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Sixty-Third Year.

# Southern Planter

A MONTHLY JOURNAL

DEVOTED TO

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

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## CONTENTS.

### FARM MANAGEMENT:

Editorial—Work for the Month.....	447
“ Grass Seeding.....	449
Green Manure.....	451
Crimson Clover.....	452
Grass Seeding.....	453
The Stolen Crop—Pumpkins—Cucurbita Maxima... ..	453
The Chinch Bug Campaign.....	454
Enquirer's Column (Detail Index, page 479).....	455

### TRUCKING, GARDEN AND ORCHARD:

Editorial—Work for the Month.....	460
“ Fertilizing the Orchard.....	461
Longevity of Peach Tree—Late Irish Potatoes— Fall Cabbage—Celery.....	461
The Imperfect Distribution of the Strawberry Crop of the Country.....	461
Grape Rot Prevention.....	462
Red Clover a Paying Crop.....	462
Utilizing Corn-Stalks.....	462

### LIVE STOCK AND DAIRY:

Jerseys at Biltmore, N. C.....	463
The Stomach Worm in Sheep.....	463
Dairying in Virginia.....	465
The Lawrence-Kennedy Milking Machine.....	465
Sick Cows.....	466
A Preliminary Report on the Use of Blackleg Vac- cine in Virginia.....	466
A Canadian Example.....	467

### THE POULTRY YARD:

The Breeding of the Pekin Duck—Selection of Breeding Stock—Handling and Marketing Duck- lings.....	468
Sore Heads.....	469
Feeding Chickens for Growth ....	469
Poultry Notes.....	670

### THE HORSE:

Notes.....	471
------------	-----

### MISCELLANEOUS:

Editorial—The New Constitution of Virginia.....	473
The Compound Farmer.....	474
Disappointments in Farming.....	474
The Education of the People—Declaration of Prin- ciples.....	475
Let us Have Telephones.....	476
Draft of Vehicles and Implements and Construc- tion of Wagons.....	476
Editorial—Ice House.....	477
Technical Teaching in Public Schools.....	477
New Wheat.....	478
Mating for Early Lambs.....	478

PUBLISHER'S NOTES.....	479
------------------------	-----

ADVERTISEMENTS.....	479
---------------------	-----

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# The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

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Agriculture is the nursing mother of the Arts.--XENOPHON.

Tillage and pasturage are the two breasts of the State.--SULLY.

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63d Year.

Richmond, August, 1902.

No. 8.

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## Farm Management.

### WORK FOR THE MONTH.

A much higher range of temperature having prevailed during the month of July up to this writing, accompanied by seasonable rains at frequent intervals over a great part of the Southern States, has much improved crop conditions generally, and there seems now every probability of a fair yield, both of corn, cotton and tobacco, though in some sections of this State and North and South Carolina there is complaint of some injury from drouth. Both the corn and cotton crop of the South is grown on a larger area than was harvested last year—the corn crop alone showing an increase of over 2 per cent. Tobacco in Virginia is planted on a less area by 4 per cent., and being late planted, much of even this reduced area is not likely to make a heavy yield. In North Carolina, there is an increased area planted of about 9 per cent., and the condition is nearly up to the ten-year average, thus indicating a considerably larger crop. The corn crop of the whole country promises to be the largest ever made. It is planted on an area of 3,500,000 acres more land than was harvested last year, and the condition on the 1st July was nearly up to the ten-year average. Since that date, however, considerable damage has been done the crop by excessive rains and floods in some sections of the West, whilst drouth has injured it largely in Texas and to some extent in one or two other Southwestern States. Great loss has been sustained in the winter and spring wheat crop in the Northwest by continuous rains and floods. At

the time of this writing, hundreds of acres in the Mississippi Valley are under water, with the crops either washed away or completely ruined. This must make a considerable effect in the total yield of the wheat crop, which, we believe, will be found to be even more deficient than we indicated in our last issue. In this State, threshing returns are proving more encouraging than the crop in the field promised, though we hear of few large yields and of many very small ones. The spring oat crop in this State has threshed out better than was expected, and the indications are for a large crop in the whole country. The hay crop of the South is short, but in the great hay-producing sections the yield is heavy. Fruit is a failure in the South, and not up to the average anywhere except in a few small sections. Live stock of all kinds continues in strong demand at increasing prices. With the promise of plenty of feed, lean stock is being sought up by feeders everywhere. It promises to pay those who have heeded our advice to breed and keep stock—to give them all they can eat and make them as thrifty and weighty as possible.

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Forage crops have made great progress during July, and bid fair to make good the deficiency in the hay crop in the South. These crops are much more largely grown now than ever before, as their value is being realized. There is no reason whatever why every farmer should not have abundance of keep for the winter for all the live stock he can carry on his



farm at any season of the year; and this live stock is the true means whereby he can secure profit from his farming operations, and at the same time increase the fertility of his land and save money on fertilizers. It is not too late yet to increase the quantity of this feed, as peas, sorghum and millet may yet be sown with the certainty of making good hay; but there should be no time lost in getting the seed sown.

The harvesting of these forage crops will require attention as they become fit for curing. Cow peas should be cut for hay when the first pods are turning yellow. A grain reaper is the best machine to use for the purpose, as the cut vines are by its use put out of the way of the team when coming round again, and the peas are not threshed out by the horses treading on them. If a reaper is not at hand, the crop may be cut with a mower, in which case a man or two should follow the machine with forks and throw the cut peas out of the way of the team on the next round. There is an attachment now being sold (advertised in our columns a month ago) for fixing to the mower, which will obviate the necessity for the men following the machine. Let the peas lie as cut until thoroughly wilted, then rake them into windrows and let them continue to cure there until most of the moisture is out of them, then put into cocks to complete the curing. The cocks should be examined when they have stood twenty-four hours, and if they feel cold and damp in the centre, should be opened out so that the sun and wind can penetrate them and dry off this dampness. The vines may then be hauled into the barn and be packed away tightly. They will heat considerably, but if not disturbed will come out all right after the heating is over. If disturbed, they are sure to mould. If hauled and stored when damp with rain or dew, they are certain to spoil. Be particular to dry off all dampness so acquired. If from threatening weather it becomes necessary to store before properly cured, the hay will cure out and keep if stored with a layer of wheat straw put into the mow between each load. This straw will be eaten by the stock readily, as it acquires much of the flavor of the pea hay, and in this way the quantity of feed may be largely increased.

Cow-peas and sorghum should be cut before the sorghum stalks become hard, and will be found easier to cure than peas alone, as the sorghum keeps the vines from becoming so compact as to keep out the wind and sun. Sorghum alone should be cured as described in our May issue. Millet should not be allowed to stand until the seed forms, but be cut when in bloom. When partially cured, put up in cocks and cure out, and thus keep the color and sweet smell of the hay.

In our last issue we wrote at length on the seeding

of Crimson clover. We refer our readers to that article. The work of seeding this clover should be continued at intervals until October, and always seed with it some wheat or winter oats. In this way some part of the seed sown is sure to make a stand, and when it fails the wheat or oats will make a winter cover.

Sand vetch, sometimes called Hairy vetch, can commence to be sown this month, and may be sown up to the end of October. This crop makes a more certain stand than Crimson clover—indeed, it rarely fails. Sow 20 pounds of seed to the acre with half a bushel of wheat or winter oats. It makes a great crop for cutting for green feed in the spring or for hay. In an experiment made in Tennessee sand vetch grown alone yielded  $7\frac{1}{2}$  tons of green forage to the acre and  $1\frac{1}{2}$  tons of cured hay. When grown with wheat it made  $3\frac{1}{2}$  tons of hay, and with oats  $1\frac{1}{2}$  tons per acre. It is valuable as an improver of the land, making an excellent green fallow to plow down for the corn crop. An average crop will supply as much nitrogen to the acre as a ton of cotton-seed meal.

The work of preparing the land for the wheat and winter oat crop should receive attention. Although much too early to think of sowing these crops it is none too early to begin breaking and preparing the land. Experiments made in many different sections all emphasize the fact that early plowing and frequent and perfect cultivation of the land for a period of six weeks or two months before sowing the seed has more influence on the yield of the wheat and winter oat crop than even the quantity of fertilizer applied to the land. Set the plows to work as soon as the land is in good plowing order, and plow deeply. Follow with a heavy harrow as soon as possible so as to break the furrow slices, and thus conserve the moisture and encourage the germination of weed seeds. If at all cloddy, roll and then harrow again. Repeat this as often as can be conveniently done, and thus get rid of weeds and secure a fine compact seed-bed. These are essentials to a good wheat crop.

Do not let weeds seed on your stubble lands or on lands which were seeded with grass and clover in the fall or spring. Run the mower over these before the weeds are in bloom, and leave the cut weeds for a mulch.

Turnips should be sown this month. They make the best bulbs grown in rows two feet six inches apart, and thinned out so as to stand eight or ten inches apart in the rows. The land should be made rich with farm-yard manure and acid phosphate and be reduced by frequent cultivation to a fine state of



tilth. Two pounds of seed will sow an acre in drills. Three or four pounds should be sown broadcast. Keep free from weeds and cultivate frequently. We have grown twenty tons to the acre, and ten ought easily to be grown.

Rape may be seeded this month for a sheep and hog pasture. It is best grown in rows like turnips and cultivated once or twice, but will make a fine crop sown broadcast. Sow two pounds of seed in rows, or three to four pounds broadcast.

We see the advice given frequently to sow turnips (cow-horn turnips) as an improver of land. Do not listen to this. It is a fallacy. We have grown hundreds of acres of turnips but never yet were able to do so without first making the land rich with manure and always finding that the crop had largely exhausted this when harvested. Turnips add nothing to the land but what they take from it, and are therefore not improvers.

Do not pull any fodder but cut the corn up at the root as soon as the ears are glazed and dented, and set in shocks to cure. Fodder pulling injures the yield of grain and leads to the wasting of a large part of the crop. Nearly one-half of the nutritive value of the corn crop is in the stalk, shuck and blades, and this ought all to be saved and fed.

#### GRASS SEEDING.

Each succeeding year brings us more enquiries as to how to secure a good stand of grass than the past one, a sure indication that Southern farmers are at last beginning to appreciate that grass and hay is a crop in which there is profit to the grower and improvement to the land. This tendency to abandon arable for grass land is one that is going to be intensified by existing economic causes. Arable cultivation, especially in cotton and tobacco crops, demands an abundance of cheap and readily available labor. Whilst trade was languishing, and the South had not entered the field of commercial activity, this labor was here abundant and ready at all times to be commanded at low wages. Now conditions have changed and the cry is that labor is scarce, unreliable and dear. This is affecting farmers seriously, and is going to bring about a change in the system of farming. Arable land is going to be put down to grass and more live stock be kept. This is a change greatly to be desired in the interest of farmers themselves and also of our lands. No grass country is ever long a poor one. The richest agricultural sections in this country and the Old World are those in which grass lands are the most extensive

and there the greatest degree of home comfort is to be found. A large farmer said to us a few days ago, "I am bound to make a change in my system of farming. I will reduce the area of my arable lands, farm them more intensively, and thus get a greater yield per acre, and put down into permanent grass a large part of my farm and keep a much larger head of live stock. There is money in stock when rightly bred and fed, and but little profit in the production of arable crops with the present high rate of wages for labor." He was right, and it is going to be profitable for all Southern farmers to follow his example. Compare for a moment the return made from a crop of corn, or a crop of wheat per acre, with that made from a crop of hay. The average annual yield of corn in Virginia for the last five years has been 19½ bushels to the acre. The average annual value of that yield for the five years has been \$8.49 per acre. In North Carolina the average annual yield for five years has been 12½ bushels per acre. The average annual value of that yield for the five years has been \$8.61. In South Carolina the average annual yield for five years has been 8 bushels per acre. The annual average value of that yield for the five years has been \$4.76. The average annual yield of wheat in Virginia for the last five years has been 11 bushels to the acre. The average annual value of that yield for the five years has been \$8.53. In North Carolina the average annual yield of wheat for five years has been 8 bushels per acre. The average annual value of that yield has been \$7.04. In South Carolina the average annual yield has been 8 bushels per acre. The average annual value of that yield has been \$8.87. The average annual yield of hay per acre in Virginia for five years has been 1.14 tons, of the value of \$12 per year. In North Carolina the annual average yield of hay per acre has been 1.42 tons, of the annual average value of \$14.50. In South Carolina the annual average yield of hay per acre has been 1.30 tons, of the annual average value of \$14. When account is taken of the labor cost of making these respective crops, it will at once be seen how much more profitable it has been to the producers in those States to make hay rather than corn or wheat. But this by no means exhausts all that is to be said in favor of grass and hay as against these arable crops. When the corn and wheat have been harvested, there is left a piece of bare and impoverished land, which must be again worked at much cost for labor and be again enriched before it will produce another crop. When the hay has been harvested, there is left a pasture field covered with a sod which will feed stock the rest of the year and which will conserve the fertility of the land and make other crops in other years without more than a very slight outlay of cost for labor. Grass and live stock is surely to be the sheet anchor of the



Southern farmer and to lead him into prosperity and his lands into fertility, and the sooner he takes hold of the business the better it will be for him. The rise in the price of labor and its scarcity will prove a blessing in disguise if it quickly and certainly leads to this. In the future the Southern farmer must practice a system of combined arable and pastoral husbandry under which he can make his own home supplies and have a surplus of these products for export to add to his cotton and tobacco, which should become wholly surplus crops. To succeed in this he must have good meadows and pastures, and these he cannot have without proper preparation and care. The first requisite for success is rich land full of vegetable matter; the second is land deeply and finely broken, so that it can hold and retain moisture; the third is land free from weeds; and the last is that this land shall be seeded down with an abundant seeding of mixed grasses of types suitable for hay and for pasture. If these conditions are complied with, there is no reason whatever why every Southern farmer should not have good meadows and pastures; but the neglect of any of them, is likely to prove sooner or later fatal to success.

The cause of most of the failures to secure a good stand of grass is that the seed is sowed on land not sufficiently rich or well filled with humus to carry a sod. Land that has grown corn or cotton for years is seeded with grass without more than a slight preparation and with little or no plant food supplied. Many farmers run away with the idea that grass is an enriching crop, and therefore all that is needed is to get a stand and this will improve of itself year by year. This is a fallacy. Grass is not an enriching crop any more than is corn, which is nothing more botanically than a gigantic grass. Grass will help to conserve fertility when once established by shading the soil, preventing washing, and adding vegetable matter to the soil; but in order that it may do this, it must first be well established. Let the land selected to be put into grass be a field in good fertility. Let it be deeply and finely broken this month, and keep on adding to its fineness and perfect tilth by harrowing, rolling and reharrowing until the seed bed is as fine as a garden bed. This working of the land will, if properly done, largely destroy weeds by encouraging their germination by bringing them to the surface. As they germinate they should be killed by harrowing in the hot sun. Weeds and grass cannot flourish together, and the crop to succumb will be the grass. Apply all the barn-yard manure that can be spared to the land, and let this be well worked in and then apply 400 to 500 lbs. to the acre of raw bone meal. This may seem a heavy and costly dressing, but it should be remembered that when once the sod is established it can only afterwards be enriched by top dressing, and this, whilst

most helpful, is not calculated to afford that complete support for the crop which an admixture of food in the whole depth of the soil will do. As a permanent fertilizer for grass, raw bone meal is to be preferred to any other. It is slow in its action, but can be relied upon to do the work in the long run. When the land is in fine order, then sow the grass seeds, and sow them alone and not with a grain crop. If grass is wanted, do not attempt to grow a grain crop with grass as a side line. This practice is not adapted to a hot country like the South. It may do—in fact, it does answer in a moist climate and on rich land in England; but even there we have made a better stand and more permanent sod when grass alone was seeded. Here, the chances are strongly against success. The grain being a stronger and quicker growing crop, soon forges ahead of the grass and robs it of fertility and moisture. At harvest time the grass will be puny and weakly, and when the grain is cut off the hot sun quickly ends its struggle with adverse conditions. Seeded alone, the grass will make a strong growth and be able to resist the heat of the sun, and will frequently make quite a good yield of hay the first year. Sow the seed in August, or September at the latest. This allows the plants to get a good root-hold before winter and for the top to become sufficiently grown to keep out much of the frost, and thus prevent heaving of the land and throwing out of the plant. Sow broadcast and seed liberally. Three bushels of mixed grass seed is not too much to sow per acre. Timothy should always be seeded alone—a peck or a little more to the acre. Timothy is not a pasture grass, and is only fitted to be grown on rich low ground. As a feed, it is much overrated, but always sells well when clean. We would never grow it for feeding on the farm. Italian rye grass makes excellent hay, grown either alone or with clover, and can be cut two or three times in the season, and also makes a good pasture. It is finer in growth than timothy. After grass seed is sown, cover with a light harrow and roll. For an upland meadow on medium red loam, sow a mixture of orchard grass, tall meadow oat grass, perennial rye grass and meadow fescue in equal parts, with 2 or 3 lbs. of red or alsike clover to the acre. On a light loam, sow orchard grass, tall meadow oat grass, Hungarian brome, and 2 or 3 lbs. to the acre of red clover. On moist land or land subject to overflow, sow a mixture of red top, perennial rye and alsike clover.

