greenbrier, Co., W. Va.



HEEBNER'S Roller Bearing HORSE POWER and Little Giant Thresher and Cleaner

make the handiest and most economical threshing outfit known. The thresher is made in three sizes, 21, 25 and 30 in. cylinder. It is a simple, easy to handle, light running, strong, durable and effective machine. Will thresh and clean wheat, rye, oats, barley, flax, rice, alfalfa, millet, sorghum, timothy, etc. Capacity 200 to 600 bus. Reversers for 1, 2 and 3 horses (equal to 2, 4 and 6 horses in lever power.) Forecutting dry feed, ensilage and shelling, sawing wood, pumping, separating cream, etc. Strongest and lightest running powers on the market. Mounted or unmounted, as ordered. We also make Lever Powers, Feed and Ensilage Cutters, Wood Saws, Feed Grinders, etc. Send for FREE Catalogue. HEEBNER & SONS, No. 25 Broad St., Lansdale, Pa.

and Plant Pathologist on the San Jose scale.
Virginia Weather Service, Richmond, Va. Annual summary 1903.
Report for February, 1904.
Report for March, 1904.
West Virginia Experiment Station, Morgantown, W. Va. Bulletin 91. Commercial fertilizers. Report for 1903.
Report of hearing before the Committee on Agriculture and Forestry, United States Senate, January, 1904, on the Latimer and Brownlow Good roads bills.

CATALOGUES.

A. B. Farquhar Co., York, Pa. Farquhar Machinery Catalogue, 1904. This is a beautiful catalogue of the well known implements and machines made by this house.

Studebaker Bros. Mfg. Co., South Bend, Ind. A personal talk to the dealer by the Studebaker man. This is a very interesting pamphlet on the vehicles made by the well known house.

Peter Henderson & Co., New York. Implement catalogue for the garden, farm and lawn.

Percy L. Banks, Union St., Norfolk, Va. The Watson four row potato sprayer.

Proceedings of the 2nd Annual Convention of the National Nut Growers Association held at New Orleans, La., October, 1903. J. F. Wilson, secretary, Ponlan, Ga.

Golden seal as a money crop. Its history, use and cultivation by Jno. Hoag, Jr.

A VISIBLE OBJECT.

A testy old gentleman forced to lay over an hour in Dull Town was cursing his fate, when a mild-mannered citizen strolled into the station and essayed conversation. Taking the many labels on the visitor's bag as a leader, he said—

"You've travelled about quite a bit?"

"Yes."

"Ever see a' Injun?"

"Many a one."

"Ever seen a Chinese?"

"Thousands of them."

"Ever seen a Jap?"

"Yes."

"Ever seen a Jew?"

"Yes. D——"

"Ever seen a——"

The testy old gentleman could stand it no longer, and, rising to his full height, shouted in stentorian tones, "Did you ever see a fool?"

The mild-natured citizen let his mild blue eye rest on the irate traveller a moment, then in a sweet, low voice replied,—

"Yes, I hev."—May Lippincott's.

Nell: Why does she consider her marriage a failure?

Belle: Well, when she threatens to leave him he never seems to raise any sort of fuss.

STUDEBAKER

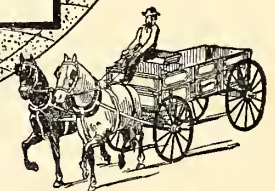
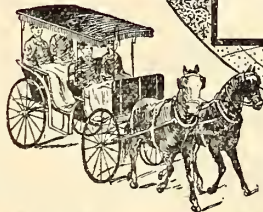
USED ALL OVER THE WORLD

For More Than Fifty Years

Studebaker Wagons and Carriages have been known the world over as the best that skill and honest work can produce. They have this reputation simply because they deserve it. They are built with exceptional care, from the pick of the world's best materials, in the largest and best equipped vehicle factory in the world. They are made right and they give unusual service and exceptional satisfaction.

Why not get a Studebaker and be sure?

Wagons—Carriages—Harness



Sold By Dealers Only

Send For Free Book No. 56

Studebaker Bros. Mfg. Co., South Bend, Ind.

Branches—New York, Chicago, San Francisco, Portland, Ore., Kansas City, Salt Lake City, Denver, Dallas.

When you go to the St. Louis Fair be sure to see the big Studebaker Exhibit in Transportation Building.



I am now prepared to book orders for pigs from imported **Kingstone Poetess**, bred by C.C. Smith, Kingstone Commons, England. Also from **Queen of Fassifern**, bred by James Lawrence, of Shrivvenham, England. Also from **Queen Alfreda**, from imported Loyal Mason, imported Loyal Berks, imported Princess Alfreda, Prince Alfred, etc. These are as fine as the world can produce, though I cannot expect fancy prices for them like some breeders get. Bacon your mongrels and start aright in the hog business. Remember me when pricing **shorthorns** (Durhams).

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

...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.

GOOD HOUSEKEEPING.

TO BOIL A HAM.

Wash the ham and put it to soak in clear cold water for some hours, or over night. Scrape it thoroughly and put into the ham boiler covered with cold water and let it come slowly to a boil. This takes from one to two hours, then it should boil very slowly fifteen minutes for each pound. When it is done let it cool and then take off the skin, brush with beaten white of egg, dust with cracker crumbs and let it bake slowly for an hour. Do not cut until perfectly cold. The main thing in cooking a ham is to have it done slowly, and never boil hard. That makes it tough.

HAM SALAD.

When you have used all the ham but the scraps, collect these and with about a fourth as much stale bread run it through the meat grinder. With this mix an equal quantity of finely chopped cabbage, or celery, pour over a dressing and serve for tea.

DRESSING.

Mix two teaspoons of ground mustard with one teaspoon of salt, one of black pepper, three tablespoons of sugar, one teaspoon of celery seed. Cream two tablespoons of butter and beat two eggs. Mix all this together and pour over it two cups of boiling vinegar, return it to the stove and let it thicken. When cold, thin out with rich cream. Pour over the ham and cabbage and you will find it a delightful relish for tea.

BAKED FISH.

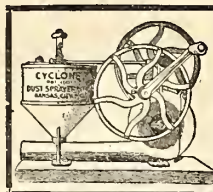
Boil a Rock or Sheepshead, when well done, pick it to pieces with a fork, take out all the bones and the skin, butter a macaroni dish and arrange a layer of stale bread crumbs in the bottom, then put a thick layer of the fish, with pepper and salt and little pieces of butter about on it, then another layer of the crumbs and another layer of fish until the dish is full. Let the crumbs come last. Scald a pint of fresh milk with a small onion in it and season it slightly with pepper and salt. Pour this over the dish and let it bake slowly for a half hour or more.

BREAD AND MILK OMELET.

Soak a cup of stale bread crumbs in a cup of fresh milk for more than an hour. Beat eight eggs separately. Just before breakfast stir the bread and milk into the yolks and then fold in the whites. Heat the skillet and put a large spoon of butter in it, as soon as it melts add the eggs and let them cook a few minutes before touching them. Stir from the bottom to prevent browning but try not to break them up more than is necessary.

MEAT PIES.

You may use beef, veal, mutton or chicken for these and they are always good. Line the pans with a rich biscuit dough. Chop three cups of meat fine removing all gristly pieces and bones, lay it in the bottom of the pan and slice four hard boiled eggs over it,

**DUST SPRAY!** Are You Interested?

LISTEN! Our Machines and Formulas were used in every comparative test made as the standard system. Growers use and recommend them everywhere. We make our compounds and guarantee strength, purity and keeping qualities. Our stock compound of chemically pure sulphate of copper and lime will form no new compounds, remain in suspension until applied to the tree and there old Mother Nature makes the Bordeaux mixture. We are in close touch with all who use the system; we know what they are doing; we publish it. Do you want to find out? Write to headquarters, DUST SPRAYER MFG. CO., 510 Broadway, Kansas City, Mo. Dept. F

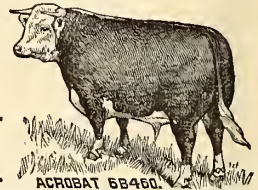
ROSEMONT HEREFORDS.

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.

**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.

Hereford Cattle.

Sires in service: IMP. SALISBURY 76059 (19083); LARS JR. 85297.

My present offering consists of Bull Calves, Aged Bulls, tested and ready for service; breeding Cows in calf to above sires. These cattle are bred right and well developed and the prices are attractive. Call and make your personal selection or write. I have shipped Herefords, ordered by letter, satisfactorily into more than a dozen States.

Murray Boocock, Owner Castalia Herefords,

Keswick, Alb. Co., Va.

Registered • Herefords,

Herd headed by the Grand Champion

American Royal Show

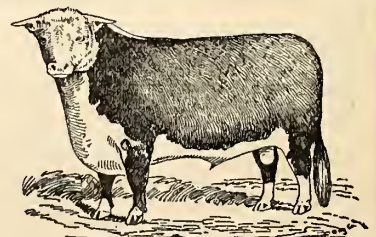
PRINCE RUPERT, 79539.

Special Offer:

Two Cows, young, bred to Prince Rupert.

All Inquiries Cheerfully Answered.

EDWARD G. BUTLER, Anfield Farms, BRIGGS, Clarke Co., Va.



PRINCE RUPERT, 79539.

SPECIAL BUGGY ANNOUNCEMENT

This is Our Celebrated

Split Hickory Special

It is the King of all Top Buggies. It is made the best that skilled labor and money can make it. We send it anywhere on

30 Days Free Trial

\$50

A similar buggy not as good would cost at least \$75.



We have so extensively advertised

and it has had such a wonderful sale everywhere that we find, from our mail, some people seem to be under the impression we only make this one particular Buggy. We beg to announce to the readers of this paper that

Our \$50 Split Hickory Special

We Manufacture Over 100 Styles of Split Hickory VEHICLES and sell them all direct from our factory to the user at factory prices. This line comprises *Buggies, Surreys, Phaetons, Doctor's Phaetons, Stanhopes, Driving Wagons, Road Wagons, Platform Spring Wagons, Delivery Wagons, Road Carts* and a complete line of all styles of *Harness*. Every vehicle we sell is a *Split Hickory Vehicle* and has many points of merit not found in other vehicles.

We sell them all on **30 Days Free Trial**

Our reputation for fair dealing is unquestionable and our **Two Years Guarantee** goes with every vehicle we sell.

This is our **\$37.50 Split Hickory Top Buggy**, not as good as the Split Hickory Special, but a world beater at the price we ask for it.



\$37.50

This is our **Split Hickory Extension Top Surrey**, complete in every detail, and, taking into consideration the quality and the fact it is a Split Hickory Vehicle, the price **\$75** is wonderfully low.