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Cauliflowers are being successfully grown in some parts of the South. There is no reason why they should not be successfully and profitably grown as a late fall and early spring crop.



## GREEN MANURE.

*Editor Southern Planter:*

That green manuring or plowing under green crops is a benefit to most soils, there is not a particle of doubt. The testimony is overwhelming, and some of it dates back two thousand years. The ancient Greeks and Romans practiced raising crops and plowing them under while still green to enrich the land before the Christian era, as we learn from the writings of Xenophon, Cato, Pliny, Virgil and others.

Plowing under a crop of ordinary grass or rye does not supply the soil with any ingredient that it did not already possess, but the decay of the green crop loosens the soil, making it more porous, and the decayed matter called "humus" is more retentive of moisture and is quicker warmed and enlivened by the sun than the ordinary mineral soils. Plowing under leguminous crops like clover and cow-peas, in addition to making humus, supply nitrogen, one of the most important and costly elements of fertility.

Among the first modern nations to raise green crops to be returned in the soil for manurial purposes, were the inhabitants of Flanders (now Belgium), and the crops which they chiefly raised for the purpose were red clover, spurry and sanfoin. Their soil generally consisted of loose, white, porous sand, resembling the sandy districts on the coast of New Jersey and Maryland. By plowing under green crops the Flemish farmers gradually converted this unproductive land into a fertile loam. At first they plowed very shallow—not deeper than three or four inches; but by degrees, as the soil became richer with humus, they plowed deeper, until at length they secured a deep loamy soil upon these once sandy barrens.

At first, when clover could not be made to grow, spurry, a forage plant of the genus *spergula*, which will grow in about six weeks and thrive with less moisture than clover, was raised for green manuring. Red clover, as soon as it could be made to grow, was their main reliance, not only to supply fodder for their cattle, but to turn under to form humus and obtain nitrogen from the atmosphere. "Without clover," said Radcliffe, "no man in Flanders would pretend to call himself a farmer." It was green manuring, a rotation of crops, and keeping as many cattle as their farms would support, that gave Flemish farming, for a long time, pre-eminence over that of every other country in Europe.

Some clover enthusiasts will say here is proof positive that clover alone will not only maintain the fertility of the soil, but has power to create a productive soil from a tract of barren sand. It should be known that the Flemish sand, to a great depth, was stored full of the most fertilizing ingredients which had been

cast up by the sea, such as the decomposed flesh of fish, oysters, clams, and their pulverized bones, which only needed the addition of humus to retain moisture and aid capillary action to make the land as productive as the Garden of Eden. Another thing to be borne in mind, the Flemish farmers kept large numbers of cattle—one beast for three acres, and sometimes more—and the manure was carefully saved and applied to the land.

On the other hand, the testimony is equally reliable and conclusive, that plowing under green crops, instead of being a benefit is an injury to some land.

James Gowan, of Mount Airy, Pa., a well educated, practical farmer, declared more than once in the public press that plowing under green crops was an injury to his land.

John F. Wolfinger, of Milton, Pa., said, in the Agricultural Report for 1864: "Green clover plowed down as a manure, does indeed at times sour the land and injure the young wheat crop thereon."

Joseph Henderson, of Mefflin county, Pa., said, in the Agricultural Report for 1850: "Experience here is adverse to turning down green crops as fertilizers, and few, I believe, have repeated the experiment. In two instances in my immediate neighborhood wherein heavy crops were plowed in in full bloom on land of excellent quality, the immediate effect at least was highly pernicious, as evinced in the almost total failure of the succeeding crop of wheat."

John S. Kellar, of Schuylkill county, Pa., said, in the Agricultural Report for 1883: "Clover, after growing up a few years, ought to be turned under when fully ripe, with a good plow. Let those who advocate the green state do so to their heart's content. I have had experience in both the dead-ripe and the green, and would by no means suffer the latter to be plowed under if I could prevent it."

T. D. Thatcher, of Massachusetts, says "That on wet low lands, the endeavor to make clover a fertilizer sufficient to redeem such lands and place them in a good condition for corn or wheat, or even for pasture, would prove a waste of money and labor."

George Jackson stated in the *Country Gentleman* that in the fall of 1885 he plowed under a heavy growth of clover and drilled in rye; that the land was naturally good and thoroughly underdrained; that the soil was in excellent condition and the seeding done in the most careful manner, but, strange to say, the rye crop proved to be almost a total failure. In an adjoining field, the land being precisely of the same character, an immense crop of rye was harvested yielding over forty bushels to the acre—the only difference in the management being that the latter was manured from the stables.

M. B. Sears, of Winthrop, Me., says: "From numer-



ous experiments on my land, I conclude that clover should not be plowed in when green, but allowed to stand until ripe."

J. A. Curtis, in the *Practical Farmer*, relates his experience in plowing under a heavy growth of clover and timothy, and thereby injured his land for two or three years afterwards.

O. W. Blacknall, of North Carolina, relating the experience of a neighbor and himself as to the harmfulness of green manuring, says: "I have about concluded to turn under no more green crops except strawberry fields in unavoidable cases. Then I shall use lime phosphate even more liberally than heretofore—say 1,000 pounds per acre—though much more might be better still."

R. H. Allen, in his *Farm Book*, explains why green manuring is a benefit to some soils and not to others, by the presence or absence of lime in them. He says: "The full benefit of green crops as manure seems only to be realized where there is sufficient lime in the soil. Calcareous soils, however they may have become exhausted when put under a thorough course of treatment in which green crops at proper intervals are returned to them, are soon restored to fertility."

Most farmers know that nothing will grow where a quantity of rotten apples or cider pomace has been plowed under, be the land ever so good, because it makes the land too sour.

J. W. INGHAM.

### CRIMSON CLOVER.

*Editor Southern Planter:*

A soil left bare over winter suffers serious injury, not only from danger of washing and other mechanical causes, but also because a large proportion of the plant-food existing in the soil as a natural condition, is lost through seepage, etc. The early spring rains are particularly injurious in this respect. Summer rains may carry soluble plant food down to depths beyond the reach of plants, but the rapid evaporation commencing as soon as rain ceases, brings it back to the surface soil. In the early spring, evaporation is slight, and the soluble plant food taken up by soil waters finds its way to the sea by the medium of streams and rivers.

For this reason, though corn is a valuable crop of itself, and doubly useful in freeing a soil of weeds, it is at a disadvantage because it leaves the soil bare over winter. Of course, where a systematic rotation is followed, wheat often follows corn, and this is fall-sown. Frequently rye is fall-sown merely as a soil cover. At best, these leave several weeks bare soil, and at a bad time. The best plan is to broadcast Crimson clover in the corn as soon as it is laid by. By this means, the soil is constantly covered, and by

a crop that does more than simply protect the soil. In fact, the value of Crimson clover as a nitrogen gatherer is much greater than is commonly supposed. A fair yield will produce per acre in forage, stubble and roots, about 150 lbs. of nitrogen, all or nearly all taken from the air. This is worth over \$20 simply as manure, and may be considered a gain to that extent. It must be kept in mind that this gain is largely in addition to the value of the crop as forage and as a soil-cover.

A crop of 70 bushels of corn per acre makes use of but a little over 100 lbs. of nitrogenous plant-food, so that Crimson clover in corn leaves the soil richer in nitrogen than when the corn was planted. It is well to note though, that Crimson clover, or any other legume for that matter, cannot store up this air nitrogen unless it has a very definite quantity of potash and phosphoric acid to go with it. The corn crop, for example, contains besides its 110 lbs. of nitrogen, about 80 lbs. of potash and 60 lbs. of phosphoric acid. This is just taken from the soil, the very soil that is to grow a crop of Crimson clover. Now, while the clover will manage its nitrogen without outside help, it can do so only if the proper amounts of potash and phosphoric acid are present, and in available form. A good crop of Crimson clover contains per acre about 150 lbs. of nitrogen, 140 lbs. of potash and 45 lbs. of phosphoric acid. Without these two latter elements, the crop cannot store up the nitrogen.

In most sections of the country, very little fertilizer or manure is used on the corn, especially when grown in rotation on a turned under grass sod. As a rule, corn suffers from lack of sufficient plant food; this being the case, how much more likely is the clover to suffer, planted as it is when the corn has taken from the soil all the plant-food it can reach. On this account, it is generally found in practice that applications of the mineral fertilizers ensure the success of clover sown in corn.

Some farmers demur to the cost of fertilizing a crop to be turned under as green manure, but this is really a measure of economy. The necessary phosphate and potash will not cost more than half the worth of the nitrogen gained thereby, and both the potash and phosphoric acid are largely returned for the next crop. The best time to apply these mineral fertilizers is in the spring, but almost if not quite as good results may be had by broadcasting in the corn rows as late as July, and working in at the last cultivation of the crop.

Crimson clover is used to advantage after many crops, such as early potatoes or crops grown for canning. In growing late potatoes, it is well to put the land in Crimson clover the fall before, and plow down in May. A crop of 200 bushels of potatoes contains

about 25 lbs. nitrogen, 35 lbs. of potash and 7 lbs. of phosphoric acid. Good potato-growers use from 1,000 to 3,000 lbs. of fertilizer per acre to supply this, costing from \$20 to \$60. The nitrogenous portion of this required plant food can be supplied by a good crop of Crimson clover. The potash and phosphate, however, must be supplied either to the Crimson clover or to the potato crop, but these two ingredients represent less than one half the total cost of plant-food required.

M. J. SHELTON.

### GRASS SEEDING.

*Editor Southern Planter :*

Our farmers make a great mistake in seeding grasses with grain. It is often the cause of a failure to get a good stand. The land should be plowed well, not later than August, harrowed over several times to make it fine. Every time it rains and the land begins to crust and put up weeds or grass, drag it again, so as to kill every weed you possibly can, and then in September drag it again, and while it is fine and fresh sow the seed. Timothy, one peck to the acre, and be sure to sow a peck of Red Top at the same time, as the two will do much better than either one alone. Timothy is always inclined to bunch, and the Red Top will fill up the empty spaces and thus make a much heavier crop of hay. The two ripen together and make most excellent hay. In sowing grass seeds with wheat it is apt to be late, and then if you have a good stand of wheat when you cut it the sun will be apt to kill the grass plants that have become delicate from so much shading.

Grass sown alone in the fall in good time will make a crop of hay the next summer that will be nice and clean, and will on good land pay you better than a crop of wheat.

When you want grass sow it alone. A nurse crop does more harm than good, and I don't see that it pays at all; you will have much cleaner hay without it. By preparing early you get rid of many weeds that would come in the wheat if sown late.

Clover, orchard grass, or any of the other grasses, can be treated in the same way, only sow them by the last of August or in the first half of September. If the grasses partially fail, sow again in February or March, so as to thicken the stand; sow on frozen ground early, and without the drag, and they will be sure to come.

Henrico Co., Va.

COUNTRY.

Egg plant succeeds to the very best advantage all throughout the South, and makes a most delicious vegetable.

### THE STOLEN CROP.

#### Pumpkins—*Cucurbita Maxima.*

*Editor Southern Planter :*

Pumpkins are said to be a stolen crop, because they are usually raised among corn without any additional labor except planting the seeds, and the seeds may be dropped at the same time when planting the corn. Some farmers think there is nothing gained by raising pumpkins among corn, because they appropriate part of the fertility which should go to the corn, and thereby lessen the value of the corn more than the worth of the pumpkins. This may be true where the land is too poor to supply nourishment enough for the corn; but such land should never be planted with corn, east, west, north or south, for no matter how thorough the tillage may be a paying crop of corn can never be raised on poor land unless it is well manured.

A good, thick sod turned under, or a field well manured with stable manure, will produce a good crop of pumpkins, and just as much corn as if the pumpkins had not been planted. I have always found that where they were the largest, the ripest, and lay the thickest on the ground, there also was the best corn, showing that the two crops are well fitted to grow and thrive in harmony with each other, if the land is good and well tilled. The pumpkins do not seem to take much of the same ingredients from the land that the corn requires.

Some farmers do not succeed in raising a fair crop of pumpkins on good land when they try their best, and I think the reason is they do not plant seed enough. Either the seed is not good, which is frequently the case, where no pains are taken in saving and drying, or the young plants are eaten up by the striped cucumber beetles. I plant a seed in every hill of corn. Some do not come up, and so many plants are destroyed by the beetles there are seldom too many left; but should there be in the seasons when the beetles are not out in full force, they are quickly pulled. The only valid objection to the stolen crop is that the dense growth of vines is considerably in the way when cutting up and husking the corn. However, I believe this dense growth of vines keep the weeds smothered which start up after the cultivation ceases.

A few years ago, our pumpkin vines made such a rapid growth that when the corn was cultivated the last time they had run clear across the rows, and we had to have a boy go ahead and lift the vines and lay them out of the way to keep them from being torn out by the roots. This was not so much trouble as it may seem—an active boy was able to move them and keep ahead of the horse.

Every farmer knows the value of pumpkins when



fed to stock, and that they are a great addition to the meal when fattening beeves; but some think that when fed to cows they do not increase the quantity of milk, and one farmer told me they "dried cows up." I think the trouble with many is, that when the crop is plentiful, and they fear it will not all be fed out before it is injured by rotting, or freezing, they feed their cows too large a quantity, causing a great looseness of bowels and derangement of the urinary organs. Our practice is to feed each cow twice a day about half a bushel of pumpkins cut up into chunks small enough to be easily taken into the mouth, putting about four quarts of dry meal, or bran on them, and I am certain that the pumpkins improve the ration, increase the quantity of the milk, and whether they make the milk any richer or not, make the butter yellower and give it a finer flavor. Pumpkins fed in October will make the butter as yellow and as rich flavored as grass in June.

Horses will eat pumpkins greedily without any cutting up, though some must have their tastes educated by first cutting the pumpkins in small pieces, and sprinkling meal or salt on them. Fed in moderation, and in addition to oats, or meal, there is no doubt they are a cheap and healthful addition to the horses' diet, especially where they must be kept up all the time and cannot be allowed to run in pasture.

Horses and cattle fed plentifully on them will drink scarcely any water, the juice of the pumpkins furnish ing all the liquid they require. I used to break them up and throw them into the pen for my hogs, just as I saw my neighbors do, and for a long time had a poor opinion of them for hog feed. The hogs would eat the seeds, gnawed a little out of the inside, and wasted the remainder. I soon learned there was a better way of feeding. When cut in small pieces, and sprinkled with meal, hogs will eat a good many pumpkins and eat them up clean. It pays well for cutting up. Six small hogs will eat a bushel of cut pumpkins twice a day; and eat them with an apparent relish. With what pumpkins they will eat they can be fattened on one half the usual quantity of grain.

Pumpkins being composed largely of water, some agricultural writers have considered them of very little value as food for cattle. The same objection might be urged against turnips, and even grass, which as everybody knows is the best food in the world for graminivorous animals, being much better than hay, from which the water has been evaporated. To keep well, pumpkins should be gathered before a hard frost and stored in a barn basement, or some place where they will not freeze before they are fed out. By careful sorting, we have sometimes kept them until Christmas. (Two years ago we kept a large pumpkin in this office until May.—ED.) The vines should be pulled

loose, and the stems left on, else they will soon commence rotting where the stems were broken off.

The cultivation of pumpkins began before the dawn of history. They have been raised in the hottest regions of Asia and North Africa from the earliest ages, and the ancient Romans were familiar with them.

The following was composed by a New England backwoodsman about 1639, and is said to be the first poetry ever written by an American:

"If fresh meat be wanting to fill up our dish,  
We have carrots, and pumpkins, and turnips and fish.  
We have pumpkins at morning, and pumpkins at noon,  
If it were not for pumpkins, we should be undone."

J. W. INGHAM.

### THE CHINCH BUG CAMPAIGN.

The multitude of letters now received daily at the Ohio Experiment Station indicate that the chinch bug is threatening immense injury to the corn and oat crops of the State, and it is feared that farmers are expecting too much of the fungus which the Station is distributing.

In the first place, the amount of this material which it is practicable to send out is extremely small, and it can only infect a comparatively small number of bugs at the best; the infection, moreover, will require four or five days, by which time the army of bugs will have done great injury. Our advice is, therefore, not to wait for the fungus, but to organize a campaign at once for the immediate relief of the crop, depending upon the fungus to finish the work by destroying the bugs which would otherwise live over winter to menace the crops next year.

The chinch bug, though able to fly, prefers to travel on the ground, and its migration from wheat to oats or corn may be intercepted by making a V shaped trench, as with the corner of a hoe or the outside tooth of a cultivator, and pouring in a little coal tar. A line of tar an inch across will be sufficient. When a crust forms over the tar it must be freshened with a new supply. As the bugs enter a cornfield their progress may be impeded by frequent cultivation of the outside rows of corn, thus burying many of the bugs. When they cluster on the stalks of corn they may be killed by sprinkling with kerosene emulsion, made as follows, and thrown with sufficient force to wash them off the corn:

#### KEROSENE EMULSION.

Dissolve half a pound of soap in one gallon of water and heat to boiling; remove from the fire, and while hot add two gallons of coal oil, churning the mixture with a force pump for fifteen minutes or until it resembles buttermilk. To each quart of this emulsion add fifteen quarts of water and apply with spray pump or sprinkling pot.

*Experiment Station, O.* CHAS. E. THORNE, *Director.*

[We hear that the chinch bug is doing much injury on the corn in some of the counties of this State. We commend the foregoing to the attention of farmers suffering.—ED.]



## ENQUIRER'S 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 of the *Planter*.

## Orchard-Grass Seeding.

1. I wish to sow a piece of high land this fall in orchard grass for seed. I cut a crop of wheat from this land about July 1st, and have plowed and seeded it to black cow-pea. Can I harvest these peas for seed in time to sow that grass alone?

2. About what time should orchard grass be sown?

3. I drilled the peas in rows two feet apart, and intend to cultivate them. Would it be necessary to re-plow land before sowing the grass?

4. Will peas make good hay when drilled in rows two feet apart, at the rate of about a bushel to the acre?

5. Which is the most profitable grass for hay on high land—orchard grass or timothy?

6. About what time should timothy and clover be seeded?

7. Does it pay to sow raw bone on grass land at time of seeding?

8. In sowing orchard grass, how would it do to mix the seed with fertilizer and sow in drill without the hoes—that is, sow the mixture on top without covering and then roll with a corrugated roller?

9. Would there be any loss by leaching of the fertilizer thus sowed?

*Albemarle Co., Va.*

D. F. WELDON.

1. Orchard grass should be seeded in the fall, in August, or September at the latest, in order to secure a growth that will withstand the winter. If not got in then, it may be seeded in March or April, but fall seeding is much preferable as being more certain to ensure a good stand. Whether your cow-peas will sufficiently mature to enable you to harvest them as a seed crop by September, depends much on the weather.

2. See above.

3. No. Cut up with the disc harrow and make a fine seed-bed with the spike harrow and roller.

4. Yes.

5. Orchard grass. Timothy is not a high land grass, though it sometimes makes a fair stand on rich land.

6. In August and September.

7. Yes. It is an excellent permanent fertilizer for grass.

8. Never mix any kind of seed with any kind of fertilizer. Most fertilizers are more or less caustic and very apt to injure the germinative powers of seed. Sow the fertilizer either broadcast or apply with the drill. Harrow in and then sow the grass and cover either with a light harrow or a bush and roll. Fertilizers should always be mixed with the soil to ensure the best results.

9. There will be little or no loss from leaching when

a crop is growing on the land, and but little loss from this cause of phosphoric acid or potash at any time.—ED.

## Mixing Ashes and Fertilizer—Cover Crop.

1. Is it best to mix ashes and ready mixed fertilizer together for wheat and other crops, or not? I have noticed when it is mixed it gets warm right off. Do the ashes kill anything in the fertilizer? We use equal parts by measure.

2. We have some land in peas, and will plant corn next year. We mow off the vines. Will the land lose anything it has gathered through the peas before next crop or not, or would it be better to sow wheat after the peas?

*Yadkin Co., N. C.*

F. W. EVANS.

1. Do not mix the ashes with the fertilizer until ready to apply to the land, or better still, apply separately. The lime in the ashes sets free the ammonia and reverts the phosphoric acid, and thus causes loss of plant food in two ways.

2. There will be some loss of gathered fertility if no crop be growing on the land during the late fall, winter and early spring months. The best way if the land is wanted for corn is to cut the pea stubble with the disc harrow and sow a mixture of Crimson clover, vetches and winter oats, or wheat, or both. This crop will conserve the fertility and make some feed and a green fallow for the corn crop.—ED.

## Fertilizers for Fruit Crops—Borers—Pruning.

1. Do you favor applying acid phosphate and muriate potash to strawberries, grapes and peaches in the blooming stage? If I applied in fall or winter or even early spring, the hillsides would cause plant-food to wash away. Please give proportions for mixture. Will plant rye among trees in fall, and turn under stubble in spring after cutting. This will follow cow-peas. Trees three (3) years old.

2. Do you advise strawberries on drained bottom land? As such land is richer in nitrogenous matter than anything else, what proportion of phosphate and potash would you apply to make "balanced ration"?

3. When would you bank up peach trees to prevent the borer moth from laying her eggs on trunk? How high and how long should bank remain? Does painting the trunks with the lye and lime washes prevent moth from laying on said trunks?

4. What do you think of the pine tar and cart grease treatment for borers? Give directions for making, applying, etc.

5. What do you know of the crude petroleum and water treatment for scale on peach trees?

6. Do you approve of fairly heavy top pruning in order to get heavy fruit crop—i. e., plants of any age?

7. Is there anything against planting sweet potatoes among peach trees, not yet in bearing, four feet from trees?

8. What is the best or improved methods of saving sweet potatoes during the winter?

9. Is it always best to keep young celery plants covered from the hot sun throughout the summer?



10. When is the best time to start an Easter Lily bulb, to be open on Easter Sunday?

11. What is there against sleeping in a room with plants?

12. How close should young Arbor Vitæ plants be set to make close hedges?

13. At what stage of growth in the plant is the pollen formed?

Macon Co., Ala.

F. H. CARDOZO.

1. No. Neither acid phosphate nor potash are immediately available as plant-food as is nitrate of soda. They require to be mixed with the soil and there undergo chemical changes before becoming available, and this process takes time, and hence, if applied when the plants are in bloom and calling for food, are not capable of giving the needed help. If the hillsides are broken deeply very little of the fertilizer will be lost. It will not leach out of the soil, and the deep breaking will prevent washing. Acid phosphate 300 pounds, and muriate of potash 50 pounds to the acre.

2. Yes. Acid phosphate 300 pounds to the acre, muriate of potash 50 pounds.

3 and 4. The borer beetle, which lays the eggs from which the borers hatch, makes its appearance late in spring or early in summer, and the trees should be banked up before this time to be protected. None of the washes or applications of tar and grease, etc., are effectual in preventing damage. They may have some deterrent effect. Banking up to a height of a foot or eighteen inches is the best protector. The banks may be thrown down in the summer.

5. See the article on San Jose Scale in the June issue.

6. The nature of the tree and its manner of growth must largely determine the pruning needed. Some trees make but little growth, and hence require but little pruning. Speaking generally, pruning is only required on most fruit trees to cut away interfering or interlacing branches, or to open out the head.

7. No. But it should not be continued after the trees have grown sufficiently to occupy the ground.

8. We will deal with this question in an article later in the year.

9. Yes, they are better shaded from the scorching sun until the early fall.

10. This depends on the warmth of the house in which the bulb is being grown and the vigor of its growth. Usually from six weeks to two months before Easter Day the bulb should be started, and be pushed or retarded as conditions of growth warrant.

11. Nothing, except as the plants give off odors or scents that may be offensive or injurious. Plants take carbon dioxide from the atmosphere during sunlight, and do not give off anything but oxygen, which is not deleterious to health.

12. A foot apart.

13. At the full blooming stage.—ED.

### Mixing Fertilizer.

Will you please give me some information through your valuable paper in regard to mixing fertilizer.

I have a sixteen per cent. acid fertilizer which I am going to use on buckwheat, also have some ashes made from spent bark from a steam tannery. What I want to know is will it affect the elements in either fertilizer or ashes to mix them together two or three days before using them, or should they only be mixed as they are used? To experiment a little, I mixed about one peck of each together, and while I was mixing them they became warm, and the acid fertilizer lost the smell it had before it was mixed.

I came to the conclusion I would only mix them as I used them; so that if anything was lost that the earth would likely catch it.

Will it pay me to haul the ashes fourteen miles, paying \$1 50 per ton for them while delivering bark. The ashes are made from the spent bark, the bark being chestnut and oak and what elements of plant food are in them.

I forgot to say that after the ashes and acid were mixed two or three hours you could hardly taste the acid, and it became rather hard and cakey.

Roanoke, Co., Va.

J. W. DAMEWOOD.

Wood ashes, which the spent bark ashes will most nearly correspond with in analysis, contain so large a percentage of lime that it is not wise to mix them with other fertilizers until just before using them. The lime drives off ammonia and reverts the phosphoric acid, making it less available as a fertilizer.

Without an analysis of the spent bark ashes, we could not say what they are worth. We do not know what the bark is treated with in the tan vats. It may be that more than the tannic acid is extracted. Send a sample to the Department of Agriculture and ask to have it analyzed, and then the value can be fixed. It is probable that there is little of value in them except the lime.—ED.

### Seeding Clover—Improving Land.

1. When should Red clover seed be sown on real clay or putty like soil, to get the best results?

3. I have a garden spot of such soil, and want the *quickest* and *best* manner of making it *loose* and *light*. After each rain it runs together and gets so hard that it will not germinate seed in dry weather.

Smyth Co., Va.

E. ROBINSON.

1. We always advise the sowing of Red clover in the fall, in August or September. The land should be well prepared, and a fine seed-bed be made. This permits of the plant making good root-growth in the cool, fall months, and this enables it to withstand the cold. The top growth of the plant also keeps out the frost from the land, and thus prevents it being thrown out. If the fall seeding fails to stand sow again in February or March. In seeding in the spring, many advise sowing on the frozen ground, leaving the covering to be done by the thawing out of the land. We do not greatly approve this plan, as we do not think



that sufficient cover is got for the seed, and the young plants are very apt to be killed by frost or a hot spell of weather. More clover stands are lost from not sufficiently covering the seed than from too deep covering. We always harrowed our clover seed in, and rarely failed to make a good catch.

2. This piece of land wants humus in the soil. Grow peas on it and plow down when nearly mature, or give it a heavy dressing of farm-yard manure with plenty of straw in it and plow down, and then seed to Crimson clover or vetches for a winter cover, and plow these down in spring and seed to peas to be plowed down in the fall.—ED.

#### Poultry Raising.

I wish to try poultry raising for profit, commencing about 1st of January, on small scale. I wish to feed them entirely from the products of the farm, as I live considerable distance from market, where I could buy bone or meat scraps, such as are recommended for poultry. Please tell me what to raise to feed on. Is there any feed I can raise this fall? How to build house, say, for fifty hens? How many males to keep? I have plenty of land for them to run on. I wish to raise two hundred early chickens for market. These and the mother hens I wish to keep in an enclosed lot to protect them from hawks, etc. How large should this lot be and what buildings for same, and how arranged? Any information will be thankfully received. I shall not use incubator first season.

Lunenburg Co., Va.

WM. A. INGE.

It is too late in the season now to plant any crop upon which to feed your fowls in the coming winter and spring. The best you can do will be to sow an acre or two in Crimson clover and winter oats or wheat to make a green pasture for them in the winter and spring. Sow also a patch of turnips and kale. These will be found useful to feed in winter. Next year grow wheat, corn and cow-peas to feed. The cow-peas can be made largely to supply the protein food needed to balance the carbohydrates in the corn and wheat. They also largely will take the place of meat scraps, but still some animal food will be needed if the hens are to do well. You can buy dried meat scrap in bags, which will not be found too costly to pay well for its use. As you have plenty of land upon which the hens can run, all you need will be a roosting house or houses. Do not keep more than fifty hens in one house. A house fifteen feet square and seven feet high will be ample for a roosting and laying house for this number of hens. Keep one male bird for each ten or twelve hens. Instead of making one enclosed chicken pen for two hundred chickens, make four pens for fifty chickens each. They will be much more certain to keep healthy and thrive quickly thus divided than running altogether. Make the pens fifty feet square, and in each pen have a roosting house ten feet square.—ED.

#### Planting Cow-Peas in the Cotton Field.

A correspondent commenting on our advice to sow cow-peas in the cotton field when cultivating the last time, says that we make a mistake in so advising, as the peas will interfere with the picking of the crop. We differ from our friend. There is no reason whatever why the peas should any more interfere with the picking of cotton than they interfere with gathering a corn crop. In rows four feet apart, there is plenty of room to plant a row of cow-peas in the middles of each row, and yet leave enough room for the pickers to work without treading down the peas. Plant a bush variety rather than one growing long trailing vines, and no trouble will be caused by the vines running on the cotton. The importance of securing humus in the soil which the peas vines will furnish, is infinitely greater than any little trouble which the vines may cause to the pickers. Even though the pickers should tread down the peas, not much harm will be done, for at the time when the cotton is ready for picking the peas will have made their growth, and they will serve as good a purpose trodden down on the ground almost as though allowed to stand and be later trodden down by the stock. The main object of the planting advised is to secure vegetable matter to add to the soil. This is the great need of the cotton fields.—ED.

#### Crop for Spring Fallow.

I have some high land, partly clay and sand, off which I have just cut a poor crop of wheat, previous crop to this tobacco. In cultivating this land, it was worked too wet. The land is now almost free from any growth. What do you think of a crop of winter oats on it as a green fallow for next spring, as I can't afford to put bone or peas on it just now?

Amherst, Va.

C. W. MARKS.

We would advise sowing a mixture of Crimson clover, wheat and oats, rather than oats alone. Sow ten pounds of Crimson clover and half a bushel of wheat and winter oats mixed in equal parts to the acre. This will give you a good winter cover and spring grazing, and make a better fallow to turn under.—ED.

#### Alfalfa Seed.

Will you kindly give me directions through your columns as to the best way to save alfalfa seed. Is it saved in the same manner as Red clover?

Westmoreland Co., Va.

W. H. CALHOUN, JR.

Yes, we believe so. Personally, we have never grown the crop for the seed, and therefore, have no practical knowledge on the subject, nor can we, just at this time, put our hands on any article dealing with the question. We will try to get the information and publish later.—ED.



### Preparing Pea Fallow for Wheat

I have been a subscriber since the first of the year, and think the *Planter* the best agricultural paper I ever saw. Each issue is worth the money charged for one year. Will you please answer the following questions in your next issue?