\$75

We do not attempt to make a buggy for around \$25 simply because any fair minded person who knows anything whatever about buggies knows that a buggy that is worth anything cannot be produced for that price. Split Hickory Running Gears and Wheels are all made of straight grained Split Hickory, **NOT SAWED**. Write for our **FREE 136-page Catalog**, which tells all about Split Hickory Vehicles and gives description and prices of our full line of Harness.

The Ohio Carriage Mfg. Co., (H. C. PHELPS, President.) 5410 Sixth St., Cincinnati, Ohio.

put two good tablespoons of butter, one teaspoon of mustard, pepper and salt to taste with a dash of red pepper, pour over this enough of the water in which the meat was boiled to about cover and sprinkle flour over it and put on the top crust, bake to a nice brown and serve hot.

BAKED CUSTARD.

Six eggs beaten very light, separating the whites from the yolks. Scald one quart of new milk and put six tablespoons of sugar in it and a pinch of salt, pour it over the yolks of the eggs and set it aside to cool. Season with nutmeg and put it into cups or a dish and set them in a pan of water and put in the stove to bake slowly until the custard is well set, then take it out and spread the meringue made of the whites of the eggs and five tablespoons of sugar and seasoned with bitter almond or vanilla over it and brown slightly.

BOILED CUSTARD.

Eight eggs, save five of the whites and beat the others with the yolks. Scald two quarts of milk, sweeten with eight tablespoons of sugar, pour it over the yolks and return it to the fire (put a few blades of mace in the milk when you first put it on the fire.) Return this to the kettle and let it come to a boil. I sometimes put in about three teaspoons of arrow root or corn starch to make it thicker. While it is boiling hot beat the five whites which you saved, add a little sugar, and a few drops of seasoning and drop them in spoonful over the custard. When it is all thoroughly cold put a

SUNNY HOME HERD OF

ABERDEEN-ANGUS CATTLE.

BARON ROSEBOY 57666 by the world famous

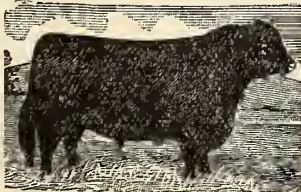
GAY BLACKBIRD heads the herd.

Females by such noted sires as Gay Blackbird, 14443, (sire of the highest priced American bred Angus bull), Ermon 18171, (by the champion sire of females Royal Eric), Eulalies Eric 15563, (2nd prize yearling bull at World's Columbian), Beau Bill 13637 (champion of the West for two years), Baron Ida 20184 (champion at N. Y. State Fair 1898), Baronet of Advia 1226 (by the "Judge" champion of the world).

Families represented in the herd are Coquette, Queen Mother, Nosegay, Westertown Rose, Old Rose of Advia, Violet, etc. We claim for our herd as good breeding as any herd in America. The individual animals in the herd have been selected with the one aim "quality" in view. Come and see, or write your order and let us guarantee a first-class animal.

Shipping point and depot, Fitzgerald, N. C., on D. & W., 24 miles S.-W. of Danville, Va.

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



... REGISTERED ...

ABERDEEN ANGUS BULLS

of servicable age at a bargain.

Shepherd Pups the best of the breed at \$2.50 each. Come and see or write. **W. P. ALLEN, Prop. of Glen Allen Stock Farm, WALNUT HILL, VA.**

SPECIAL BARGAINS IN HOLSTEIN-FRESIANS.

From a few months to 1 year old, from dams that are large producers, and with strong, official backing on both sides. The sire is half the herd; it is important that you get the right one. We have that kind, and our prices are no higher than others are asking.

LARGE ENGLISH BERKSHIRES, by such sires as Manor Faithful Imp., Esau Princess of Filston, by Esau Imp., Fancy Duke, a double G. son of Loyal Berks. Address

URY STOCK FARM,

THOS. FASSIT & SONS, Sylmar, Md.

preserved cherry, or a dab of fruit jelly on each spoon of the whites. Eat with sponge cake.

FROZEN CUSTARD.

Scald four quarts of fresh milk and pour it over the well beaten yolks of six eggs. Sweeten with four cups of sugar in which you have rubbed two tablespoons of corn starch. Return it to the fire and let it cook thoroughly. It is always best to cook milk in a double boiler. I have no double boiler so I set the bucket in a pan of water and it does just as well. Beat the whites very light and pour the boiling hot milk over them and put it into the freezer. Season with vanilla or lemon and freeze. When it is so hard the dasher will not move take the dasher out and put the top back and continue to turn it for ten minutes more, then pack and let it set for an hour or two to ripen.

LEMON OR ORANGE EXTRACT.

I have found that the lemon and orange seasoning is much better when made at home and it is easily done. Have bottle with a tight fitting stopper and keep it half full of alcohol, into this put the thin outside rind of the oranges just whenever you eat one. Be careful not to shave off any of the white inside skin, this is bitter. When you get into the habit you will find it easy and that your extract bottle is never empty. So when you make lemonade you will save the yellow rind of the lemons and put them into another bottle of alcohol. This keeps perfectly and is pure, stronger and better than anything you can buy.

CARAVAN.

POCKET MANUAL OF PLANT DISEASES.

Our well known advertiser, Mr. James Good, of Philadelphia, issues a very handy little pamphlet of the above title, and is circulating it free. It is gotten up primarily in the interest of his celebrated Whale Oil Soap, but the information given about the various diseases of fruit trees, etc., make it well worth having.

ALL ABOUT DUST SPRAY.

This is a comprehensive treatise on the subject from both a practical and scientific standpoint, and is issued by the Dust Sprayer Mfg. Co., of Kansas City, Mo., who are advertising their machine in this paper. Our orchardists and fruit men are invited to look up this ad and send for the pamphlet and see the advantages accruing from dust spraying.

We have the following from W. E. Shipley, breeder of pure bred Hereford cattle and Shropshire sheep, Valle Crucis, N. C.:

"I have used Zenoleum as a dip for my sheep and as a spray on my cattle, and found it very effective. It cleans up lice wherever it goes."

Local agencies and complete repair stocks everywhere

DEERING HARVESTERS

International Harvester Co. of America, Chicago, U. S. A.

.. 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.

—REGISTERED—

POLAND-CHINA

Pigs from 4 to 6 months old. Boars ready for service, and young sows with pigs. Tamworth pigs 8 wks. old \$5. Prices Reasonable. Apply to

J. C. GRAVES, Barboursville, Va.

THE OAKS

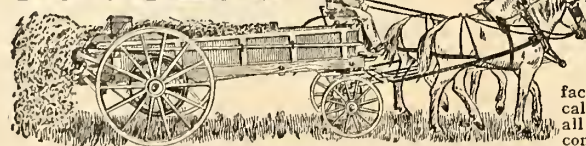
offers "Show Yard" material in a

Reg. MORGAN STALLION

Rising 2 years old, mahogany bay, white hind feet, diamond between nostrils; also a Reg. SHORTHORN BULL, red with white switch; good enough to show in any company. Stock guaranteed as represented or can be returned at my expense.

B. B. BUCHANAN, Bedford City, Va.

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.

EWELL FARM SALE.

The attention of our readers is called to the thirtieth annual sale of trotting and pacing horses, and Jersey cattle, which is to be held at Ewell Farm, on Friday, June 3rd. This is an annual breeders sale and is held jointly by the Ewell Farm, of which Geo. Campbell Brown is the manager, The Piedmont Stock Farm, of Huntsville, Ala., property of W. F. Garth, and the Cleburne Farm, of Capt. M. C. Campbell, Spring Hill, Tenn. Capt. Campbell also contributes a number of young Jersey cattle representative of his herd and about 20 of the cattle that will be offered, come from the magnificent herd of Mr. M. M. Gardner, at Nashville, Tenn. The fame of Ewell Farm which is now the home of Jno. R. Gentry, 2:00½, and of Tennessee Wilkes, 2:27, the only son of Geo. Wilkes, that has sired two better than 2:05, and McEwen, 2:18¼, and Hal Brown, the promising young son of Brown Hal has been maintained throughout thirty odd years, by these annual sales and through the distribution of Tennessee pacing bred horses throughout all the United States and Canada. Mr. W. F. Garth, of the Piedmont Farm at Huntsville, is gaining in reputation every season through the many speedy young horses emanating from that source. Mr. Garth himself is a horseman of superior judgment, and his consignment to this sale contains some of the best on his farm. Some of his colts can now show a gait of 2:20 of trotting and pacing, and it is a fair prediction that they will by the time of the sale be able to show that they are of 2:10 calibre. The greatest sire of pacers in the world, Brown Hal is owned at Cleburne Farm and a number of his get are offered by this establishment. The get of Brown Hal won more money on the turf last year than any other set of pacers, and he has founded a family which is second only to that of Geo. Wilkes. The high character of sales always held at Ewell Farm will be maintained by the gentlemen interested in this one, and the general feeling of prejudice against auction sales need not be considered in this case as every one will be treated exactly alike, and there will be absolute freedom from any suspicion even of bybidding or reserving any of the animals catalogued.

The Jerseys which will be offered at this sale consist of animals bred on Tennessee foundation crossed with the most recent importations and are of the kind that will make high class dairy animals. Tennessee Jerseys have been leaders all over the United States for 20 years or more and some of the animals here offered will be of pure Tennessee breeding. For Southern buyers these cattle will be kept until October 1st, free of charge and placed on the cars without extra cost.

For catalogue of this sale write to Geo. Campbell Brown, Box L, Spring Hill, Maury county, Tenn.

**LOOK AT THIS. BUY THE BEST.
BLUE GRASS GRAZING FARM.**

NO. 194—600 acres, about 2 miles East of Wytheville, on Pepper's Ferry road, 560 acres cleared, 40 acres in original growth timber, mostly white oak, never been culled; 440 acres in grass and meadow; land slightly rolling just enough to afford fine drainage, no steep hillsides or high hills, considerable portion comparatively level; has excellent water facilities, two large springs and two branches running through the place, one very bold spring at the barn. Good, substantial dwelling, frame building, 2 stories, 9 rooms, solid stone foundation, house in good condition, lately remodeled. Two large barns, cattle barn with capacity of 100 head, and horse barn capacity 16 head, all necessary outbuildings on place. 3 tenant houses, frame, 3 rooms each, spring at each house. Fine young orchard of between 800 and 1,000 trees, about two-thirds bearing. Farm in good condition and well fenced. One of the most desirably located and best lying farms in the county. Price \$50 per acre. NO. 230.—Building and lot on east Main street, in Wytheville, Va. Lot on corner of 3rd and Main streets, fronting about 45 feet on Main St., and running back with east side of 3rd St. 300 feet to Monroe St. Frame building, 9 rooms and brick basement with two store rooms in basement. All necessary outbuildings. Good business corner. Property will rent for \$240 per year. Price \$3,000.