I have a nine acre field, six acres of which are sowed in cow peas broadcast, the other three planted in peas and cultivated. Land was well plowed and peas sowed first of June. I intend to cut all of it for hay. I want to sow this field in wheat this fall. It produced 14 bushels per acre two years ago, rested one year. Should this land be plowed again or cut with disc harrow?

How much fertilizer should I use and what analysis?  
*Davidson Co., N. C.* H. J. C.

There will be no necessity whatever to plow this land again before seeding in wheat. Cut it up well with the disc harrow and then harrow into the drag harrow until a fine seed bed five or six inches deep is secured, and sow the wheat. Wheat requires a firm and well compacted subsoil, yet one with which the roots can penetrate, and this condition you will have secured by having plowed well for the pea crop.

In our next issue you will find an article dealing with the question of the fertilizer to use in seeding wheat.

Thanks for you compliment.—ED.

### Sick Sow—Blind Horses.

I have a sow, about a year old, running with pigs up to a couple of weeks ago, when she came up one night with one ear hanging down and head sagging to one side, and so dizzy apparently as to be scarcely able to walk, falling down occasionally.

I shut her up and fed on ship stuff principally, giving cholera remedy, recommended in *Farmers' Bulletin* No. 24. Though it didn't seem to be cholera, appeared rather an affection of the head.

She has eaten well at all times, but does not seem much better, though she does not stagger so much as at first.

Hogs appear to be troubled here frequently in this way, and it is attributed to eating berries. Kindly tell me what to do.

Is there any known reason for horses getting blind in this section? I never saw so many blind horses as there are in Virginia, all kinds and conditions apparently going blind with startling frequency.

*Surry Co., Va.*

J. A. MOORE.

The sow, we think, suffers from some form of poison, probably taken in the pasture from eating some plant or berries. We would give her a purgative in her slop, either Epsom salts or flaxseed oil. Feed lightly and keep her out of the hot sun.

We had not noticed the prevalence of blind horses, nor have we had complaint of it. In some sections, Pink-eye, a form of ophthalmia is prevalent now and again, and horses attacked with it are apt to lose the sight of one or both eyes.—ED.

### Alfalfa.

I have a field of Alfalfa clover that was seeded in April, came up and have a fine stand; before the rain the clover got five to eight inches high, as good a stand as I ever saw, but turned yellow and has not grown since the rain. At present the weeds are about to take it. What can I do to save the clover and check the weeds?

*Henry Co., Va.*

W. M. PARKER.

Mow the alfalfa at once, not cutting it too close to the ground, practically little more than topping. This should be repeated two or three times during the first year of growth. Rake up the mown clover and carry to the barn as soon as dry enough. Those growing alfalfa should realize that it is of absolute importance to cut and carry the crop off the ground before it blooms and seeds, if the stand is to be a permanent one. If allowed to stand unmown until the bloom is past, the plants will die out. Or if the cut crop is allowed to remain in continuous wet weather on the ground it will cause the crowns of the plants to rot, and thus destroy the stand.—ED.

### Blight in Apple Trees.

In answer to an inquiry of W. W. Allen, of Sussex county, in July number, page 405, the blight so called is due to the work of the Aphis. A web will be noticed which encloses the whole affected part. Remedy is found in the following when applied with a good compressed air sprayer, costing \$5. White wash 10 gallons, kerosene 1 gallon, which will destroy the creatures. Should be applied with much force, so as to penetrate the nest.

*Cumberland Co., Va.*

H. N. D. PARKER.

The description given of the disease or blight of which our correspondent complained appears to us indicative of a clear case of twig blight, which is a spore disease and not induced by insects of any kind except in so far as it is believed to be disseminated largely by insects carrying the spores from one twig to another. The remedy we gave is the best known to tree pathologists. Kerosene as a spray on trees requires to be used with great discrimination and care, as indicated in an article in our June issue on San Jose scale, or serious damage may be done. Kerosene emulsion prepared as directed in our March issue is a very proper remedy for aphid, lice and sucking insects.—ED.

### Milch Cow.

Please be so kind as to let me know through your valued columns, if a cow with her first calf is not milked, but made to raise two calves, will she make as good a milch cow as she would if well milked.

*Rockingham Co., N. C.*

W. B. WILLIAMSON.

No. There are two conditions essential to the making of a good milch cow. First, that she should be milked at regular intervals and at the same time each day; and next, that at each milking she should be milked perfectly dry. Neither of these conditions can be complied with whilst suckling calves.—ED.



### Angora Goats.

Will you or some of your readers please answer the following questions :

1st. What prices do Angora goats command on the market as meat?

2d. How many kids do they have a year?

3d. How much hair or wool do they shear, and value?

4th. Will they do well in this section in woods and meadow pasture of 1,500 acres?

5th. To what extent do they interfere with cows in same pasture?

6th. Will a good tight four strand barb wire fence hold them?

7th. Will they defend themselves against sheep-killing dogs?

8th. Where would be the best place to buy about 50 grades and registered bucks?

9th. How many bucks would be required for a flock of 50 females?

10th. Do they fight each other like the common goat?

Warren Co., N. C.

W. A. DONNELL.

If the enquirer will refer to our June and July issues of this year he will find articles on the subject of Angora goats which will give him the information he asks for. See our advertising columns for goats for sale.—ED.

### Squabs.

Is there any calls for pigeons near Richmond? I have always wanted to raise them, but haven't had time before. If there is any possibility of my selling squabs or pigeons, for eating or raising, please tell me, and what breeds would be best?

Where could I get them, and what would they cost?

We take the *Planter*, but I wish you would write everything out in full.

Chesterfield Co., Va. LUCY ADELAIDE PRINDLE.

Squabs are always salable in the markets of this city, and are largely shipped from some sections of the State to Washington and the Northern markets. The best breeds for squab breeding are the Homers or the old-fashioned Blue Rocks. Advertise in the *Planter* and you will soon have plenty offered. Breeders sometimes advertise them through our columns and more might do so with advantage to themselves. We do not understand the complaint of our not "writing everything out in full." We are careful as far as we can to give every information in our power in good plain English and so fully that none can fail to understand.—ED.

### Seeding for Pasture.

I have recently become a reader of your fine paper, and see that you are helping the farmers of our State to solve many difficult questions of farming. I have a small field of cow-peas planted in drills for cultivation that I will use for pasturing hogs and cows this fall. Next year I want to use same field for pasture after June 1st. Will you advise me what will make best pasture? Would it be advisable to sow red clo-

ver at last working, which will be in about ten days? The soil is of a coarse sandy nature of medium grade, southern exposure, and very thirsty. I want to use this same land for corn two years hence. What is the best time to sow rye for grazing?

Albemarle Co., Va.

W. R. FOX.

Sow five pounds Crimson Clover, five pounds of red clover, and half a bushel of orchard grass and Tall Meadow oat grass in equal parts per acre. This should give you both spring and summer grazing. Rye may be sown for grazing at any time from September to December.—ED.

### Pea-Vine Hay.

I have about 50 bushels of stock peas sown for hay. Please inform me the best way to save the hay.

1st. At what stage of growth must they be cut?

2d. How long should they lay on ground before hauling?

3d. Would it not be best to salt them as housed?

4th. Would it be a good plan in housing them to make a layer of vines and then a layer of wheat straw until the house is filled. By this plan I think vines might be housed from one day sun.

Pittsylvania Co., Va.

A SUBSCRIBER.

1. Cut when the first pods are beginning to turn yellow.

2. This depends altogether on the weather. Let them lay as cut until thoroughly wilted, then rake into windrows and allow to remain until partially cured, then put up into small cocks and allow to cure out. Before taking into the barn throw the cocks over and allow the sun and wind to dry off all dampness.

3. We have never used salt upon pea vines nor do we think it advisable. We do not approve of its use on hay of any kind unless it is badly spoiled by the weather, when a slight salting may make the hay more palatable.

4. The use of straw in layers between the pea vines will allow of their being housed with much more moisture in them than if stacked alone, and is to be commended when the season is showery.—ED.

### Alfalfa.

I sowed a crop of alfalfa in the late spring. It is now up about one and a quarter inches. Won't you please tell me if it will be better to drag it over this fall and re-sow or let it alone? People around this section say that alfalfa won't do at all well, and I am experimenting for my own knowledge.

Fairfax Co., Va.

EXPERIMENTING FARMER.

This depends upon the growth the crop makes during the summer. Run the mower over it as soon as it is tall enough and repeat later. This will encourage a branching growth. If, in August or September, the stand is thin, run a harrow over it and re-seed and roll.—ED.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The crops of spring-planted vegetables and fruits should be harvested and marketed or stored for use as they mature. In handling them be careful not to bruise or damage them any more than possible, as each bruised place becomes the starting point of rot and decay. Especially is it necessary to exercise care in handling products which are to be stored for winter use. Use care in sorting out all damaged products, and let these be used at once, either for the table or for stock. Nothing but the soundest and most perfect products should be stored. Before storing in bulk all roots and bulbs should be thoroughly dried and cooled. Onions should be pulled as soon as the tops die down, and be left an hour or two on the ground to dry, and then be stored on slatted shelves in a cool, airy shed to thoroughly dry. When dry trim off the tops and roots and ship to market or store in a cool, dry place.

Cabbages for fall cutting should be set out from the seed bed this month, and should be put into rich ground, and their growth hastened as much as possible by frequent cultivation, and the application of nitrate of soda as a top dressing. Apply 100 pounds to the acre, sowed down each side of the rows. If worms trouble them dust with a mixture of air-slaked lime and salt, when moist with dew or rain, or they may be sprayed with kerosene emulsion. Paris green may be used when the plants are small and before they begin to head, but we advise caution in the use of this poison on vegetables. Hot water (130° F.) will kill the worms and not hurt the cabbage.

Broccoli plants should be set out. Treat like cabbages. The heads will be ready for cutting in the late fall. They are as fine eating as cauliflowers.

Kale and fall spinach may be seeded at the end of the month.

English peas and snap beans may be sown for a fall crop. These are uncertain as to yield, but if the fall be mild, and there be sufficient rain to cause them to make a quick growth, they often make a nice crop which is of ready sale and always acceptable on the home table.

In our last issue we wrote fully on the second and late crops of Irish potatoes, and to this we refer our readers.

Celery plants should be set out from the seed bed. In our June issue will be found an article dealing fully with this crop.

Land should be prepared for planting strawberries. Plow deeply and break finely and encourage the germination of weeds, which should be killed by harrowing in the hot sun. Weeds are great hindrances to successful strawberry growing, and every means should be taken to get rid of them before planting. Fertilize the land liberally with well rotted farm-yard manure, and supplement with acid phosphate and kainit. Potash is especially useful as a fertilizer on strawberry beds. It will be early enough in September to set out the plants.

All land not wanted for other crops, should be sown down with Crimson clover and wheat or oats to conserve the fertility.

Cultivation should cease in the orchard, so as not to encourage further growth of new wood. The object to be aimed at now is to secure the ripening of the wood.

### FERTILIZING THE ORCHARD.

*Editor Southern Planter :*

I have an apple orchard on my place about ten years old, but have never gotten a full crop of apples, the majority of the trees never bearing at all. Will you suggest in your next issue something to help to make them fruit bearing.

*Prince Edward Co., Va.*

F. N. WATKINS.

Without knowing more about the general condition of this orchard and its treatment in the past, it is difficult for us to suggest with anything of certainty what is needed. It may be that the trees need more feeding than they have been getting, or they may be growing too much wood, or the cause may be want of drainage. Possibly the orchard has had little attention given it in the way of cultivation, or it may be that other crops have been grown amongst the trees, thus robbing it of what it needed. An orchard ten years old should have no other crops grown in it, except as food crops for the trees, and should receive help in the way of cultivation and fertility every year. We would advise that the land be at once plowed and receive an application of 300 pounds of acid phosphate and 100 pounds of muriate of potash to the acre, and that it be then sown down in Crimson clover and wheat or winter oats—10 lbs. of Crimson clover and half a bushel of wheat or oats, or both mixed, to the acre. This crop should be plowed down about May next, and the orchard be then cultivated every ten days until July, and then the same treatment be again followed. This should result in inducing vigorous and healthy growth and the setting



of fruit buds. If the trees are already making vigorous growth, then the foregoing treatment is not needed; but instead of the clover and fertilizer, only the potash and phosphate should be applied, as these two elements tend to the development of sound woody matter and fruiting buds. A writer in our last February issue advised that in the case of a vigorous, healthy orchard not bearing, the proper course was to check the growth of the trees when growing—that is to say, to practice summer instead of fall pruning. This he would do by cutting off the ends of many of the branches in July or August, when in full leaf, or remove a ring of bark on half the limbs just above the body about the eighth of an inch wide. In these suggestions he was supported by a practical fruit grower in a later issue. First be certain that your trees have plenty of food at hand. Their condition of growth will indicate whether this be the case. If thrifty in growth, then try the two last suggested remedies.—ED

#### LONGEVITY OF PEACH TREE—LATE IRISH POTATOES—FALL CABBAGE—CELERY.

*Editor Southern Planter :*

Dr. Jno. H. Green, who has lived in the county of Franklin for seventy-five years, recently told me of the vitality of a peach tree which, to his certain knowledge now exists, and has been a healthy bearing tree for the last sixty years. The tree is on the slope of Chestnut Mountain, about fifteen miles from Rocky Mount. It has survived many consecutive orchards around its present location. He says there has been around that tree a large rock-pile during its whole existence. This may account for its remarkable duration.

I am trying the cold storage potato, planted the 26th of June; only one rain, yet they are up fine, about three or four inches high. I am keeping the ground well pulverized, and they seem to enjoy the treatment. I shall sprinkle plaster early in the morning, and will try a treatment of nitrate of soda. Please let me know what quantity to administer; also what price it can be obtained at in your city.

I am also trying the late cabbage plan suggested in your July number. My plants are just up and looking fine, ten feet from yard pump. I have never been able to raise late cabbage. I am inclined to attribute failure to too early sowing of seed; will report success.

I am also testing the celery plan suggested by Mr. Alfred P. Edge, of Harford county, Maryland. Shall set plants in a few days. My plot is well prepared, ground rich, a fine tilth, and near water. Shall give you the result of my experience.

Rocky Mount, Va. G. W. B. HALL.

Apply from 75 to 100 pounds of nitrate per acre. The last price we have is \$50 to \$60 per ton.—ED.

#### THE IMPERFECT DISTRIBUTION OF THE STRAWBERRY CROP OF THE COUNTRY.

*Editor Southern Planter :*

The value of the strawberry crop of the United States is something enormous. It has been estimated at \$100,000,000 annually.

A large part of this is consumed by the producers. Still an immense quantity is grown for sale and shipped to markets far and near. There is much congestion of the strawberry crop on the great markets. Far too large a proportion of the crop goes to these markets and too little to the smaller markets. The result is in the aggregate an immense loss to the grower.

This could be avoided by better distribution. The fruit shipping associations are doing much good in this line. They keep in daily touch with the chief markets of the country and distribute the shipments of their members in such a way that none of these markets shall be glutted and none left bare.

Nevertheless, this mode, effective as it is within certain limits, reaches only the markets of the comparatively large places. The numberless small towns of the country are supplied at hap-hazard if at all. Many of these are more or less adequately supplied by local growers. The majority of them, if supplied at all, receive reshipments of berries from the large markets. Such fruit is always more or less stale and scarcely ever in a condition to encourage the sale and use of the strawberry, which when ripe and fresh is the most delicious and wholesome of fruits.

Of course the growers in the great strawberry districts where hundreds or thousands of acres are planted must dispose of their product by consignment to the great markets. But many growers are not so situated. They are scattered about through the different States with various villages and towns near at hand. These villages and towns are actually or potentially large consumers of berries. The demand either exists or can be created. It will pay berry growers well to cater to this trade and do their utmost to promote its growth.

Such markets as these being rarely glutted, prices are almost sure to be better than in the larger markets. Then freight, commission, and crates are saved, as a grower usually delivers and sells his own berries and gets back most of the crates. Another great advantage of this mode of selling is that first-class fruit and first class handling tells so much more than on the large markets where the identity of one's shipment is swallowed up in the great aggregate of berries from all quarters.