All we ask is to have you look over our properties and always consult in reference to farms, the

SOUTHWESTERN VIRGINIA LAND AGENCY,

WYTHEVILLE, VA.,

C. B. THOMAS and L. F. KRENNING, Managers.

CHARTERED 1870.

MERCHANTS NATIONAL BANK

OF RICHMOND, VIRGINIA.

Capital Stock, - - - \$200,000.00

Surplus and Profits, - - - \$672,445.75

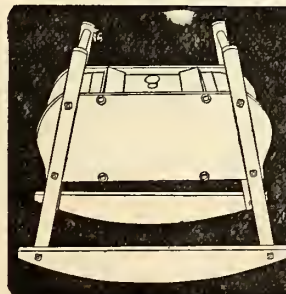
Designated Depository of the United States, City of Richmond and Commonwealth of Virginia.

Being the Largest Depository for Banks between Baltimore and New Orleans, this Bank offers superior facilities for direct and quick collections.

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President.

JNO. K. BRANCH,
Vice-President.

JOHN F. GLENN
Cashier



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.**

∴THE SOUTH SIDE CARRIERS.∴

For Strawberries, Peaches, Beans, Lettuce, Cukes, Grapes, Apples, etc., send for Catalogue and prices.

SOUTH SIDE M'F'G CO.,

Petersburg, Va.

THE FIRST NATIONAL BANK,
RICHMOND, VA.

Among the new advertisements to be found in this issue, is that of the "old First National" of Richmond, Va. We take pleasure in calling the attention of our readers to this advertisement as an opportunity is offered by which they can get the "saving habit" and draw interest on their deposits in a very convenient and novel way. With a million dollars capital and surplus, this bank is a veritable Gibraltar among Southern banks. Look up the ad and write the cashier for particulars.

It bites and stings and irritates your face to shave with common soaps, just as well enjoy as to dread shaving. Avoid toilet and laundry soaps for shaving. There is such a thing as a perfect shaving soap. Try William's Shaving Soap and enjoy easy shaving and luxurious after effects that no other soap can give. The J. B. Williams Company of Glastonbury, Conn., are sending a trial sample of this famous article upon receipt of a 2 cent stamp.

READY WIT.

It may seem rather trite to go back to Civil War times for a story, but all the tales of that memorable time have not been told, and as this one was a personal experience of a relative of mine I can vouch for it. I have never seen it in print nor heard anyone else tell it.

My uncle, Major Thomas Ridgely, was a surgeon attached to General Grant's staff. It was after the surrender of Vicksburg. The Union forces had entered the city and much merry-making and entertaining were going on. One night a dinner was in progress at which many Northern officers and a large number of Southern ladies were present. Many toasts had been proposed and drunk, all of them practically in honor of the successes of the Union army and the men responsible for them.

Finally one of the Southern ladies, a great beauty and noted for her intense partisan feeling for the South, arose and said, "Gentlemen, may I propose a toast?"

With natural gallantry and a little trepidation the ranking officer said, "Certainly."

"Well, then, gentlemen, I give you, 'The Southern Confederacy.'"

It was an embarrassing situation. But with hardly a moment's hesitation one of the Northern officers relieved the tension.

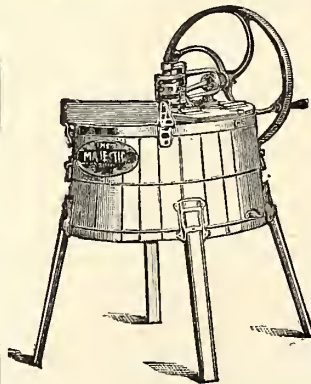
"Down with it, gentlemen," he cried; and the glasses were drained without embarrassment and without disloyalty. —Francis H. Lee, in May Lippincott's.

Mention the SOUTHERN PLANTER in writing.

Local agencies and complete repair stocks everywhere

PLANO HARVESTERS

International Harvester Co. of America, Chicago, U. S. A.



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

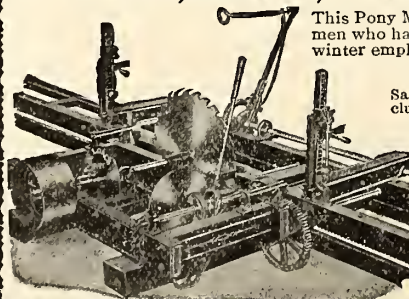
The Majestic Rotary Washer

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.

DeLoach Saw Mill

Special for the Man with Light Power and Heavy Timber.
Cuts 2,000 to 10,000 Feet per Day. 4 to 20 h. p.



This Pony Mill is especially adapted to the use of threshermen who have engines, enabling them to secure profitable all winter employment when the threshing season is over.

We Make All Styles

Saw mills from smallest to largest capacity. A great exclusive feature in the De Loach Variable Friction Drive.

Our advantages in cheap Southern labor and superior and low-priced lumber, iron and steel enable us to make the best saw mills for least money of any manufacturer in the world.

Our Mill Machinery Line includes Shingle Mills, Planers, Edgers, Trimmers, Stave Mills, Lath Mills, Water Wheels, Portable Grinding Mills, Shafting, etc. Ask for Saw Mill and General Machinery Catalogue. Mailed free for the asking.

De Loach Mill Mfg. Co.,
Box 600
Atlanta, Ga.

ORGANIZED 1832.

ASSETS, \$932,050.00.

Virginia Fire and Marine

Insurance Company, of Richmond, Va.

Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms.

AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

W. H. McCARTHY, Secretary.

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.

COW GIVES A HUNDRED POUNDS OF MILK A DAY.

A Herd of Holsteins at the World's Fair Out for a Record.

Average Holstein Weighs 3,000 Pounds
One Cow's Record for a Year is 30,-
182 Pounds—Calf Sells for \$4,000.
The Breed's History Dates Back
2,000 Years.

St. Louis.—Calmly chewing their cud in comfortable stalls in a model barn on the World's Fair grounds at St. Louis are 15 big Holstein cows on which the Holstein Friesian Association pin their faith and are confident that they will demonstrate the superiority over all other breeds of cattle.

In other stables near by are representative herds of Jerseys, Devons, Brown Swiss and Shorthorns and the same degree of confidence is evinced among the followers of each breed.

E. B. Von Heyne, who has earned an enviable reputation as a developer of milch cows, is in charge of the Holsteins at the World's Fair. He thinks this breed is the best in the world and he says that the present test will surely settle the question and demonstrate that the Holstein as a dairy cow especially, as well as for general purposes, has no equal.

"Yes," said Mr. Von Heyne as some of the Jerseys were driven by, "the Jersey cows won in Chicago, but then they had no competition. The Holsteins did not participate in that test but this time it will be different. We are here to win that prize," and the superintendent leaned back in a self-satisfied manner as though it were all over but the shouting.

"The Holsteins," said Mr. Von Heyne, "have been bred in Holland and the Friesian Islands for more than 2,000 years, and he thinks that in that country the science of dairying is as far advanced as in any other country of the world.

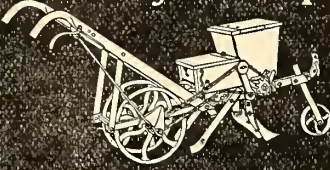
The Holstein cow is angular of frame, rawboned and big. The average weight is about 3,000 pounds. The Holstein colors are pronounced and unmistakable—the black and white mottled. The good cow is never fat. Mr. Von Heyne explains this by saying that the ideal cow is a machine and that her mission is to assimilate her food and convert it into milk. The milch cow is not bred for the flesh.

"A good Holstein cow is never fat," said Mr. Von Heyne. "She is a machine for the manufacture of milk—not tallow."

The first importation of Holstein cattle to America was made in 1621. Other importations were made at later dates, but no attempt was made to keep the breed pure until 1861 when W. W. Chenery, of Belmont, Mass., brought over a herd. Since then many other herds have been imported and there are as many pure blood Holsteins in the United States now as there are Jerseys.

"While I confidently expect to triumph over the Jerseys and all other

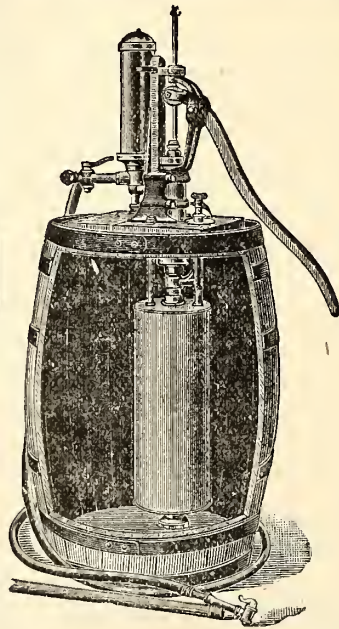
The Proof of the Planter is the Stand of the Crop.



FARQUHAR KEYSTONE CORN PLANTER

Plants corn, beans, peas, etc., without cracking a grain or missing a hill. Will work wherever a plow will run. Drops seed in drills, or in hills at any distance. Distributes any kind of fertilizer in any quantity desired, with absolute safety from injury to seed. Strong steel frame gives lightness and durability. Write for new 1904 catalogue describing this and other farm implements and machinery.

A. B. FARQUHAR CO., Ltd., York, Pa.



SPRAY NOW

and save your fruit and vegetables. CATALOGUE and SPRAYING CALENDAR giving FORMULAS, free for the asking.

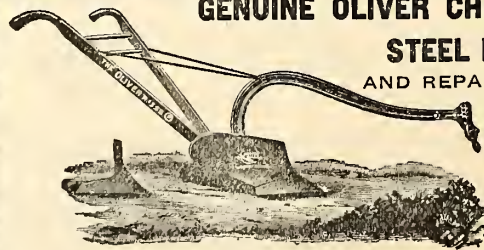
Our Pumps used by Virginia and North Carolina Agricultural Departments

Pumps, Wind Mills, Rams, Fencing, Gasoline Engines, etc.

Sydnor Pump and Well Co., Inc.,
BOX 949,
RICHMOND, VA.

GENUINE OLIVER CHILLED STEEL BEAM PLOWS AND REPAIRS.

PLOWS



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.

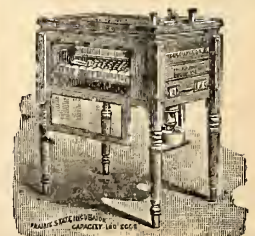
Implements
Poultry Supplies

Fertilizers
Wheel Material

41 to 51 Union Street,

NORFOLK, VA.

INCUBATORS AND BROODERS.