Selling near home, either in person or by means of an employee, a grower can build up a regular line of customers which he can hold year after year as long



as he gives satisfaction. Some customers will, of course, buy from the cheapest man, but the majority prefer to deal with the most reliable one. People are fastidious about their fruit far more so than about their bread or meat. Fruit should please the eye as well as the palate. The æsthetic element has more or less to do with its sale. People buy it largely because it is pretty and fragrant. Stale fruit that has lost its color and fragrance has small attraction for them. They are not only willing to pay more for ripe, fresh fruit, but they consume more of it. A line of custom built up for fruit is of course available for other products at all seasons.

In my time I have seen some notable instances of what a diligent and industrious man may accomplish in this line. I have known men who failed in general farming, or rather were conducting it at a loss, to gradually devote a part of their farm to fruit growing, recover themselves and make money. Such men proceeded with judgment, enlarging their acreage as their experience and knowledge grew.

The capacity of even one very fertile, perfectly cultivated acre to produce strawberries is almost incredible. I have known small, specially favored plants to bear at the rate of 20,000 quarts to the acre. This, it is hardly necessary to say, was under very excellent conditions. No such yield could be depended on even with the richest soil and best cultivation. But 5,000 quarts to the acre is easily within the range of the probable. A man with even one acre of such berries needs only a fair market to clear a good deal of money therefrom. Even at 5 cents a quart his profit would be large.

But let him not be too eager to make it all. Let him make it all if he can, but let him proceed about it with wisdom. Let him expand gradually, paying as he goes, and remembering that the race is not always to the swift but oftenest to the diligent and persistent. A hare once pitted herself against a tortoise and got beat. If the records were more complete we would doubtless find that more hares have been beaten by the tortoises than we ever dreamed of.

*Kittrell, N. C.*

O. W. BLACKNALL.

### GRAPE ROT PREVENTION.

The Ohio Experiment Station has already called attention to the method of grape rot prevention by spraying, and to Soda Bordeaux mixture as well as to the source where caustic soda may be obtained for making the Soda Bordeaux mixture. These press bulletins will be sent to those who apply.

Warning is now given that spraying at six day intervals is imperative while weather is so favorable for grape rot; also, that it is no longer safe to use the regular Bordeaux mixture except perhaps once on Catawba grapes. Upon Concord, and other varieties

ripening with the Concord or earlier, ammoniacal copper carbonate or Soda Bordeaux mixture, preferably the latter, should be substituted, since the ordinary Bordeaux mixture will coat the grapes too much.

Grape growers are urged to substitute one of the last named sprays, by preference the Soda mixture, and to persist in the spraying until August 15; upon Catawbas one application should be made after that date.

*Experiment Station, O. A. D. SELBY, Botanist.*

### RED CLOVER A PAYING CROP.

*Editor Southern Planter:*

On April 13th, 1901, I sowed a half bushel of Red Clover seed on a piece of wheat. I expected to have run a harrow over the land, but it commenced raining while I was sowing the seed, and continued wet for four or five days, and by that time the seed sprouted and came up, so the harrow was not used. Nothing was done to the clover until mowing season this year. On June 3d I advertised the clover for sale just as it stood. In two weeks' time I had sold \$35 worth. I mowed the remainder, which made four two horse loads, feeding four horses six weeks, which I valued at six dollars per load, making \$24 worth mowed. Taking off two dollars for mowing, three dollars and twenty-five cents for seed and sowing, I realized fifty-three dollars and seventy-five cents from the crop. I raised this clover on land that only cost me five dollars per acre. No fertilizers used except on tobacco in 1900.

*Pittsylvania Co., Va.*

W. P. DIX.

### UTILIZING CORN-STALKS.

The National Fibre and Cellulose Company, recently incorporated in Delaware, with a capital of \$10,000,000, proposes to organize and equip several large plants for depithing corn stalks. The promoters claim there can be as much economy in the working up of corn-stalks into profitable material as there is in using up cotton seed. The difficulty of separating the hard shell of the corn stalk from its pith has been overcome by certain machines, which the Company controls. It is proposed to establish plants in the corn belt within easy access to farmers.

Experienced paper and box makers have examined samples of paper and paper-box board made wholly from the shell of the corn-stalk, and also that made from the pith and shell, and have pronounced them satisfactory. The pith of the stalk is also valuable for preparing cellulose, gun cotton, smokeless powder, and other products. Material for covering floors, making panels, and other furnishing for interior decorative purposes, can also be made from the product at a moderate cost. The Marsden Company, capitalized at \$50,000,000, was the pioneer in this industry, but has not made the expected financial success of it, though it still hopes to do so.—*Am. Agriculturist.*

Mention the *Planter* to your friends.



## Live Stock and Dairy.



GOLDEN LAD'S SUCCESSOR.

### JERSEYS AT BILTMORE, N. C.

Golden Lad's Successor, A. J. C. C. 53960, Sweep stakes bull at the Pan-American, also first aged bull, special for best Jersey bull any herd and Gold Medal. The winner of twenty-nine first prizes and sweep stakes, and headed eleven first prize herds at the leading State Fairs for the last three years.

Sire Great Scot, a son of Golden Lad; Dam Golden Ora (the best daughter of Golden Lad), winner of fifteen firsts, two seconds, and eight first prize herds for Biltmore farms. She has a butter test of 16 lbs 1½ oz. from 260 pounds of milk in seven days, and for thirty days (five months after calving) 1196 pounds of milk testing, by Babcock, 87.24 pounds of butter.

Born and raised on Biltmore farms, he is at the head of the noted Jersey herd, and the quality of his young heifers now coming on promise that he will make his mark on the American bred Jersey.

GEO. F. WESTON.

*Biltmore, N. C.*

Okra, or Gumbo, is most useful for soups, stews, etc., and is becoming more popular every year. A desirable fill in market crop.

Garden Peas are one of our most satisfactory vegetables, both for home use and shipping. They also succeed well sown in August to come in late in the fall.

### THE STOMACH WORM IN SHEEP.

*Editor Southern Planter:*

Flockmasters in Virginia have learned, "by costly experience," to regard the late summer and early fall months as being a critical time for their lambs and yearling sheep and even those of more mature years, for these, though able to withstand its ravages, are reduced to an unprofitable condition. Investigation as to the cause of this loss, has revealed the fact that much of it, if not nearly all, is due to the stomach worm (*Strongylus contortus*). The purpose of this paper is to give the reader the latest scientific knowledge regarding the history of this parasite, its prevention, and the treatment of the affected animals.

#### LOCATION OF PARTS ATTACKED.

The sheep, goat and cow are provided with a more complicated stomach than those animals which are not ruminants. The rumen, reticulum and omasum are the organs which prepare the food for digestion, while the abomasum contains the true digestive secretions. It is in this fourth stomach, or rather fourth division of the stomach, that this worm makes its attack, subsisting there on the blood which it extracts from the mucous membrane of the organ.

#### SOURCE OF INFECTION.

The worm is known to develop rapidly, passing

through its various stages of development in muddy or stagnant water. It is, therefore, most probable that the most fertile source of infection comes from sheep drinking at stagnant pools. Wet seasons, therefore, will favor its development, and pools of stagnant water are a source of much danger.

#### ANIMALS ATTACKED.

It is true that nearly all ruminants are favorable hosts for this parasite, but young sheep and goats suffer most from the ravages of an epizootic outbreak here in Virginia. Many flocks which have come under our notice have suffered very seriously during the weeks following the middle of July.

#### SYMPTOMS.

Animals suffering from an attack of "Stomach Worms" present an anæmic appearance, and as anæmia usually accompanies debilitating influences, especially when digestion is impaired, this symptom is not especially characteristic and scarcely permits a precise diagnosis to be established. There is, however, a chain of symptoms usually present upon which much dependence can be placed. The animal, if noticed closely, will be observed to be languid and to lag behind the flock, or to leave it altogether. It appears intensely thirsty, becomes thin and emaciated, and may have colicky pains, and a peculiar black diarrhœa. Emaciation rapidly follows, the animal ceases to follow its companions, seeks some secluded spot and there dies. The less severely attacked will present many of the above symptoms in less intense form, but are generally unthrifty, will hang about the watering pools and have occasional diarrhœa.

#### TREATMENT.

The seriousness of this malady has led to most thorough investigation, not only in this country but abroad. Nearly all of the vermifugal treatments have been adopted, some with more, some with less success.

The Seventeenth Annual Report of the Bureau of Animal Industry deals extensively with this subject, and quotes the results of many remedies which have been tried, with full detailed instructions as to procedure and management of each, together with many valuable suggestions. Personally we have had a varied experience with different remedies, and quote the advantages and disadvantages as we have found them: Freshly ground Areca Nut gave us good results in doses of from one to two drachms, according to the size of the lamb. Much difficulty is, however, experienced in getting the drug fresh, which, when old, may be worthless. When placed on this treatment, the animal should be fasted for twelve hours previous to dosing. Areca Nut being a powerful astringent, may require to be, and should be, followed by a laxative of oil or Epsom salts. Creoline, well diluted, has

given us marked results in doses of one drachm for each fifty pounds weight of lamb. Having an objectionable taste, and causing a smarting sensation to the mouth, it causes sheep to struggle violently during drenching, and this sometimes results in an accident, such as choking. This treatment should be repeated every five or six days until three doses have been given. Our experience with gasoline corresponds with the general reports we have read of it, that unless great caution is exercised in its administration there is danger of sudden death from suffocation when the drug reaches the lungs. Repeated treatment is expensive and liable to produce much intestinal irritation. Fluid extract of Kamal has given the best results of anything we have yet tried, administered in doses of one drachm for each fifty pounds weight of lamb. As it is not readily dissolved in water, it should be mixed with an equal quantity of glycerine before adding the water. Sheep take it readily with not much resistance. As it is non-irritating to the mouth, it does not require large dilution, from two to three ounces of water being enough for a full dose. Being a purgative, it also carries off dead worms by the intestines. Kamal has, however, the disadvantage of being expensive, but, on the whole, it is the most satisfactory agent we have yet tried.

In the treatment of stomach worms, animals should be at once removed from the source of infection. If they have been on low, damp land, they should be placed on upland. All stagnant pools should be drained or fenced. The emaciated animals should have plenty of good feed, with tonics, such as iron, and an abundance of salt and fresh, clear running water. Where lambs are raised for market it is much safer to have them shipped before July.

#### POST MORTEM.

In animals which have died from this disease, the worms are found in hundreds or even thousands on the mucous membrane of the abomasum. If death has just taken place they will be seen alive. The writer has seen the lining of the fourth stomach of sheep and goats one crawling mass of small brownish colored worms, with the mucous membrane reddened and much thickened from the irritation produced. The flesh of animals in this condition is usually pale in color, soft and flabby, and unfit for human food.

Before leaving this subject, I feel that too much stress cannot be placed upon the importance of thoroughly draining or protecting stagnant pools of water and the removal of animals to healthy pasture, as soon as treated, in order to avoid infection.

*Experiment Station,*

*Blacksburg, Va.*

JOHN SPENCER,

*Veterinarian.*

Mention the *Planter* to your friends.



## DAIRYING IN VIRGINIA.

*Editor Southern Planter :*

I have three fine bred Jersey cows that I think are worthy of mention in your columns. "Premium Besie" has given forty pounds of milk, testing three pounds of butter per day. She is at the head of my herd.

"Evergreen Pet" has given twenty eight pounds of milk, testing eight per cent. butter fat.

I have also a cow two years old last April which has had her second calf.

Up to the time of second freshening I had taken in from this heifer for cream alone \$60, after paying for grain given her from the time of her first freshening.

I am asked the question, "Will dairying pay in the South?"

My experience in the business leads me to answer in the affirmative, if we secure the right kind of herd. The most profit is in the best bred cow.

*Prince Edward Co., Va.*

W. B. GATES.

## THE LAWRENCE-KENNEDY MILKING MACHINE.

In dairy machinery there has perhaps been a greater advance made during the past twenty-five years than in any other branch of the farmer's business. A modern dairy fitted with all the latest appliances must be something of a revelation to the uninitiated. Science has done much to advance modern dairy practice, and whether the aid has been in the mechanical or in the chemical departments of research, it has been welcomed and appreciated to an extent which guarantees to those who can render effective help a substantial recompense for their labors. There is one operation in dairying, however, which, so far as general practice is concerned, still remains open for the inventor, and where the dairy farmers would cordially welcome help. We refer to the need of an efficient substitute for the present scarce and costly labor of hand milking. That the difficulties hitherto preventing the general adoption of mechanical milking will be, if they have not already been, successfully surmounted, we have little doubt—difficulties which are not purely mechanical, but extend to the widely differing conditions of what may be best described as temperament in the individual animals.

It was, therefore, writes a correspondent of the *Agricultural Gazette*, of London, Eng., with considerable interest that we accepted an invitation to view the Lawrence Kennedy cow milker in practical work at Riding Court, Datchet, where the occupier, Mr. J. Kinross, farms some 1,100 acres, has 150 milch cows, and is the holder of that much-coveted trophy, the Prince Consort's cup, presented by Her late Majesty the Queen. The machine, we were advised, has been in use on the farm for a year, with the view of having it thoroughly tested under ordinary working conditions, so that any defects noted, or improvements required, could be remedied. The apparatus was erected

in a shed containing 48 cows, but at first half the number were milked by hand so as to be able to compare the yield and other conditions of the two methods. The result is reported as being altogether satisfactory and decidedly in favor of the machine in economy of labor, cleanliness, keeping qualities of the milk, and without any ill effects on the animals. The machine is operated by suction, which may be obtained by a suction pump operated by an engine, electric motor or water wheel, or, as in this instance, where the vacuum is obtained by an ejector attached to a small boiler, the steam jet producing the vacuum and dispensing with the necessity for an engine. A vacuum-container tank is connected, so as to give steady working, and a range of iron pipes runs along the shed immediately over the cows, with a short branch, fitted with a vacuum cock, descending between every alternate animal. A rubber tube, slipped onto the iron pipe, connects with the milking apparatus, which may be described as a cone shaped pail, the lid carrying a double action pulsator of simple construction, from which branches two rubber tubes, one to each cow, to which are attached four rubber teat-cups. The speed and strength of each pulsation can be finely regulated by means of a screw, to suit the peculiarities of each cow, and as the pulsations only occur in the teat-cups and in the short rubber tube leading therefrom to the pulsator, the milk is not brought into direct contact with the air. The lid and pipes are kept in place by the vacuum, no screw or other fitting being required, while the milk, on its way from the teats, can be seen passing through a glass trap, and when the cow is milked clean, the cups remain on the teats until removed by the attendant. The cups are unique in that a thin piece of rubber with a hole in the centre is inserted immediately inside the cup, giving a more tenacious hold than in previous patterns, while at the bottom of the cup a smaller detachable rubber cup is inserted, so that the cow is milked wet, as the fluid has to flow over this inner vessel before leaving the large cup, and in practice this has been found of considerable advantage to the success of the operation. In work, the appliance is exceeding simple. The pail is placed between the cows, the rubber tube slipped onto the iron pipe, the vacuum cock turned on, and the cups held to the teats, to which they at once adhere, and the milking begins.