Season is at hand. HEN PRODUCTS higher than ever. Our prices low. Write for Free Catalogue.

breeds here at the World's Fair, I want to say that we did not consider it necessary to go to the length that the Jersey people did. They selected the choicest specimens from all over the United States. They assembled their cows at Jerseyville, Ill., near St. Louis and have kept them in training for a year.

"When the Holstein Friesian Association decided to enter the contest I went out into one county in New York State and bought some of the cows. The remainder will come from Wisconsin. They are just good, average, pure blooded Holsteins the same as may be found in any first-class dairy farm. There is no need to spend time in acclimating Holsteins. They do well in Russia and equally as well in South Africa or any climate in the world.

"The milk of the Holsteins is not quite as rich as the milk of the Jerseys. But it more than makes it up in the quantity. A Holstein cow at the International Agricultural Exhibition at Amsterdam from September 7, 1883, to June 7, 1884, produced 14,223 pounds of milk. The record of Pietertje II. for one year is 30,182 pounds of milk.

"Mercedes Julipes Pieterje, a cow I developed myself, produced as a six-year-old in an official seven-day test 29 pounds and 3 ounces of butter.

"Sadie Voll Concordia, the present world's champion, not alone among the Holsteins but of all breeds, produced in an official test in seven days 697 pounds of milk which yielded 30 pounds and 10 ounces of butter. This test was made in New York State at the Cornell Experiment Station in 1903. This cow at the age of 13 years sold for \$2,300. A calf from this splendid cow, at the age of four weeks, sold for \$4,000.

"Now the Holstein is not only a milk producer without an equal but she is a beef producer as well. We will compete with the Short Horns on the beef production, a thing the Jerseys would never attempt. The Holstein is the practical and economical breed of cattle for the United States and it will be proven at the test this summer."

THE ANNUAL SALE OF JERSEYS AT "LINDEN GROVE."

We take great pleasure in calling the attention of our readers and dairymen especially to the advertisement of Mr. T. S. Cooper, Coopersburg, Pa., to be found on another page. As has been his custom for a number of years, Mr. Cooper will sell to the highest bidder, May 30th, his recent importation of Jersey cattle. To describe these cattle is an impossible task on our part, as Jersey experts who have seen the herd and passed upon it seem at an utter loss for proper descriptive adjectives. It is needless to say, however, that this sale will be equal to, if not surpassing, any of his previous efforts, and that is saying a great deal.

Be sure and refer to the ad. and send for a catalogue.

Local agencies and complete repair stocks everywhere

MILWAUKEE HARVESTERS

International Harvester Co. of America, Chicago, U. S. A.

Where to Sell Your WOOL

WE ARE THE LEADING DEALERS IN THE WOOL TRADE IN VIRGINIA.

HIGHEST MARKET PRICE PAID, and no Commission, Freight, &c. charged- SACKS FURNISHED FREE. Checks remitted promptly. Correspond with us when ready to sell.

THE WALLERSTEIN PRODUCE CO., 19 & 21 So. 13th St., Richmond, Va.

References: American National Bank and Richmond merchants generally.

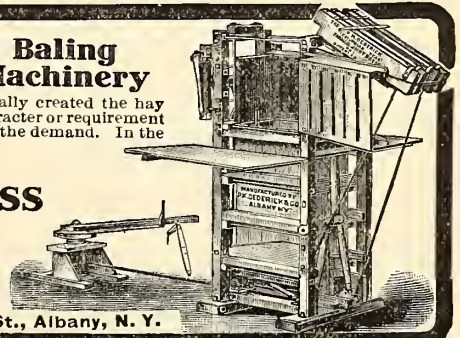
DEDERICK'S Baling Machinery

Designed and built by the man who practically created the hay shipping industry of the world. For every character or requirement of work, there is a Dederick Press to meet the demand. In the

COLUMBIAN BOX BALING PRESS

the disadvantages of the old-fashioned box press are removed by the invention of a new pressing power. Send for free catalogue with full detailed description of baling machinery of all kinds.

P. K. DEDERICK'S SONS, 87 Tivoli St., Albany, N. Y.



Masters Rapid Plant Setter

The only hand mechanical plant setter on the market. Avoids stooping and the drudgery of setting out Cabbage, Tobacco, Tomatoes, Sweet Potatoes, Sugar Beets, etc.

Sets Plants in Water

or liquid fertilizer at just right depth and so they stand erect. At its best when weather is driest and hand setting means failure to grow. Assures better stand of quicker starting, better growing plants. With a little practice one man will set 8,000 plants a day.

Ask your dealer for Masters Rapid Plant Setter. If he does not handle it send us his name and we will see that you are supplied. Write for particulars. Circulars free.

Masters Planter Co., 171 South Water Street, Chicago, Ill.

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.

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

PLANT INTRODUCTION GARDEN AND EXPERIMENT STATION.

The United States Department of Agriculture has decided to establish a Plant Introduction Garden and Experiment Station at Chico, California. Contracts for the necessary land have been closed and work has been begun on what will undoubtedly be the greatest institution of its kind in America and perhaps in the world. A beginning will be made with ninety acres but it is the intention of the Department to extend the area as the needs of the institution require. The garden will be devoted to experimental culture of the plants introduced from various parts of the world and to a careful study of plant life.

Such an institution has long been contemplated by the Agricultural Department. California was selected for its location on account of climatic conditions which admit of the culture of tender plants from the tropics and of Northern products as well. The ideal location for such an institution is that which admits of the successful cultivation of the widest possible range of products and the committee entrusted with the duty of selecting the site believe they have found it at Chico.

This committee was composed of Prof. P. H. Dorsett, Government Expert, who will have charge of the institution, and Prof. A. V. Stubenrauch, of the University of California, acting with Dr. A. J. Pieters, head of the division for seed and plant distribution. Messrs. Dorsett and Stubenrauch spent months in making a careful study of conditions affecting plant life in various portions of the State, visiting and carefully inspecting each locality likely to prove available. The decision in favor of Chico was reached sometime ago but the site selected could not be secured and another tract had to be chosen, which has now been done and the purchase consummated.

Chico is situated near the eastern border of the great Sacramento Valley, seventy-five miles north of Sacramento, the State capital, and was the most northerly point considered by the committee. Climatic conditions in California are affected but little if at all by conditions of latitude, the orange, the lemon and the olive being staple products of a district that measures fully five hundred miles north and south.

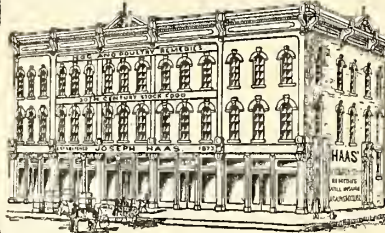
Don't rut your fields with narrow tires. Get a set of Electric metal wheels; save your horses, save your back, save repair bills and be happy. A good Wheel Sense booklet free. Address Electric Wheel Co., Box 146, Quincy, Ill.

SAVE YOUR HOGS

This can be done through my plan of treatment, which affords every swine raiser practically absolute protection against loss from disease and unthriftiness. Its great and continued success for more than 28 years is indisputable proof of my claim, but to make it doubly strong, I WILL INSURE HOGS AND PAY FOR ALL THAT DIE when they are fed my remedy, under the terms of my insurance proposition.

HOG BOOK FREE

"HOGLOGY," my book about hogs, fully explains my insurance proposition, and, in addition, contains a great fund of general information for the swine raiser, from which even the most successful will get many valuable pointers. Remember, this book is the work of a specialist; one who has spent a lifetime in the study of the care of hogs and the treatment of their diseases, hence is practical and useful. It will be sent FREE to any one who mentions the Southern Planter when asking for it.



Building owned and occupied by Dr. Jos. Haas.

Don't Wait Order a supply of Haas' Hog Remedy, and get started on the road to success, for there is no other way so sure, so safe or so inexpensive, results considered. Prices for the remedy: 25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; packages, \$2.50, \$1.25, and 50 cents. None genuine without my signature on package or can label.

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

MAGIC FOOD

ACTS LIKE MAGIC

Thirteen years' successful use has proven Manfield's MAGIC STOCK FOOD to be absolutely the best animal Tonic and system Regulator for HORSES, CATTLE, SHEEP and HOGS. It contains all the necessary requirements. It is purely vegetable, and is guaranteed to be safe and effectual, or money refunded. A hard winter on stock leaves them in a run down condition, and in such cases Magic Food is necessary. Stock and Poultry raising cannot be entirely successful without Magic Food. MAGIC FOOD is imitated. Get the genuine, avoid substitutes.

Every Farmer and Stock Owner who sends his address to the Magic Food Co., Chattanooga, Tenn., will receive free by mail a valuable book on the management of Stock and Poultry, and three nice colored pictures, without advertisements and well worth framing.

Magic Poultry food will KEEP THE FLOCK HEALTHY, and make hens lay. Sold by 3,000 dealers in 33 States.

If your dealer does not keep it, write to us.



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Can save you Money, save your Horse, save your Mule or save your Cow.

Home Treatment for Horses and Cattle.

Sick and Lame Horses Made Well. Weak Cows Made Strong. Better Breeders and Milkers. Book for the asking of your druggist or dealer, or send to

DR. A. C. DANIELS, 172 Milk St., BOSTON, MASS.

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A two-cylinder gasoline engine; superior to all one-cylinder engines. Costs less to buy and less to run. Quicker and easier started. Has a wider sphere of usefulness. Has no vibration; can be mounted on any light wagon as a portable. Weighs less than half of one-cylinder engines. Give size of engine required. Sizes 1½, 2, 2½, 4, 5, 6, 8, 10 and 15 horse power. Mention this paper. Send for catalogue. THE TEMPLE PUMP CO., Meagher and 15th Sts., CHICAGO.

Good Corn, per bushel	12c.	California Sherry Wine, per gallon.....	50c.
.....	65c.	(Sacks for corn and oats, 5c. extra.)	1.00

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

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Apr 9 1902

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You would like you plantation. we want to get
best price you would not we are interested
having inquiries about such places and if you
care to see we will be glad to visit it with our
own properties. we charge 5% for nothing. And you
can make arrangements for next visit any of the
parties we select you addresses up to 3 months to
hear from you when we remain
Very truly yours
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A two-cylinder gasoline engine; superior to all one-cylinder engines. Costs less to buy and less to run. Quicker and easier started. Has a wider sphere of usefulness. Has no vibration; can be mounted on any light wagon as a portable. Weighs less than half of one-cylinder engines. Give size of engine required. Sizes 1 1/2, 2, 2 1/2, 4, 5, 6, 8, 10 and 15 horse power. Mention this paper. Send for catalogue. THE TEMPLE PUMP CO., Meagher and 15th Sts., CHICAGO.



.....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.