The pulsations regulating the collapse and expansion of the cups are close imitations of the calf sucking, and the vacuum pressure is very small. The milking was done quickly and cleanly, and the animals did not exhibit any signs of inconvenience, as in most cases they stood quietly feeding during the operation. The value of the regulation of the pulsations as regards speed and strength to suit the temperament of the various animals was particularly noticeable, and altogether the work was completed in a very satisfactory manner. The vendors—the Dairy Outfit Company, Limited, King's Cross, London—claim that by the use of the machine 48 cows can be milked in an hour, with the help of a man and a boy, and that no more hands would be required for 60 cows. Cleanliness is ensured by the milk being drawn direct into the air-tight pail, while it has been found that the milk will keep longer than where the milking is done by hand. The teats of the cows appeared to be in capital condition, and we were advised that after the first few days the



animals take kindly to the machine, while heifers milked for the first time take to it much more readily than to hand milking. The apparatus is easily cleaned by sucking water through the cups, and the rubber is kept sweet, soft and pliable, when not in use, by being immersed in lime water. The cost of the plant is not heavy, and if under varying conditions the work is done as well as when we viewed it—and we see no reason why it should not—then it will soon repay its cost in wages. The Lawrence Kennedy machine, at any rate marks, a decided advance in meeting the need indicated at the beginning of this article; time alone will tell whether or not it has solved the problem of mechanical milking, but we commend its claims as worthy of the attention of readers.—*Farmer's Advocate, Can.*

### SICK COWS.

In the early spring I had a cow that was sick; had a cough and would not eat for about two weeks. She then ate some, and lingered on that way for some time and then died. I cut her open and found her lungs in bad condition; there seemed to be a secretion all through them, rather dried up, looking like small worms; about two-thirds of her lungs were in that condition, and closed up solid, nearly the color of liver. Was that caused from feeding her cut corn stover or was it tuberculosis?

Roanoke Co., Va.

J. W. DAMEWOOD.

The cow no doubt died from tuberculosis. The feeding of the cut corn stover had nothing whatever to do with the condition of the lungs.—ED.

### A PRELIMINARY REPORT ON THE USE OF BLACKLEG VACCINE IN VIRGINIA.

*Editor Southern Planter:*

Since the year 1898 this Department has been distributing blackleg vaccine to the stockowners of the State free of charge, asking in return that the parties using the same would report results when asked to do so. It is to be regretted, however, that only about fifty per cent. of those using the vaccine have deemed the matter of sufficient importance to report results, notwithstanding the fact that blanks containing questions to be answered were mailed to each party who had used the vaccine with the request that they fill out the blank and return it to us by return mail.

The averages recorded in this Bulletin are, therefore, obtained from the limited number of reports received, and can only be considered as an approximate estimation of the results obtained. Could a complete report be gotten, no doubt even more favorable results would be shown.

As has been stated in former bulletins, blackleg is a disease which attacks, for the most part, young cattle ranging in age from six months to two years. In fact, more die at the age of one year than at any other age.

We have, however, received a few reports in which it is stated that calves from two to three months of age have died of blackleg, and in a few more instances cattle five or six years old have been known to contract the disease and die. These are exceptions, however, and as a rule it has not been considered necessary to vaccinate cattle over two years old.

The disease is an old one, and has been known for a great many years. It is due to a short rod shaped bacterium which under certain conditions forms spores (eggs), which spores are capable of great resistance to destructive agents, and when once scattered in a field or pasture may remain for an indefinite time, only waiting for an opportunity to enter the system of a susceptible animal and produce the disease, blackleg. Hence, a pasture which once becomes infected may remain so for years.

The carcass of an animal which dies of blackleg contains countless numbers of these spores, and unless destroyed by burning, may be the means of infecting a whole neighborhood, or at least an entire grazing boundary, being scattered, as it usually is, by dogs, buzzards, etc.

Too much stress, therefore, cannot be placed on the importance of burning every animal which dies of blackleg. Mere burying is not sufficient, since the spores are easily brought to the surface by various insects. For the last three or four years the disease seems to have been on the increase. This is doubtless true to a very large extent, but is made more apparent by the fact that since vaccination has been pretty generally adopted as a preventive measure, stockowners have taken more notice of the disease and have increased their efforts to stamp it out or prevent it. The fact, however, that it is on the increase is due to two important factors: First, the careless manner in which blackleg carcasses are disposed of; and second, to the greatly increased number of high-bred cattle, as is evidenced by the fact that blackleg is decidedly more prevalent in the grazing counties of Virginia where the better classes of cattle are kept. As a matter of fact we have had almost no reports of the appearance of the disease except in the best grazing counties. In the low lying counties, where but little attention is given to stock raising, and where, with few exceptions, the cattle are of the old type, the disease is rarely seen. The result of our investigations show conclusively that blackleg is practically a disease of the high-bred cattle. The writer has, however, seen a few quite severe outbreaks of the disease among scrubby North Carolina cattle, when placed on infected pastures in Virginia.

The following table will indicate the counties from which reports have been received, and in which we have distributed the most vaccine. Only one report



has been received from King George county, hence the figures are not indicative of the actual condition of the county as a whole :

County.	Loss before vaccination.	Loss after vaccination.
Albemarle ....	11.00 per cent.	.00 per cent.
Amherst .....	10.00 "	.00 "
Augusta.....	5.70 "	.70 "
Bedford .....	19 30 "	.00 "
Bland.....	8 50 "	5.00 "
Botetourt.....	14 50 "	.40 "
Buckingham..	6 00 "	.00 "
Craig.....	16.00 "	4 60 "
Culpepper .....	11.00 "	.00 "
Floyd .....	10.30 "	.00 "
Franklin.....	12.30 "	1.10 "
Fauquier.....	6 00 "	.00 "
Giles .....	19.20 "	.00 "
Grayson .....	14 40 "	.50 "
Highland .....	6.70 "	.20 "
King George..	16.00 "	.00 "
Lee .....	12.00 "	.00 "
Loudoun.....	8 20 "	6.00 "
Montgomery..	20.70 "	.00 "
Orange.....	12.00 "	3 50 "
Pulaski .....	12.70 "	3 30 "
Roanoke .....	13 20 "	3 30 "
Rockbridge...	16.50 "	.20 "
Rockingham .	7.00 "	.00 "
Russell.....	7.35 "	.10 "
Scott .....	2.00 "	.20 "
Spottsylvania	4 00 "	4.00 "
Smythe... ..	11.00 "	.00 "
Tazewell. ....	9.70 "	.00 "
Washington...	9.00 "	.70 "
Wythe. ....	11.90 "	.00 "
Average before vaccination.	11.07	Average after vaccination .89

From the foregoing table it will be seen that the losses from blackleg before vaccination amounted to 11.07 per cent., and that after vaccination the death rate was reduced to .89 per cent. In a few instances it was reported that losses were sustained in from twenty-four to forty eight hours after vaccination. Since it is impossible for a case of blackleg to develop from vaccination in so short a time, such animals were undoubtedly infected before vaccination. The majority of deaths after vaccination occurred in from two to six months afterwards, and in cattle which were less than six months old when vaccinated.

It must be remembered that vaccination has no curative effect. An animal, therefore, which is infected at the time of vaccination is just as sure to die as one which has not received the vaccine, and all such deaths may properly be discarded in considering results. In the printed directions sent out with each lot of vaccine it is plainly stated that cattle under six months old should be vaccinated the second time, since the protection in such is not lasting. The most of the losses were in this class of animals and might

also be properly discarded in figuring results. Discarding the deaths in these two classes of animals we would have a death rate of less than one half of one per cent. Even counting these, we have the remarkable reduction in the death rate of 10.18 per cent., giving a death rate of only .89 of one per cent., after vaccination.

Although the disease appears to be on the increase, there is no doubt that it could be stamped out in a few years' time by concerted action on the part of the farmers, by a thorough system of vaccination and thorough destruction by burning of all carcasses of animals which have died of the disease. Vaccination should be practiced before the disease makes its appearance, thus preventing loss and further infection of the pastures. It is too often the case that stockowners wait until they have lost one or more cattle before applying for the vaccine, and then send in a "hurry up" order, with the request that the vaccine be sent along with the application blank. We have been compelled, however, to conform strictly to our rules and insist that the blank be filled out and returned to this office before sending the vaccine, for the reason that many who neglect to vaccinate their cattle until the very last moment also neglect to fill out the application blanks after they have received the vaccine.

As the vaccine is distributed to stockowners of the State without cost to them, it is hoped in the future that all will report results without delay when asked to do so

E. P. NILES, *Veterinarian,*  
*Experiment Station, Blacksburg, Va.*

#### A CANADIAN EXAMPLE.

Mr. J. W. Roberts, of Wicklow, Ont., is a good illustration of the practical effect of sound dairy thought and intelligence.

During the past year Mr. Roberts has manufactured and shipped to Ottawa 3,031 pounds of butter from 12 cows; 11 of them milked for five months and one for seven months. The butter brought 20 to 23 cents a pound and netted \$647, or an average of \$54.91 per cow. This is the result in butter alone. Mr. Roberts' methods are all progressive, using the silo and other great helps to economic dairying.

At a recent meeting of the Board of Directors of the Southwest Virginia Agricultural and Live Stock Association, held in Radford, Va., it was decided to offer the following premiums on live stock exhibited on the fair grounds of the Association at Radford, October 21-24: Hereford cattle, \$1,000; Shorthorns, \$1,000; Aberdeen-Angus, \$200; horses, \$200; sheep, \$50; hogs, \$50; horse races, \$1,000. In case of Herefords and Shorthorns \$500 for each breed was appropriated by the American Hereford and Shorthorn Breeders Associations respectively.

## The Poultry Yard.

### THE BREEDING OF THE PEKIN DUCK.

#### Selection of Breeding Stock—Handling and Marketing Ducklings.

*Editor Southern Planter.*

The rearing of ducks for the early market is becoming quite an extensive business in the United States at the present day. Several varieties of the duck family have been experimented with for the purpose, and all growers concede that the Pekin comes nearer being an ideal bird for profit than all other varieties.

The feathers of the Pekin are creamy white throughout, orange-colored legs, feet and beak. They are quite large at maturity—adult birds weighing from 8 lbs. to 10 lbs. apiece when fat; are exceedingly hardy, good feeders, rapid growers, and stand forcing for the early market better than any other.

Ducklings at eight weeks of age, if rightly handled, can be made to weigh from 7½ to 8 lbs. per pair. To those understanding the business, it is very remunerative. No one should embark in the enterprise, though, with the expectation of there being little work attached to the undertaking and large profits derived throughout. If they do, they will be sadly disappointed. It is a business that requires the most careful attention and constant study to handle it successfully. The pioneer duck raisers of this country had many "ups" and "downs" (and some of them more "down" than "ups") before they made a success of their enterprise.

*Selecting Breeders.*—The subject of selecting breeding stock is a very important one, and one that is sometimes neglected. For raising early ducklings, you should know that the parent stock has been well cared for from the egg to maturity. If they have been carelessly handled in any way, the chances are it will show up in the offspring. Your breeders should be of good size, well proportioned, and males especially not too heavy. They should be vigorous and hardy. In making a beginning, we would advise you to buy a few birds from some reliable breeder and one who has been in the business for years and has a reputation as a breeder. Beware of advertisers of whom you know nothing. The man who has been in the business for years and is "on to his job," is the man who will ship you your money's worth, doing the square thing by you. Buy a few settings of eggs from another breeder of good standing, and by this means obtain new blood for your next season's breeding. Mate up your breeding yards not later than October 15th, in order that they may become accustomed to their new quarters and general surroundings. There

is no breed of fowls so susceptible to a change of either their location or bill of fare as the Pekin duck, either of which will decrease the egg production materially. Begin to feed your bill of fare, and strictly adhere to it throughout the season. Ducklings hatched in February or March will begin laying in November following, if carefully handled, while those hatched as late as May will begin to lay in January or February. The eggs for the first two or three weeks, as a rule, run very low in fertility, and it is a question whether it pays to hatch them, though if you use incubators the infertile eggs can be taken out on the fourth day and shipped to market, where they are sold to hotels and restaurants for culinary purposes. In order to have best results, you should put forth every effort to make your breeding stock comfortable in every way. The Pekin duck delights in having a nice, clean bed of wheat or oat straw at its disposal. A good plan is to scatter a thin layer of dry straw over their pens every few days, just before the birds go to their quarters for the night. If this is done, there is no necessity for cleaning out the houses more than once or twice during the season. When the roof is good, allowing no rain to come through, there is no moisture to cause dampness, and the accumulation of bedding throws the ducks farther from the ground, and they are less liable to suffer with cramps and leg weakness, which is brought on by damp roosting quarters. Ducks suffer a great deal with cold feet in very severe weather. Give them a bed of straw on the sunny side of their houses during the cold winter days, and see how quick they will take to it. Do not shut them in their houses during the daytime, as it is their nature to worry if confined, and this will show on the egg yield. Ducks generally make their own nests in the straw, but we have found it a good plan to make a lot of nests and place in their pens, but have no sharp edges for them to run against and injure themselves. A sudden fright will very often throw them "off their feed," and will sometimes require days to get them back so they will eat their accustomed allowance. This materially curtails the egg yield. Always be careful to have the doors to their houses as near on a level with the outside ground as possible. They cannot climb like other fowls. If you allow them access to ponds or tanks of water, have it convenient for them to get in and out. Any obstruction in either case will certainly cause lame ducks. More depends upon the careful handling of your breeders, as to the success with the ducklings' than most people imagine. In making your troughs for both old and young, round the edges and ends



smooth. The duck has a knack of getting himself into trouble with no thought as to how he is to get out.

You may give all branches of duck culture every attention possible, but if you neglect *good breeding birds in any way*, trouble and disappointment, and to say the least, loss to the owner, follows.

Pennsylvania.

WALTER P. LAIRD.

[We commend these articles to the attention of our readers. Mr. Laird is a practical man, who has had charge of large duck and poultry ranches.—ED.]

[TO BE CONTINUED.]

### SORE HEADS.

*Editor Southern Planter :*

I now allude to sore heads—so denominated—in chickens, and not to this term as sometimes offensively applied to disappointed poultry men.

Sore head among poultry, especially through the extreme Southern States, is of very common occurrence. It is a phase of roup, catarrh or inflammation, aggravated, if not caused, by neglect, foul air, wet quarters or exposure on the roost at night.

It is not true, though often stated, that if the flock is kept clean, dry and well attended to, it will never have the roup, for it sometimes appears under the best of management just as sure as influenza or diphtheria will attack children, let them be ever so well nursed and managed.

Yet, the better the sanitary conditions provided the less the danger of attack. I know of yards that raise thousands of chicks each year, in which the breeder rarely ever has a case of this kind among his large flock. And again, I know of more than one place where the owner is continually annoyed with this trouble among his birds of all ages.

This disease is a form of roup or catarrh, as are in flamed eyes and nostrils, difficulty in breathing, in flamed throat glands, swelled face or pustuled crown, and all arise incipiently from the same primary causes.

There is no reason why poultry men should ever be troubled with these nuisances to any extent, unless in the milder and more manageable forms, where proper care is continuously taken to prevent—on the old principal that an “ounce of prevention is worth a pound of cure.”

If the poultry man attends to his stock as he ought to and provides his birds with clean, well ventilated quarters, feeds them regularly and judiciously, affords them good range in summer, and warm, sunny quarters in winter, never crowds them, and above all, fights off the lice, which, if not attended to, will soon infest birds, houses and roosts, he will have little cause to complain about sore-headed chicks or fowls.

Occasionally an exception may arise, and a severe

case of sore head will develop. In an advanced stage the head becomes inflamed and swollen on one or both sides, often obstructing the sight, and many times resulting in the loss of one or both eyes; but the appetite is good up to the last, unless internally affected.

Roup or sore head usually appears as an epidemic, and if a cure is not effected will spread through the whole flock. Where it exists the mortality is generally great. In the early stages of the disease a cure can be effected by injecting into the nostrils a little kerosine oil, anointing the head, if swollen, with sweet oil and alcohol, equal parts of each, once or twice a day. Add about one half teaspoonful of acornite to each quart of drinking water, and keep the affected birds in dry and comfortable quarters with plenty of sunshine. The drinking vessels used by affected birds should be boiled occasionally.

The adage, an “ounce of prevention is worth a pound of cure,” applies very forcibly here.

W. P. L.

### FEEDING CHICKENS FOR GROWTH.

A series of valuable experiments on the subject of feeding chickens have been carried on by Prof. G. M. Gowell, of the Maine Experiment Station, and the latest results are published in Bulletin 79. The English and French chicken fatteners who make a specialty of the business and who fatten many thousands each year, use small coops, holding four or five birds each. This plan has also been adopted by the Canadian Government. Prof. Gowell has followed a similar plan and compares it with confining fowls in small houses and yards. The English and French fatteners use a food composed largely of finely ground oats and tallow. Prof. Gowell used corn meal, wheat middlings and ground beef scraps, with small quantities of finely ground oats in the earlier tests. That the gains from the birds in small coops were as great as those made by the former, is shown by the reports which they have published.