MONEY SAVED HERE.

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.....	4½c.	Good Oats, per bushel.....	50c.
Arbuckle's Coffee, per lb.....	11c.	Best Timothy Hay, per ton.....	\$19.00
Best meal, per peck, 20c.; or, per bushel.....	70c.	No. 1 Mixed Hay, per ton.....	18.00
Pride of Richmond Flour, per sack, 35c.; or, per bbl.....	\$5.40	No. 1 Clover, per ton.....	16.00
Daisy Flour, per sack, 33c.; per bbl.....	5.25	Bran, per ton.....	23.00
Good Green Coffee, per lb.....	9c.	Ship Stuff, per ton.....	24.00
Best Salt Pork, per lb.....	10c.	Old Crown Rye, 5 years old, per gallon.....	3.00
Good Salt Pork, per lb.....	7c. & 9c.	Old Keystone Rye, 4 years old, per gallon.....	2.50
Best Butcher's Lard, per lb.....	10c.	Old Excelsior Rye, 3 years old, per gallon.....	2.00
Good Lard, 3 lbs. for.....	25c.	Old Capitol Rye, 2 years old, per gallon.....	1.50
Green, Black and Mixed Tea, per lb.....	35c., 40c. & 50c.	Pure N. C. Corn Whiskey, 2 years old, per gallon.....	2.00
Best Cheese, per lb.....	15c.	Pure N. C. Corn Whiskey, 5 years old, per gallon.....	2.50
Best Cut Herrings, 3 dozen for.....	25c.	Duffy's Malt Whiskey, per bottle.....	80c.
Best Roe Herrings, per dozen.....	18c.	O'Grady's Malt Whiskey, per bottle.....	75c.
Heavy Bright Syrup, per gallon.....	35c.	Apple Brandy, 3 years old, per gallon.....	2.50
Best Genuine N. O. Molasses, per gallon.....	60c.	Virginia Apple Brandy, 5 years old, per gallon.....	3.00
Good Dark Molasses, per gallon.....	25c. & 35c.	Geneva Gin, 3 years old, per gallon.....	2.00
Soaps, 8, 7, 6, 10 and 11 bars for.....	25c.	London Dock Gin, 5 years old, per gallon.....	2.50
Large Cans Tomatoes, per can.....	7c.	Wilson Whiskey, per bottle.....	1.00
Large Cans Table Peaches, per can.....	12c.	Buchu Gin, for kidneys, per bottle.....	1.00
3 Plugs Grape, Peach, Apple, Plum, Reynolds' Sun		Catawba Wine, per gallon.....	50c.
Cured Tobacco for.....	25c.	Blackberry Wine, per gallon.....	50c.
Best Lemons, per dozen.....	12c.	California Sherry Wine, per gallon.....	1.00
Good Corn, per bushel.....	65c.	(Sacks for corn and oats, 5c. extra.)	

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

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

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

UTTERLY IMPOSSIBLE.

Uncle Daniel Harmon's pastor was a vigorous temperance advocate. For years and years he had preached to the old man about the virtues of total abstinence, but had never succeeded in convincing his parishioner that it was wisest and best for him to part company with the "cussid stuff." At last one day, after long persuasion, the minister managed to extract from the old man a promise that he would not drink another drop. The Saturday night following the day on which this promise was obtained the parson met Uncle Dan on the street with a basket of groceries in one hand and a tell-tale "little brown jug" in the other.

"What you got in dat jug, Uncle Dan?" asked the parson.

"It's liquor!" exclaimed the old man; "it's liquor. It sho' is liquor, an' I ain't gwinetah lie 'bout it."

"Whose liquor is it?" inquired the minister.

"It b'longs to me an' Deacon Walkah—me an' Deacon Walkah, sah," said Uncle Dan, looking the questioner straight in the eye.

"Bruddah Harmon, you ain't forgot yo' promus so soon, is you?" asked Rev. Mickins. Uncle Dan made no reply.

"Set dat jug down—set it right down," commanded the parson, "an' po' dat whiskey right out on de groun'!"

The old man put the basket and the jug down. Then, straightening up, he said,—

"Bruddah Pastah, you knows I tries to 'bey you in ev'yt'ing—I sho' do; but I don't think you'd want me to follah yo' ordahs in dis mattah ef I tol' you it would cause me to treat Deacon Walkah wrong."

"I don't see," protested the preacher, "how you'd be treatin' Deacon Walkah wrong by po'in' out dat liquor."

"Ain't I done tol' you," explained Uncle Dan, "dat me an' Deacon Walkah went 'in cahoots' in buyin' dis liquor—dat ha'f uv it b'longs to him an' de udah ha'f b'longs to me?"

"Dat's so," said Rev. Mickins, "dat's so, Uncle Dan; well, den, you po' out yo' ha'f—I reckon you kin do dat!"

"Dat's onpossible," said Uncle Dan. "dat's onpossible; I can't po' out my ha'f 'dout po'in' out Deacon Walkah's ha'f."

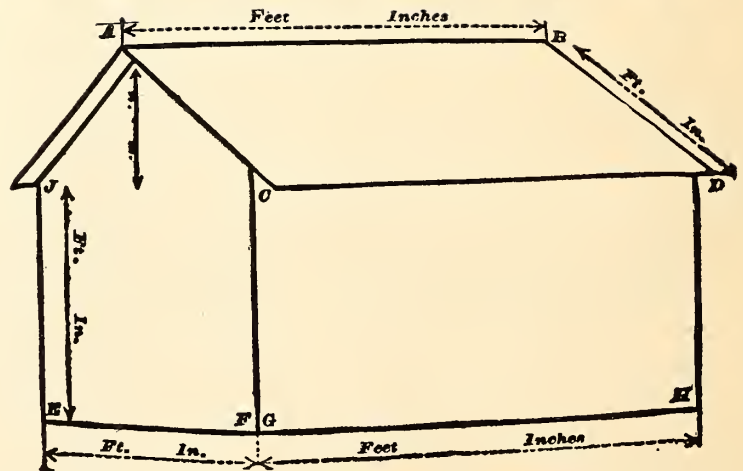
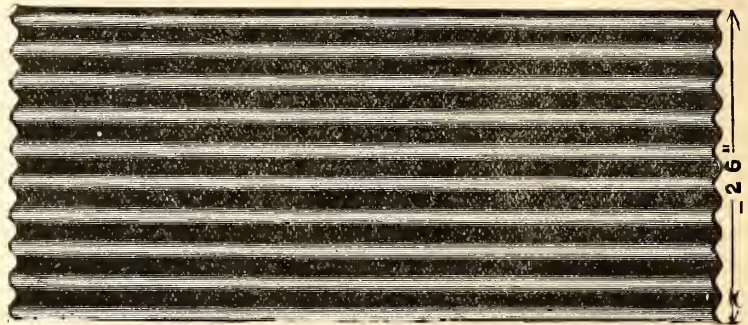
"How's dat?" asked the preacher. "How's dat?"

"Cause," said the old man, "Deacon Walkah's ha'f's on top, an' mine at de bottom!"—Silas Xavier Floyd, in *May Lippincott's*.

Valuable pamphlet "Diseases of Sheep and How to Cure Them" sent free by mail to subscribers to this paper on receipt of twelve names of sheep-owners by William Cooper & Nephews, 142 Illinois street, Chicago, Ill.

ROOFING OF ALL KINDS.

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



Fill in the Dimensions in the diagram, cut it out, mail it to us and we will quote you price on a sufficient quantity of whichever kind of roofing you desire.

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

Southern Railway Supply Company,

1323 East Main Street,

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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.

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R. R. GWATHMEY, Vice-President,

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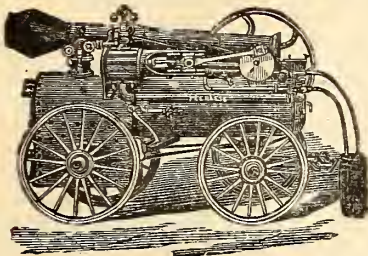
ESTABLISHED 1840.

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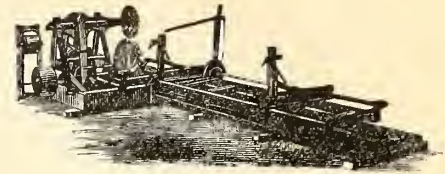
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Machinery, Vehicles and
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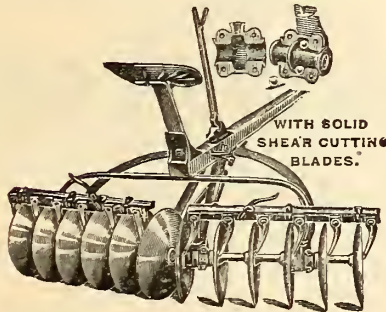


PEERLESS ENGINE.

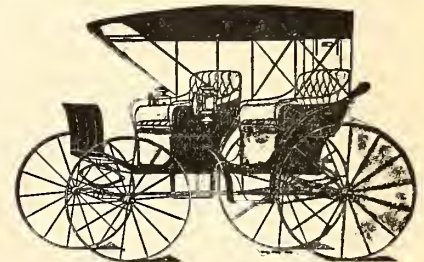


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THE BUFFALO PITTS ALL-STEEL, SPRING-FLEXIBLE, DISC HARROW.



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EXTENSION TOP SURREY.

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 fail.

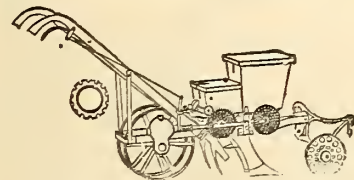
Hocking Valley Feed Cutters, Cyclone Shredders, Smalley Feed Cutters, Dain Corn Cutters. Equal to any made. Staver Buckeye Feed Mill and Horse Power Combined.

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.

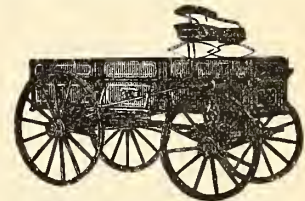
Hocking Valley Wine and Cider Mills. Hard wood rollers. The best mill made.

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.

John Deere and Continental Disc Cultivators, Corn Planters, etc. A full line of Planet Jr., Garden Tools. Your correspondence is solicited.



SPANGLER CORN PLANTER.



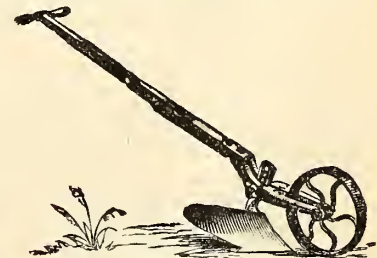
FISH and WEBER WAGONS.