The coops each had a floor space of 16 x 23 inches and were constructed of laths with close end partitions of boards. The floors were of lath, placed three-fourths of an inch apart and one inch from the wall, so that they might be kept clean by the moving about of the birds. The coops were made two together without cutting the lath, which were placed lengthwise on bottom, top and back, but placed upright and two inches apart in front, so that the chicks could feed readily between them. V-shaped troughs with three-inch sides were placed in front, about two inches above the level of the floor of the coops. In each coop four or five birds were placed. The houses employed were 9 x 11 feet in size, with an attached yard 15 x 20 feet, in which there were no green plants growing.

The food consisted of a mixture of 100 lbs. corn meal, 100 lbs. wheat middlings, and 40 lbs. animal meal. This was mixed up with cold water as needed and was fed twice each day, as much being given as the fowls would eat. One lot of twenty Plymouth Rock cockerels ninety-five days old were placed in



coops and another lot of sixty eight of the same size and age were placed in the house. Both lots were fed twenty-eight days. Those in coops made an average gain of 1.34 lbs. at a cost of 8.92 lbs. of the dried grain per pound of gain. The sixty-eight cockerels in the house and yard made an average gain of 1.43 lbs. at a cost of 5.26 lbs. grain per pound of gain. Several other experiments with fowls of different ages were made, and in all 321 chickens have been fed in forty one lots in periods of twenty-one, twenty-eight and thirty five days each.

In eleven of the coops containing four birds each, the gains have been greater than in the houses and yards which contained from twenty to sixty eight birds, while in twenty four of the coops the gains have been less. In five of the six groups of experiments, the gains have been greater in the houses and yards than in the coops. The results show that close cooping is not necessary to secure the greatest gains in chicken fattening, and that the chickens made greater gains when given a little liberty than when kept in close confinement. The labor involved in caring for birds in small numbers in coops is considerably greater than where they are kept in a house and yard, while the amount of food required to make a pound of gain is likewise greater.

Other interesting data brought out in these experiments are that the periods of cheap and rapid gains in weight come early in life. The greatest gains were made in a test report in a previous bulletin, where twenty chickens confined in coops gained an average of 2.23 lbs. each in a period of thirty five days, while a similar lot in a house and yard gained 2.47 lbs. each. The best gains were made on chickens about three months old.

In one of the experiments, skim milk was used in place of water in mixing up the dry feed. Instead of 40 lbs. beef scrap, 33 lbs were used, so that there should be no difference in the amount of digestible protein between the two rations. Two pounds milk were used to each pound of the meal mixture. The following table shows conclusively the great value of skim milk in fattening chicks:

SKIM MILK VS. WATER IN FATTENING CHICKENS.

	On water. lbs.	On skim milk. lbs.
Chickens 95 days old.		
In coops, gained in 28 days each .....	1.34	1.68
In house, gained in 28 days each.....	1.43	1.71
Chickens 160 days old.		
In coops, gained in 28 days each.....	.78	.87
In house, gained in 28 days each .....	.45	.93

Another series of experiments showed the great value of meat meal. One lot of birds gained .72 lbs. each when fed equal quantities of corn meal and wheat middlings, mixed with water, while a similar lot gained .92 lbs. each when one fifth of the ration was composed of meat meal. Where no meat meal was fed, 14.96 lbs. of dry grain was required to make a pound of gain; where meat meal was fed, 12.07 lbs. of dry feed produced a similar gain. The mixture containing the meat meal cost 1.15 cents per pound, while the other mixture cost one cent per pound. Where the meat meal was fed, a pound of live weight of chicken was made at a cost of 13.88 cents, without

the meal, 14.96. In other feeding tests, greater gains have been made at a cost per pound of as small as five to eight cents.

POULTRY NOTES.

In order to have healthy, vigorous, profitable poultry, new blood must be introduced annually.

Beware of overfat, inactive hens; they are most certain to be a source of trouble and at best are unprofitable stock to keep either for layers or breeding stock.

The straw and chaff from the barn floors make excellent scratching material for the hens to work over, furnishing food and exercise at the same time.

Any breed of fowls that is carefully and systematically bred for egg production can be made to produce good layers. But the individual specimens must be bred along the right line.

If situated so you can raise a patch of millet this year do not fail to do so, for there is nothing better for hens in winter or for little chicks. It is easily grown, yields well, and can be fed without being threshed.

Let your fowls take a run occasionally where they can get green stuff furnished by nature in the springtime. They much prefer to pick it themselves to it being supplied to them in pens, and it seems to do them more good.

A correspondent asks how to feed ground dried beef. We feed it in a trough just as it comes from the factory. We have never discovered any evil effects following this way of feeding. A good way to feed it is to cook it in the mashed feed, but we do not feed mashes.

Feeding hot mashes is forcing for eggs and forcing for eggs is not what is wanted in the breeding pen. There you want not only eggs, but good, strong, healthy chicks from the eggs. Another reason why it pays to have a separate pen from which to select eggs for hatching purposes.

When cleaning out the hen house do not dump the droppings out on the ground to leach their strength away. Either barrel up and house for fertilizing some special crop or else put them at once on the general manure heap so they will be incorporated in the mass when drawn to the field.

Oat meal, cracked corn, corn bread, moistened bread crumbs, wheat and cottage cheese are among the best and most generally recommended foods for small chickens. It is not so much the kind of food as it is the care in feeding it that insures success. The great danger is in overfeeding, especially while the chicks are very small.

Nests and roosts in the hen house should be frequently treated with applications of kerosene from now on through the warm weather months, but care should be taken not to have the kerosene come in contact with the eggs; the nest box should receive a thorough application of the oil and new clean nest material used to replace the old.



## The Horse.

### NOTES.

Mr. Robert Tait, of the wholesale seed house of George Tait & Sons, Norfolk, Va., is gradually collecting some well bred material for his Stud at Spring Garden Farm, near Coolwell P. O., in Amherst county, Va. Capt. Jas. N. Lamkin, who directs affairs at the farm, has faith in the potency of Ed. Kearney. The thoroughbred son of Tom Ochiltree and Medusa, by Sensation, heads the Stud. Most of the general-purpose mares on the farm will be bred to the big chestnut stallion with the hope of producing hunters and jumpers, which are now so much in demand and find ready sale on all the prominent markets. Ed. Kearney's fee is only ten dollars the season, and at that figure farmers should not hesitate to breed their mares to him, especially the heavy weight, larger ones. As an example of such a cross I may cite the famous steeple chase gelding Mars Chan, the crack high jumpers Amaret, Hornpipe, Gray Cap, Searchlight, and numerous others that have won in the best of company at the big horse shows and are held at almost prohibitive prices. Of the trotting-bred matrons at Spring Garden, K. Helice, the bay mare, by Norval, dam Grenada, by Onward, is probably the most highly prized. She has at her side a shapely bay filly, by Foxhall McGregor, and will be bred to Red Leo, son of Red Wilkes, as most likely will Sweetstakes, dam of the good sire Great Stakes, 2:20; and Sunbeam, by Hambletonian Mambrino. Flora McC., the chestnut mare, by Red Wilkes, dam Missie Wilkes, by William L., second dam the great brood mare Fanny H., dam of Evangeline, 2:18 $\frac{1}{2}$ , and three others, by Red Wilkes, making her quite closely inbred to the last named famous trotting sire. Flora McC. is in foal to David Harum, son of Director, 2:17 $\frac{1}{2}$ , and will be bred to Foxhall McGregor. Lucy Tait, the chestnut filly, one year old, is by the latter horse, out of Sweetstakes, and is well thought of by Captain Lamkin.

The destruction by fire of the big Auditorium building at the Exposition Grounds on July 10th gave the management of the Richmond Horse Show Association some concern, as the Horse Show was to have been held there this fall, and thousands had been spent in improvements, but President J. T. Anderson and his associates were equal to the occasion and other arrangements were soon made. Plans have been approved for a splendid new Auditorium at Reservoir Park, and it will be completed in time for the show to take place on the dates chosen—viz., October 14th, 15th, 16th, 17th and 18th. The building when completed will be the largest of its character in the South, and for horse show purposes will not be surpassed by any in the country. President Anderson, Secretary W. O. Warthen, and other officers of the association are pleased over the prospect and look for their second annual show to be a grander success than even the sanguine supporters of the affair anticipate.

Manager F. Covington, who directs affairs at the Foxhall Farm of Captain John L. Roper, Norfolk, Va., writes me that the trotting bred horses there are

for the most part in good shape and doing nicely—Charles Atkinson, who does the training and driving, has some in his stable that he thinks will do to take to the races later on. During the spring meeting at Baltimore, Atkinson did well with the farm horses—winning some races and disposing of several, among them the bay pacing gelding Captain, 2:16 $\frac{1}{2}$ , by Great Stakes. He is now working for speed Princess Kenton, 2:32 $\frac{1}{2}$ , chestnut mare 5, by Great Stakes, dam Lady Kenton, by Hambletonian Mambrino; Mr. Lindsay, bay gelding, 5, who can trot in 2:15, by Russell Rex, dam Helice, by Norval; Lena Bell, bay mare, 7, by Lynne Bell, dam by Commoner, and a half dozen or more well bred and promising two and three year-old fillies and geldings. The only foal dropped on the farm this season was a bay colt, by Foxhall McGregor, dam Frances, 2:25 $\frac{1}{2}$ , by Muscovite, dam Venus, dam of Mohoeye, 2:30, by Conger. Frances was not bred again, as Atkinson thinks she will trot in 2:15 this fall, and Mr. Covington would like to see her reduce her record. Foxhall McGregor, the bay stallion, 5, by Robert McGregor, dam Cleo, 2:19 $\frac{1}{2}$ , by Gambetta, who is kept for service at the farm, has also been given track work, and can show miles under 2:25, but will hardly be raced this season.

The great brood mare Erena, 2:19 $\frac{3}{4}$ , the gray daughter of famous Aleyone and Estella, by Clark Chief, owned by Henry G. Herring, Harrisonburg, Va., has a fine chestnut colt at her side, by Supremacy, 2:29, son of Bell Boy and Susan, sister to Allen Lowe, 2:12, by Alcantara, and has been bred back. Erena is the dam of Allercyone, 2:18, and two others in the list, all by Allerton, 2:09 $\frac{1}{2}$ , and several more of her produce by other sires are likely to follow. One of the handsomest and most highly formed of her produce is the chestnut filly Helen Wilmer, one year old, by Kelly, 2:27, a full brother to the great three year old campaigner Expressive, 2:12 $\frac{1}{2}$ , by Electioneer, out of Esther, dam of four in the list, by thoroughbred Express. Helen Wilmer is owned by her breeder, James Cox, of the Belgravia Stud, Mt. Jackson, Va., from whom Erena passed to Mr. Herring.

One of the handsomest thoroughbred foals of the season is the brown filly Boscobel, foaled April 29th, and bred and owned by Charles H. Hurkamp, Boscobel Farm, Fredericksburg, Va. She was sired by the great race horse Tournament from Lovelorn, by imported Esther, second dam Ladylove II, by Troubadour. Tournament, the sire of Boscobel, is a splendid son of imported Sir Modred and Plaything, by Alarm, and heads the stud of Marshall & Thompson, Warrenton, Va. In placing before the public such stallions as Tournament, His Grace, son of Eolus, and some three or four other horses as richly bred and grand individually, Marshall & Thompson are doing a great service for the breeding interests of Fauquier and Loudoun counties, and their efforts should be appreciated in a practical way by liberal patronage of the stallions whose services they offer.

The Virginia Circuit of Horse Shows grows in im-



portance and popularity, and is doing a great work for the horse interest in the State. The latest to drop into ranks being the Lynchburg Horse Show Association, whose first annual exhibition will be held there October 22, 23 and 24, or during the week following the Richmond Horse Show. The Shows booked for this month are Harrisonburg on the 13th and 14th, Culpeper on the 19th, and Warrenton the 27th and 28th. The Rockingham Horse and Colt Show Association, whose headquarters and show grounds are at Harrisonburg, is not strictly a member of the Virginia Circuit, but its dates conform with the latter, and it is quite an important affair, as Rockingham county and adjacent sections form a large breeding and grazing district.

Among the inmates of Wilton Greenway's training stable, South Towson, Md., that is highly thought of, is the young mare Marjie Z, 4, bred and owned by Mr. Samuel Walton, the big railroad contractor, of Falls Mills, Va. Greenway has worked her miles around 2:20, and she will be campaigned by him this season. Marjie Z. was sired by the Walton Farm stallion Red Leo, 2:26½, dam Carina, by Caliban, second dam Yellow Woman, by Strathmore.

The chestnut mare Flora Jefferson, by Elk Nutwood, dam Flora Diamond, by Bay Diamond, owned by W. N. Wilmer, the New York lawyer, at his Virginia breeding establishment, Plain Dealing Farm, near Scottsville, has a shapely bay colt at her side by Virginia Chief, the son of Kentucky Prince, that heads the Plain Dealing Stud, and has been bred back.

Capt. James N. Williamson, of the Ossipee Cotton Mills, Elon College, N. C., drives one of the hand-somest and fastest roadsters in "The Old North State" in the chestnut pacing gelding Defender, 2:19½; Gregorian, 2:29½. Defender was bred by Captain Williamson, who raced with success for several seasons.

In Eonic, who landed the Burns Handicap in California, Ethics and others, the Ellerslie Stud of R. J. Hancock & Son, Charlottesville, Va., has sent out some good winners during the present season. Imp. Charaxus, Imp. Fatherless, Eon and Aurus are the stallions in use at Ellerslie, while the brood band includes some of the choicest matrons in the country.

Ard Patrick, the son of St. Florian and Marganette, by Springfield, who is credited with the English Derby of 1902, is the biggest horse that ever won that classic event, as he stands close to seventeen hands and seemingly runs best when in high flesh. Ard Patrick is an Irish bred horse, and his dam, Morganette, also produced another Derby winner in Galtee More.

One of the most promising green trotters in the Acca Farm stable of W. L. Bass is the bay horse Resinol, son of Alfred G., the sire of Charley Herr, 2:07. With less than one season's regular training Resinol has shown miles better than 2:25. He is out of Madge, by Hetzel's Hambletonian.

BROAD ROCK.

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

The season is passing—we are right in the middle of harvest, and such farmers as desire to have colts on their premises next summer or spring must see to it that their mares are settled. A great many breeders are now adopting the practice of having their mares bred in the fall, say in October, in order that they may have the services of their mares in spring when crops must be put in, but there are objections to this way of horse breeding that may be discussed. Suppose that a mare is to come in September. In July and the first days of August she is required to do sharp, prompt work on the binder and the mower. Is it better to submit her to this ordeal than it is to the more sober and less lively labor incident to putting in small grain? It is doubtful if it is, and reasoning from Nature's standpoint possibly it is best to have the mares foal in spring—the month of April being the favorite of all the most successful farmers who make a business of breeding horses. Still, if a mare has not caught there is yet time. By all means keep at it until she does catch. Bred now a mare will have her foal next year about the middle of June, and while that is not the most desirable time on earth it is better than nothing. It is not advisable to mate mares in August and September. A breeder of high grade drafters remarked a few days ago that July 20 was the latest date in the summer on which he could afford to have a mare foal. The last day of September he counts as the first day in the fall on which he can afford to have a fall colt come and there is much sense in what he says. Therefore the time is right at hand when breeders must permit a small gap to intervene in the breeding of their mares. Get the work out of them farmers must, foals or no foals, and the times and seasons described represent the most practical solution of this rather weighty problem.—*Breeders' Gazette*.

One of the most favorable signs of the season is the tremendous demand that exists in all the large American markets for saddle horses of both kinds—both the so called gaited Kentucky kind and the walk trot-canter kind. Prices are hardly any criterion in this case. The rich man pays from \$1,000 to \$3,000 or more for what suits him of either sort, the poor man buys the horse that is either able or is supposed to be able to "saddle" and thereby "ease his pains." The fact is that the supply of really finished saddle horses of any sort is woefully short. All dealers with reputations for furnishing finished performers are over-run with orders.