THE SPANGLER CORN PLANTER WITH AND WITHOUT FERTILIZER ATTACHMENT.

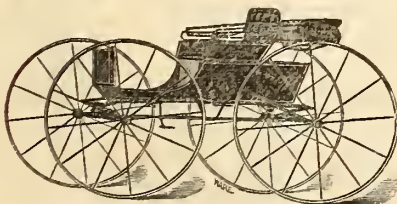
The Spangler Planter has a side gear which is convenient and practical. The quantity of corn to be dropped can be regulated instantly without changing the quantity of the fertilizer sown, or the quantity of the fertilizer can be changed without affecting the corn dropping, and either can be discontinued in an instant and not sow at all.

Hoosier Single and Double Row Planter, made entirely of steel, except handles—a very durable machine—Black Hawk, and John Deere single and double row planters.

We will mail copy of our new catalogue upon application.



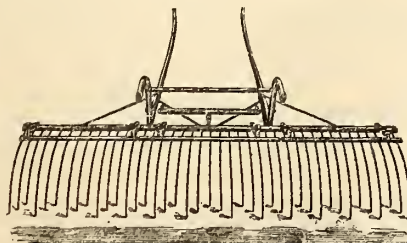
FIREFLY GARDEN PLOW.



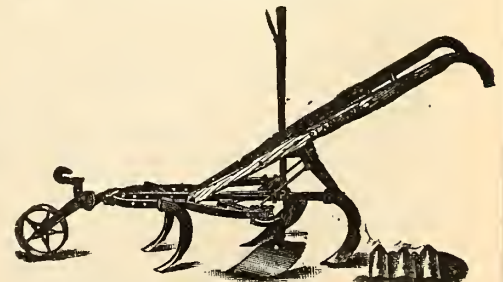
ALL STYLES OF BUGGIES.



SPIKE TOOTH HARROW.



BEMENT IMPROVED WEEDER.



COMBINED CULTIVATOR, AND HORSE HOE.



SOUTH BEND PLOW

THE WATT PLOW CO.,

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

FARQUHAR'S CATALOGUE.

Our well-known advertisers, The A. B. Farquhar Co., York, Pa., send us their 1904 catalogue. This company was one of the victims of the Baltimore fire, inasmuch as all the first plates of the catalogue were destroyed. Hence the delay in getting it out. Of course, all of our readers should have this catalogue. It contains full description of all the implements made by this firm. Thousands of our readers are patrons of this firm, and thousands of others should be. Don't forget to send for the catalogue. It's well worth having.

THE WELCOME WAG.

A gentleman was walking with his youngest son at the close of the day and in passing the cottage of a German laborer the boy's attention was attracted to the dog. It was only a common cur, but the boy took a fancy to him, and asked his parent to buy the animal for him, promising to take good care of it.

Just then the owner of the dog came home and was demonstratively met by the dog. The gentleman said to the owner:

"My little boy has taken a fancy to your dog and I should like to buy him. What do you ask for him?"

"I can't sell dat dog," said the German.

"Look here," said the gentleman. "that is a poor dog, but as my boy wants him I will give you a sovereign for him."

"Yaas," said the German, "I knows he is very poor dog, and not vort much but der ish van leetle ding mit dat dog I can't sell—I can't sell de vag of his tail ven I comes home at night."

The May Century's features of war interest will be "Unhappy Korea" and "Korea, the Bone of Contention," both from authorities. The Rev. Arthur Judson Brown, D. D., author of "The New Era in the Philippines," is secretary of the Board of Foreign Missions of the Presbyterian Church. He has traveled in Korea and knows the conditions whereof he writes, conditions which may well make Korea unhappy. Homer B. Hulbert, who contributes the account of "Korea, the Bone of Contention," will be remembered as author of "The Sign of the Jumna" and narrator of "In Search of a Siberian Klondike." He has been editor of the Korea Review of Seoul for some years and has made a study of Korean history, ethnology, etc. His article will discuss the probable fate of Korea in the event of either Russian or Japanese victory; and will touch upon how the result of the war must affect America and American interests.

"Set 40 acres of cabbage plants last year with four of your setters—never had such a good stand before." Read Masters, Planter Co.'s ad.

Your money back

if you are not satisfied

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

DO YOU SUPPOSE we would jeopardize our standing with the public and our chances of still greater success by failing to fulfil any promise we make?

DO YOU SUPPOSE we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

WE KNOW we can please you and save you money, for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

4 FULL QUARTS \$3.20 EXPRESS PREPAID

We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

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

Write our nearest office and do it NOW.

THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.
156 DISTILLERY, TROY, O. ESTABLISHED 1866.



The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and

THROUGH ITS CONNECTIONS....

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

THE OHIO CENTRAL LINES, from Toledo and Columbus;

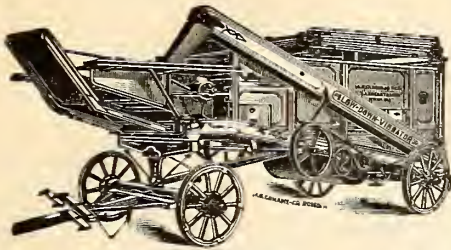
THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

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

To STAUNTON, LYNCHBURG, CHARLOTTESVILLE, RICHMOND, PETERSBURG, NORFOLK, And Principal Virginia Points.

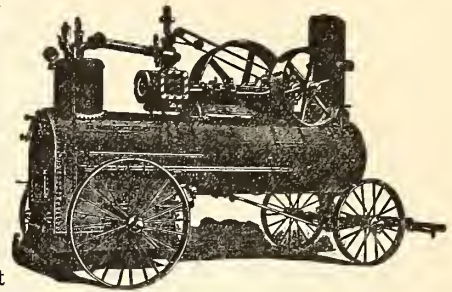
H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

Farm Implements and Machinery.



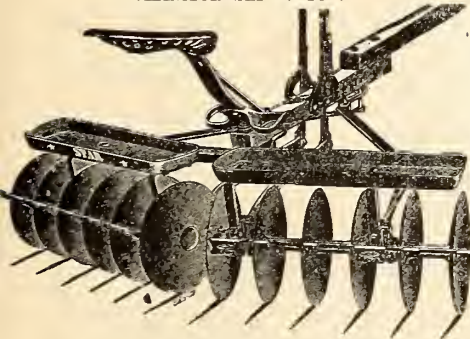
VIBRATOR SEPARATOR.

THE BEST THRESHING OUTFIT for a thresherman to buy is the Ajax Threshing Engine and Farquhar Separator Engines from 4 h. p. up. Easy steamers develop more than rated horse power. Have driver's seat, foot brake and two injectors. Separators of all sizes with latest improvements, thresh and clean all kinds of grain perfectly.



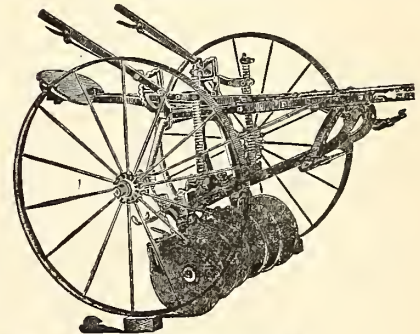
PORTABLE ENGINE.

DISC HARROWS with or without solid steel weight boxes. Most durable bearing with oil reservoir directly over axle free from dust and clogging. Anti Friction Rollers. Adjustable Seats. Easy to handle. Light in draft.



STAR HARROW—Steel Weight Boxes.

ALL STEEL LEVER HARROWS made up of sections of 25 teeth each. Instantly adjusted straight or slanting by lever.



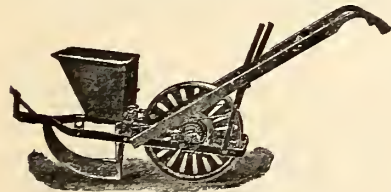
DISC CULTIVATOR.

THE EMPIRE CORN PLANTER with or without fertilizer attachment The Lightest Planter Made. Plants any quantity and distance accurately.

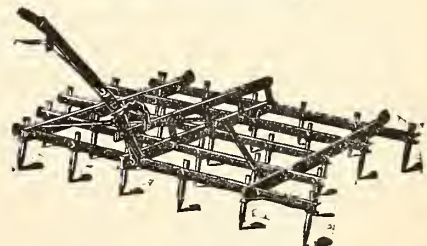
DOUBLE ROW PLANTER with or without Check Rower, Drill and Fertilizer attachments. Adjustable in width, distance of drop and quantity.

DISC CULTIVATORS and HARROW combined. Made of steel and malleable iron. Light Draft, Great Strength, High Steel Arch, Steel Axle, Steel Wheels, adjustable in width. Discs adjustable in depth and at any angle.

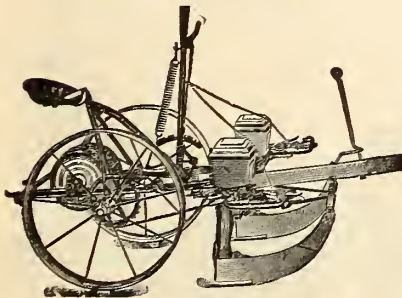
WALKING AND RIDING CULTIVATORS with four, six or eight shovels and spring teeth.



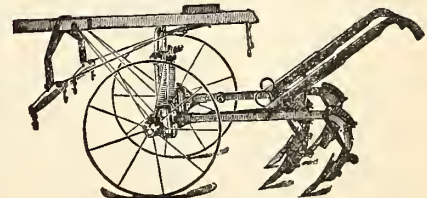
SINGLE ROW PLANTER.



LEVER HARROW



DOUBLE ROW PLANTER.



WALKING CULTIVATOR.

THE MILWAUKEE LINE OF HARVESTING MACHINERY. Binders, Mowers and Rakes. Light Draft, with greatest strength, durability and perfection in work.

THE NEW MOLINE AND IMPERIAL WAGONS. Built of air dried timber, and all material the best.

IRON AGE PATTERN CULTIVATORS AND HARROWS. MALTA DOUBLE SHOVEL PLOWS, FIELD ROLLERS, with Solid Steel Head. BALING PRESSES for hand and power.

GRAIN DRILLS, FERTILIZER DISTRIBUTORS, MANURE SPREADERS, FEED CUTTERS, PEA HULLERS, SAW MILLS, GRINDING MILLS, etc. Write for prices.

13 So. Fifteenth Street,
Between Main and Cary.

Established by
GEO. WATT, 1840.

THE CALL-WATT CO.,

MANFRED CALL, Gen'l Manager.

RICHMOND, VA.

Our Clubbing List.

The following list of papers and periodicals are the most popular ones in this section. We can SAVE YOU MONEY on whatever journal you wish:

DAILIES.		
	Price Alone.	With Planter.
Times-Dispatch, Richmond, Va.....	\$5 00	\$5 00
The Post, Washington, D. C.....	6 00	6 00
The Sun, Baltimore, Md.....	3 00	3 40
News-Leader, Richmond, Va.....	3 00	3 00
THI-WEEKLY.		
The World (thrice-a-week), N. Y....	1 00	1 25
WEEKLIES.		
Harper's Weekly	4 00	4 00
Harper's Bazaar	1 00	1 40
Montgomery Advertiser	1 00	1 00
Nashville American	50	75
The Baltimore Sun	1 00	1 35
Breeder's Gazette	2 00	1 75
Heard's Dairyman	1 00	1 35
Country Gentleman	1 50	1 75
Religious Herald, Richmond, Va....	2 00	2 25
Times-Dispatch, Richmond, Va.....	1 00	1 25
Central Presbyterian, " ".....	2 00	2 25
Horseman	3 00	3 00
MONTHLIES.		
Wool Markets and Sheep	50	75
Dairy and Creamery	50	75
Commercial Poultry	50	75
All three	1 50	1 15
North American Review	5 00	5 00
The Century Magazine	4 00	4 25
St. Nicholas Magazine	3 00	3 25
Lippincott's Magazine	2 50	2 50
Harper's Magazine	4 00	4 00
Forum Magazine	3 00	3 25
Scribner's Magazine	3 00	3 25
Frank Leslie's Magazine	1 00	1 35
Cosmopolitan Magazine	1 00	1 35
Everybody's Magazine	1 00	1 35
Munsey Magazine	1 00	1 35
Strand Magazine	1 25	1 65
McClure's Magazine	1 00	1 35
Argosy Magazine	1 00	1 35
Review of Reviews	2 50	2 75
Poultry Success	1 00	75
Rural Mechanics	1 00	55
Blooded Stock	50	60
Successful Farming	1 00	75
Southern Fruit Grower	50	35

Where you desire to subscribe to two or more of the publications named, you can arrive at the net subscription price by deducting 50 cents from "our price with the PLANTER." If you desire to subscribe to any other publications not listed here, write us and we will cheerfully quote clubbing or net subscription rates.

Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the PLANTER or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish NO SAMPLE COPIES of other periodicals.

Seed House of the South.

RED CLOVER,
MAMMOTH CLOVER,
CRIMSON CLOVER,
WHITE CLOVER,
LUCERNE CLOVER,
ALSYKE CLOVER,
BOKHARA CLOVER,
JAPAN CLOVER,
BUR CLOVER,



TIMOTHY,
ORCHARD GRASS,
RED TOP or HERDS GRASS,
KENTUCKY BLUE GRASS,
RANDALL GRASS,
TALL MEADOW OAT GRASS,
JOHNSON GRASS,
GERMAN MILLET,
BUCKWHEAT,
OATS and CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are RAGLAND'S PEDIGREE TOBACCO SEEDS.

WE ALSO SELL

Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

Wm. A. Miller & Son,

1016 Main Street, LYNCHBURG, VA.

Headquarters for Nursery Stock.

WHOLESALE AND RETAIL.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

AGENTS WANTED.

FRANKLIN DAVIS NURSERY CO., Baltimore, Md.

HOW TO LIVE TO 100.

I find that the information usually sought from me is as to my food and habits of life, that may show why my life has been extended beyond the usual span. As to food, I have been accustomed to eat oatmeal porridge and milk from my childhood, and I still use it for the principal part of my breakfast, with a single cup of black tea and a slice of plain bread after it. I consider it both wholesome and nutritious. Till quite late in life I ate butchers' meat, I did not care how fat, but the fat began to disagree with me, and I have made it a rule to eat nothing that disagrees with my digestion, no matter how palatable. I have, therefore, for many years, eaten neither beef or mutton or pork in any form. I take instead a little fowl or fish with my cup of tea at mid-day for dinner, and at six o'clock I find a cup of tea and a slice of bread is all I need. My cup of tea is my only dessert; I eat no pie or pudding, drink nothing stronger than tea, eat no suppers, go to bed at or before ten o'clock and rise these dark mornings about half past seven.

I now ask my young readers to open their Bibles at the 25th chapter of Matthew, and read from the 31st verse to the end, and learn that, whether life is long or short, the important point is to be prepared for its end.—Senator Wark, in the Globe.

"Have you no pride?" "Naw," replied the street beggar. "But I'm goin' ter lay in er supply when it gits er trifle cheaper." "Gets cheaper!" "Yep, Pride, dey say, is bound ter have er fall."

Men love women for what they lack, for the promises they break—and for the things they leave undone.

**REGISTERED
GUERNSEY CATTLE**

Of all ages, for sale, including a 2-year old Bull, from a tested dam.

**G. M. WALLACE,
FALMOUTH, VA.**



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.

Our PHOTO DEPARTMENT

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.

THE S. GALESKI OPTICAL CO., 8th and Main Sts., Richmond, Va.

THE GREAT ROLLER SWING.

A table may be placed on the foot platform and eating or games can be engaged in while you swing. The old lawn swing put out of business.



A Joy In Hot Weather.

Operates as easily as a rocking chair. Is an ornament to any lawn or porch, and with our handsome patented tilting CANOPY TOP you do not need a shady place. Very ornamental and makes a pretty effect. It is handsome, strong, and well made, carrying four adult passengers and all the kids in the neighborhood.

First, there is a lower platform with two short concave tracks on each end, and on this is placed the foot platform which is hung on four flanged wheels. The upper platform carrying the seats has at each corner a curved steel track riding upon the circumference of the flange wheel of the foot platform, giving an easy motion like the ball bearings of a bicycle. The slightest movement of the feet swings the upper platform two feet each way. The motion is delightful. Old and young all enjoy it. Will not give you that uncomfortable sensation of sea sickness. Good-bye to the old style high swing with its squeaky noise, sea sickness, as big as all outdoors, and liable to catch the hand or arm when the body of the swing passes the upright frame.

Big fun for children. Delightful and refreshing for the old folks. Keeps the children at home and brings them good company. Is as much fun as a merry-go-round or playing railroad train. The old folks enjoy it, the young folks are delighted with it. Children never tire of it, while the nurse and baby can use it all the time. Newest, Latest and Best. Delightful movement; easy, pleasant and cool. If you want to be certain of getting one of these swings this spring, place your order NOW.

RICHMOND ENGINE & PUMP CO.,

1422 Main Street,

RICHMOND, VA.

A LIBERAL OFFER.

3 Months Trial Subscription

TO THE

SOUTHERN PLANTER

FOR 10 CENTS OR 3 FOR 25 CENTS.

This liberal offer should be accepted by thousands who are not now readers.

Send in at once.

The SOUTHERN PLANTER, Richmond, Va.

Courtland, Ala., April 1, 1904.
 Jos. Haas, V. S., Indianapolis, Ind.
 Dear Sir,—I have been using your Hog Remedy for about two years, but will say I have not used enough, or not as much as I should. I have raised in the two years something near 75 hogs, have had very few sick and only one to die. I think all swine raisers should use your Hog Remedy. Enclosed please find postal money order for \$6.50 for another half can. Ship by express. Yours very respectfully,
 WM. PRICE.

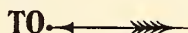
"We-ell, some ways I'd like to an' some ways I wouldn't," said Farmer Bentover, when the suave dispenser of encyclopedias had paused in his siren song.
 "You see, if I was to sign for that 'ere cyclopedee in forty-seven parts, including the index and appendicitis, I'm sorter afraid I'd hev to work so hard to pay fer it that I'd be too tired to enjoy readin' it; while if I read it at my leisure, as I ort to, in order to get the good of it, I wouldn't have time to ern the price. So, all things considered, I'll have to deny myself the privilege, as it were. Looks sorter like rain off to the sou'east, don't it?"

Stop! Look!! Listen!!! Read
 Masters Planter Co.'s ad.

THE
SEABOARD

AIR LINE RAILWAY

OFFERS THE MANUFACTURER,
PROFITABLE THE STOCK RAISER,
INVESTMENTS THE DAIRYMAN,
 THE FRUIT GROWER,
 THE TRUCKER.



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, EDW. W. COST, CHARLES B. RYAN,
 Gen. Industrial Agt., Portsmouth, Va. Traffic Mgr. Gen. Pass. Agt., Portsmouth, Va

When corresponding with our advertisers always mention the
Southern Planter.

RICHMOND ENGINE & PUMP CO.,
 1422 MAIN STREET.

MORE OF OUR ENGINE outfits in use to-day, than the combined output of any three of the largest concerns in existence:

If you wish proof, write us for any number of names of those whom we have supplied in nearly every county in Virginia and North Carolina.

- Draws Water,
- Saws Wood,
- Shells Corn,
- Cuts Feed,
- Turns Grindstone.

What other one thing can possibly take the place of labor to such great extent?



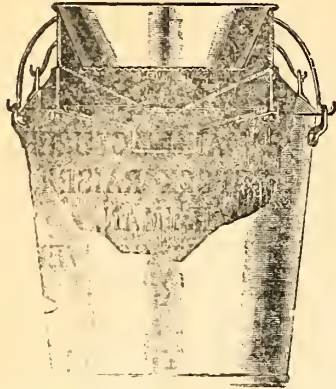
LABOR CAN BE COUNTED ON NO LONGER, don't rob yourself of all the pleasure of living by PUTTING OFF, PUTTING OFF that which is in your reach and will contribute so largely to the health and comfort, of those about you: Hot weather is coming and you will need water. Our's is NOT THE ENGINE WHICH IS EVER OUT OF ORDER, which requires a machine shop by it and that's the reason we are so far in the lead.

WRITE FOR CATALOGUE, ETC.

RICHMOND ENGINE & PUMP CO., - Richmond, Va.

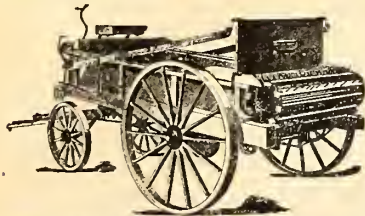
Latest Improved FARM IMPLEMENTS.

ANTI-DIRT MILK PAIL..



Only pail made that prevents Dirt and Hair from dropping into the Milk and STRAINS IT TWICE while milking. Aerates and cools it.

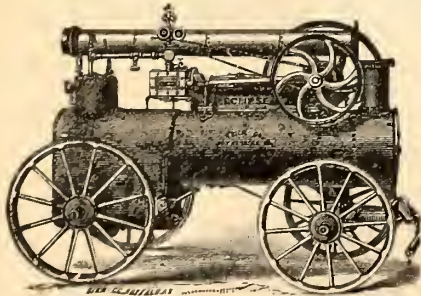
Every Farmer and dairyman Should Have it.



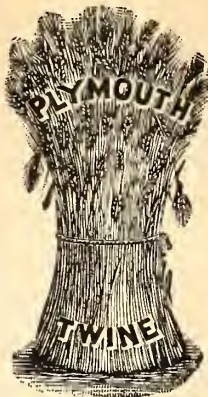
Kemp's Improved Manure Spreader. Three Sizes. 19. S. B.



DONT FORGET! All the merchants in town who claim to sell Oliver Gilled Plows and Repairs only sell the Imitation, Bogus, Cheap Goods. The only place in Richmond, Va., to buy Genuine Oliver Plows and Repairs is at 1436 and 1438 E. Main Street.



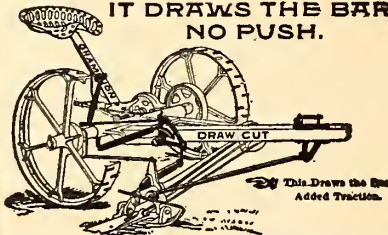
Frick and Aultman and Taylor Engines, Saw Mills and Threshers. Special prices given on Studebaker and Brown Wagons, Buggies, and Carts. Superior Grain and Fertilizer Drills. Hoe and Disk.



The Celebrated **Plymouth Twine,**

Even, Smooth, Strong, - Full Length. Every Ball Warranted.

IT DRAWS THE BAR- NO PUSH.



THE WHEELS WILL NOT LIFT FROM THE GROUND. CHAMPION Mowers, Reapers, Binders, Hay Rakes and Twine.



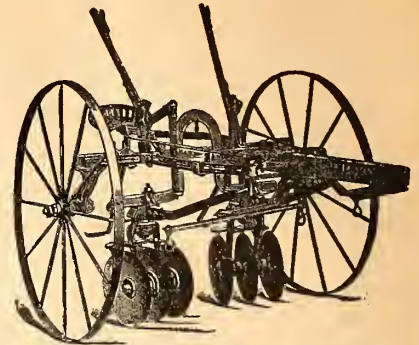
TIGER Steel and Wood Self-Dump Rakes, GRANGER Steel and Wood Hand Dump Rakes. all sizes.



Michigan Wheelbarrow Sower. Three Sizes. Cahoon Seed Sower.

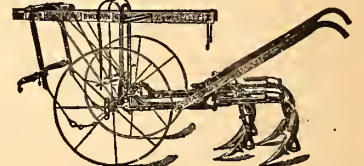


Tiger Disk Harrows. Plain and Lever Spring Tooth Harrows. All Sizes.



Bement Disc Cultivator, with 6 or 8 Disc.

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.



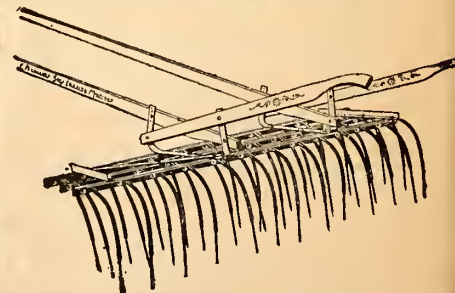
Genuine BROWN Walking and Riding Cultivator. All styles. Write for circular and prices.



One and Two-Horse Planter, Plain or with Fertilizer Attachment.

Smith's EUREKA Corn Planters. FARMER'S FRIEND Plain and Fertilizer Planters.

TIGER Double-Row Plain Planters. TIGER Double-Row Planters with Fertilizer and Check Rower Attachment.

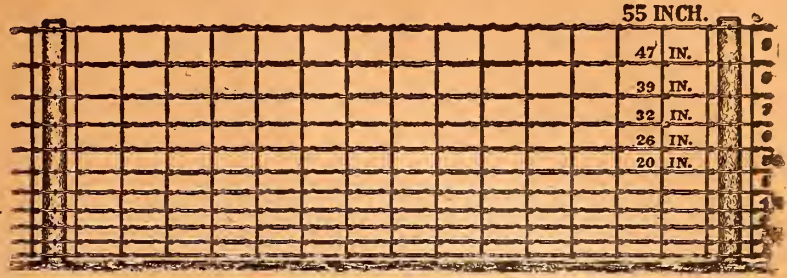


Hallock Flat Tooth Weeders. "Bement" Improved Duplex Tooth Weeders. Ross Ensilage Cutters, Fodder Cutters, Fodder Shredders, Powers, all sizes. Write for circulars and prices.

HENING & NUCKOLS, Successors to CHAS. E. HUNTER, 1436-38 E. Main St., RICHMOND, VA.

WHY USE DANGEROUS BARB WIRE

WHEN AN
**ATTRACTIVE WOVEN
 WIRE FENCE**
 CAN BE BOUGHT AT EVEN
 LESS COST?



THE AMERICAN FIELD FENCING Is made in many heights and styles for turning the smallest to the largest animal. Write for special catalogue and prices.

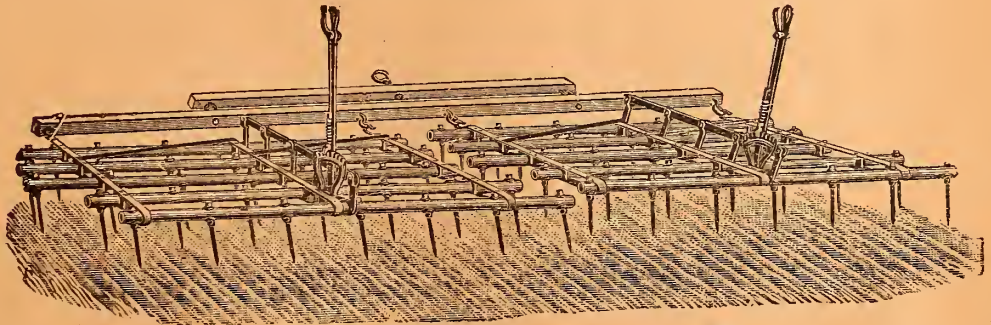


We have a large stock of **BARB WIRE, POULTRY NETTING, and V CRIMP ROOFING**, and can fill orders promptly.

STEEL FRAME LEVER SMOOTHING HARROWS.

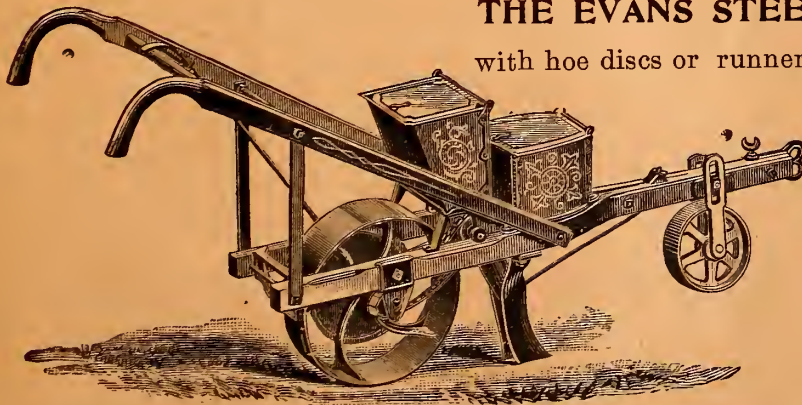
All sizes for one, two or three horses.

WOOD FRAME SMOOTHING HARROW for one or two horses.



THE EVANS STEEL FRAME CORN PLANTER

with hoe discs or runners, drops accurately any desired distance. Furnished with or without fertilizer attachment.



EVANS TWO ROW CHECK OR DRILL PLANTER has positive force feed, and never misses a hill. Send for special catalogue and prices.

Buggies, Carriages, Harness, Robes, Steel Skein Farm Wagons, Corn Shellers, Feed Cutters, Grain Drills, Wood Saws. All kinds of Agricultural Implements and machines. Catalogue on application.

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

How is Your Wheat?

ONE CENT Invested in a postal card and addressed to
**THE CARDWELL MACHINE COM-
PANY, Richmond, Virginia,** will bring you circulars regarding

Gardwell's Thresher and Cleaner

They are **SIMPLE, DURABLE** and **EASY TO WORK.**
Capacity, 200 to 1,000 bushels of wheat per day, according to size
and character of grain.

THE CARDWELL MACHINE CO., Nineteenth and Cary Sts
RICHMOND VIRGINIA.

OUR \$50 "KETCHER."

This name fits this

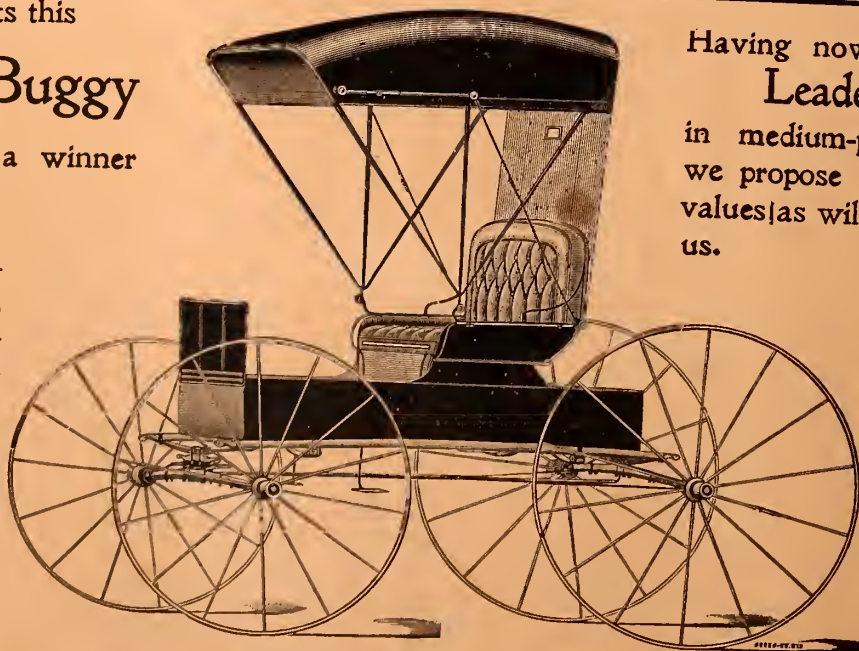
Virginia Buggy

admirably. It is a winner
wherever used.

Right up-to-the-
minute in design,
honestly and strong-
ly built, very rea-
sonable in price.

We also build all
other styles of light
pleasure vehicles.

Write for our in-
teresting catalog.



Having now gained the
Leadership
in medium-priced work,
we propose to give such
values as will keep it with
us.

RICHMOND, BUGGY AND WAGON CO., 1433 E. Main Street, Richmond, Va.

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