The demand among farmers for the privilege of breeding mares to stallions that weigh a ton or more is certainly greater than at any time in the United States. Salesmen for various importing companies that have been going the rounds of their customers state that the chief call this ensuing season will be for horses of that weight or more and that the stallions of medium weight are going to be rather at a discount.

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## Miscellaneous.

### THE NEW CONSTITUTION OF VIRGINIA.

The new organic law of this State is now in force and effect as from the 10th day of July, by virtue of its proclamation by the Convention and the Governor of the State. Before, however, many of its provisions can become operative, the action of the Legislature will be needed, and this body is now in session for that purpose. We have not yet been able to secure a copy of the Constitution as finally approved, and are not therefore in a position to deal exhaustively with the changes made. Speaking generally, however, we may say that the principal alterations are in the suffrage law, the judiciary system of the State, the functions of the Legislature in reference to private legislation, the system of taxation and finance, and the creation of a Corporation Commission, to have authority over all corporations. Whilst we are not able to say that we cordially approve all the changes made, yet upon the whole we think that probably they will in great part tend to the better and more economical government of the State. We were in hopes of seeing the suffrage based solely upon the payment of taxes, as experience has demonstrated that only in this way can the highest efficiency and the greatest economy be secured. "The man who pays the piper" has or ought to have "the right to call the tune." This, however, has not been fully attained, as provision is made for the registration of classes of voters who are non tax payers for a limited period. In time, however, these classes will cease to exist, and then all who vote must pay. Only when this time comes can we expect to see efficiency and economy enforced. The changes made in the judiciary system are in harmony with the views we have often enunciated in these columns. The county court judges are abolished and the State is divided into twenty-four circuits, over each of which a judge presides, elected by the Legislature. This should result in economy and the more effective administration of the law. It should also lead to the lessening of the cost of litigation by the abolition of unnecessary appeals from one court to another, and the prompt punishment of offenders which, in itself, is one of the greatest deterrents of lawlessness. The limitation of the powers of the legislature to enact private laws is a step in the right direction. What we most need is fewer laws and a better observance of those affecting all citizens alike. The mass of private legislation (much of which could have been and will now be much more properly dealt with by the courts) had become such a burden to the legislature as to hinder that attention being given to matters of

public interest which should be the first care of a legislature. We are not so well satisfied with the changes made in the taxation and financial system of the State as we are with the judiciary system. We had hoped to see a clean sweep made of the antiquated system of taxation now in existence and the relief of personal property from taxation, as has long since been done in the other civilized countries of the world, and the substitution for it of a system under which each citizen would have been taxed on what his labors and investments produced. This, however, was impossible of attainment, and the Convention contented itself by imposing heavier burdens on corporate bodies and thus secured the means wherewith to provide for the necessary expenses of government, with a State tax rate reduced from 40 to 30 cents on the hundred dollars until the year 1907. There is also provision made for the prevention of double taxation, which has been in the past a fruitful source of injustice and the cause of much evasion of legitimate taxation. The Corporation Commission created by the Convention is to be appointed by the Governor, and is invested with wide powers of control over railroads and other corporate bodies. Much of its effectiveness will depend on the character of the three gentlemen who may be appointed the first members of the court. It may easily be made either an instrument of repression of that commercial development of the State which has made so auspicious a start, or it may be made a moderating and guiding influence potent for good. It is to be hoped that the powers with which the court is invested will be exercised with caution and wisdom. Capital is shy. There is nothing more fearful and timid than a dollar except two dollars. We want the two dollars, yea, many million dollars, to come into the State and help to develop its resources. Upon the action of this court will largely depend whether we are to have this help. In matters solely pertaining to the agricultural interest the only provision of the Constitution is as to the office of Commissioner of Agriculture. This official is now made elective by the people, a provision, in our opinion, most unwise and likely largely to impair the value of the Board of Agriculture as an instrument for the advance of the agricultural interest of the State. As the executive officer and servant of the Board, he ought to have been appointed by the Board. This was the decision of the committee of the Convention, but the politician in the Convention overruled the committee. We fear much that in the future the commissioner will be more of a politician than a



farmer and more the servant of the politicians than of the Board.

### THE COMPOUND FARMER.

*Editor Southern Planter :*

We hear a great deal these times of compound and combined action. We find the compound principle in all great transactions, and wherever we find it, it is *intense*, whether it be in the compound engine or in the manipulations of the money lender or the merchant. One of the most successful farmers I have known, told me his rule was always to invest and turn over once and sometimes several times in a year the proceeds from his crops or stock. That is the true gist of compound farming when intelligently applied, and is of far reaching power and influence.

The average man is often astonished at the great difference in the success of farmers, a great per cent. of whom are but barely making an existence, while some have to quit. Others whose assets were *nil* but comparatively a few years ago, are now worth five to fifteen thousand dollars, and are still making. If the matter is carefully looked into, the successful ones are the compound farmers. The average farmer will buy all his fertilizer, machinery and seeds on time. The usual terms are from five to ten dollars more on a wagon or binder on time and a dollar a ton on fertilizer, and then 6 per cent. on the note. The compound farmer will buy for the cash generally at a cut under the cash rate, which will foot up to nearly 20 per cent. difference between the buyers. The average farmer needs, or imagines he does, a new buggy or surrey. The accommodating local agent sells him one on his own time at a reasonable price (?); of course, the buyer pays for the accommodation at a very high per cent.

The compound farmer needs a similar vehicle, but instead of buying on time, he will make the old one do another year. In the meantime, he sets aside some particular crop or part of his stock to sell next year. Then buying for the cash, effects a saving of nearly 100 per cent. difference over the other one. Should anything happen in the meantime to upset his plans, he simply waits another year. Some will say that time is too long to wait. Ah! how many of us have waited a lifetime for that handsome surrey and matched bays we all would like to drive! The average farmer, in buying stock of any kind, generally considers the first cost. If the price be low enough, any old thing will do. The compound farmer buys carefully the stock that will bring the top price. If the quality be right he will pay a long price, and when properly handled for another year, will have three buyers to A.'s one. When sold, the difference of profit on the two lots will be as far apart as Success and Failure.

The average farmer will buy his stock, cattle or sheep from the speculator after he has bunched them up and added his tariff. The compound farmer buys his in small lots, as he can get them right, and generally sells them straightway to the shipper without the pin hooker getting a dollar a head for looking them up. It would be impossible to enumerate all the details of compound successful farming. There is more scope for brain work in successful farming than in almost any other business, notwithstanding the opinion of the city man to the contrary. Some will say that all this is only the difference between the man who has money and the one who is "hard up." This is not all the difference. It is training of one's self to do without what he can't afford, and to buy judiciously. There is no royal road to success. Neither are there any miracles these days. The compound farmer has the same disadvantages to contend with as the slip shod one. The drouth or hail destroys his crops; he has sickness in the family; the dogs kill his sheep, as happens to others.

I am perfectly aware that an opinion prevails that it is not the successful farmer who writes articles for agricultural papers; but, like all other rules, there are exceptions. The successful business man in any other line lays his plans months—sometimes years—abead, in order to compete with his rival. No other business could be successfully carried on in the manner the average farmer conducts his affairs, and no other occupation offers a better return from brain and brawn than nature does to the

COMPOUND FARMER.

### DISAPPOINTMENTS IN FARMING.

*Editor Southern Planter :*

Every farmer must be prepared for constant disappointments in his work. What succeeds this year may fail utterly next year. Two years ago I planted early Irish potatoes and raised a fine crop. I was so encouraged that I thought I had at last struck the right thing. Last year I planted again and the potatoes did not even come up, except in straggling hills. I plowed them up and sowed millet, thinking my potato fertilizer and manure would bring an enormous crop. A drouth came on and the millet burnt up, and made next to nothing.

Last year was a good season for hay, and I made a fine paying crop. My mind had been running on grass for some time, and my success induced me to spread out. This year my grass started beautifully under the magic touch of a little nitrate of soda, but soon the dry weather came on, and now I think I shall do well if I make a half crop.

So it is in everything, so far as I can discover. By inquiring, I find other farmers have a similar experi-



ence. A friend tells me he grew a big crop of Irish potatoes four years ago and made big money. He has tried it every year since and made only a failure.

Of course the experience narrated above is not invulnerable. Farmers often make a success with the same crop in successive years, but a failure must be expected about as often.

Year before last, the fly injured wheat so badly that all my neighbors said they would not sow last fall till after the fly was killed by the first frost. The result was that the wheat had a poor start and froze out during the winter. So they had no wheat after all.

Next year these farmers will sow their wheat early and risk the fly. Then they will probably be caught on the other horn of their dilemma. The fact is, that farming is a most complicated business, and is full of snares and pitfalls. Yet no one need be discouraged. The best policy is to take a medium course, or, at least, a definite course, and stick to it. A liberal per cent. of failures must be counted upon in averaging up one's profits.

The farmer's greatest factor of uncertainty is the weather. In time he may learn to control the fertility of his soil. He may become skilled in combatting the diseases of most of his crops. He may solve the mystery of cultivation, but he never will be able to control his supply of moisture, unless he lives in an irrigation district.

With irrigation in a rainless district, farming might become a reasonably certain business, provided the climate were equable. Without these conditions there will always be much uncertainty in the result, and the farmer's only chance is to even up on a variety of crops. If he misses on one, he is apt to hit upon another. In most countries a drouth never lasts all the year. Some crops will succeed. So the final conclusion is that most farmers will find diversified crops to pay the best. This is true, at least with most East Tennessee farmers.

*Powell Station, Tenn.*

T. C. KARNS.

## THE EDUCATION OF THE PEOPLE.

### Declaration of Principles.

The following declaration of principles was adopted on July 4, 1902, by the teachers of the Summer School of the South, now in session at Knoxville, Tennessee:

"We the 1,700 teachers attending the Summer School of the South, representing every southern state, do on this day of our national independence, unanimously adopt the following declaration of educational policy:

1. We bear grateful testimony to the great sacrifices made in behalf of education by the people of the South, who in their desolation and poverty have taxed themselves hundreds of millions of dollars to educate two races.

2 Notwithstanding these efforts, we are confronted with the appalling fact that the large majority of the

3,500,000 white children and 2,500,000 black children of the South are not provided with good schools. In 1900 ten Southern States having 25 per cent. of the school population of this country, owned only 4 per cent. of the public school property and expended only 6½ per cent. of the public school moneys. We must recognize these conditions and frankly face them. We therefore declare ourselves in favor of a public school system, State supported and State directed, in which every child may have the open door of opportunity.

3. Conscious of our dependence upon the God of our fathers, and believing that the highest and truest civilization can be attained only by following the precepts of the great teacher, Jesus Christ, *we favor the recognition of the Bible in our public schools.*

4. We regard local taxation as the foundation upon which a public school system should be built, and therefore favor an agitation in behalf of such taxation in every community.

5. If an increased expenditure of money is to be of lasting value, a more intelligent interest must be brought to bear upon our schools. But even greater than the need of money and interest is the need of intelligent direction.

6. A mere extension of the present school term with the present course of study will not meet the needs of the children. The lines of development in the South must be both *agricultural and mechanical.* Our people must bring a trained brain and a trained hand to the daily labor. Education should not be a means of escaping labor, but of making it more effective.

The school should be the social center of the community, and should actively and sympathetically touch all the social and economic interests of the people. In addition to the usual academic studies, therefore, our courses should include manual training, nature study and agriculture.

7. To secure more efficient supervision, to encourage grading and to broaden the social life of the children, we favor the consolidation of weak schools into strong central schools. It is better in every way to carry the child to the school than to carry the school to the child. We indorse the movements recently made by the women of the South for model schools, built with due regard to sanitation, ventilation and beauty.

8. Teaching should be a profession, and not a stepping stone to something else. We therefore stand for the highest training of teachers and urge the school authorities of every State to encourage those who wish to make the educating of children a life profession. We call upon the people to banish forever politics and nepotism from the public schools, and to establish a system in which, from the humblest teacher to the office of State superintendent, merit shall be the touchstone.

9. We express our hearty appreciation of the noble work of the Southern and General Education Boards, which by their earnest sympathy and generous means have made possible this great Summer School of the South, and in numerous other ways are strengthening the patriotic efforts of the Southern people to improve their educational conditions.

10. With gratitude to our fathers for the heritage of a noble past, with thankfulness to God for the many blessings bestowed upon our people, with due recognition of our present problems and their deep importance, we face the future with a faith which we shall



endeavor to make good by our works, to the lasting glory of our Republic."

If to the foregoing had been added a clause requiring compulsory attendance of all children of school age until a certain standard of education had been reached, then we would have felt that here was a declaration of principles worthy of being fought for and which we could heartily indorse. To use the strong arm of the law to compel the payment of taxes to build and support schools and to train teachers and then to leave the people free to use these advantages or leave them as they pleased is neither wise nor economically or morally right. The class which most needs education, and to whom, if given it would result in most profit, both to itself personally and to the community and nation, is the one which least appreciates these advantages and which, for the sake of a present, "cents" gain by child labor, will and does throw away the prospect of future dollar gains, and the only way to prevent this is by compulsion. The experience of the old world and of those parts of the new, where the experiment has been tried, is conclusive in favor of compulsory attendance at schools. No child should be allowed to work for wages until educated at least so far as to be able to read and write.—ED.

### LET US HAVE TELEPHONES.

*Editor Southern Planter :*

I clip the following from the *Breeders' Gazette*:

There could be no better evidence of the prosperity of farmers in general at the present time than the persistence with which co-operation is making headway in many neighborhoods. A farmer interviewed at length a few days ago said: "My house is 'Central' for no less than five different rural telephone lines. The farmers in five neighborhoods bought the poles, phones and wire, did all the necessary work, and now almost the entire county can talk from house to house. It makes a wonderful difference, and we also have connections with both the long distance lines in Iowa. We can keep well posted, and such things as fresh meats or the like we can get delivered now when so many of us have a way by which we can order them, the butchers sending wagons as often as required to bring us our supplies."

Now, the above is one way of doing things. Another is for farmers to become subscribers to a line which will sooner or later fall into the hands of a trust.

Co-operative lines furnish telephone service at less than half of the rates charged by the old line companies. I have before me a circular issued by a newly formed corporation asking farmers to subscribe to stock of the company at ten dollars per share. That is about the cash outlay required for connecting you with your neighbor or with a co-operative line.

There is scarcely a farm in this part of Virginia that has not plenty of cedars from which to make telephone posts, and there is always a season in the year when the farmer can spare the time to put up the poles. Why not have co-operative lines instead of paying high rates to old line companies?

In Illinois and other Western States the cost to members of co-operative lines is about fifty cents per month. It is possible to maintain a line at that figure without charging extra tolls for communications with nearby towns and cities. Old line companies will charge you, in addition to the regular fee, a toll of from ten to twenty five cents every time you wish to talk to your grocer.

By all means let us have rural telephones, but let the farmers own and operate them.

*Hanover Co., Va.*

F. H. NAGLE.

### DRAFT OF VEHICLES AND IMPLEMENTS AND CONSTRUCTION OF WAGONS.

*Editor Southern Planter :*

In your May issue there is a paper by Dr. Wm. C. Stubbs, which brings up a very interesting subject.

Farming is by no means one of the "exact" sciences, as I have found by the experience of three years, and therefore, if any matter can be definitely settled, it should be done at once in order that a very intricate problem might have something less left to mere conjecture.

Observe, for instance, the ordinary farm wagon. It is a remarkable piece of construction. The front wheels are lower than the hind wheels, and the height of the latter compels a height of body that seems preposterous when economy of labor is an object. You will also note how narrow the body is in proportion to its own length and the width of the track.

Is there any scientific or practical reason for this? Is the draft of a wagon with high hind wheels appreciably lighter than if all the wheels were the same height?

I can easily remember when the driving wheels of locomotives for passenger service were six feet or even higher; now they are built very much lower. Is the hind wheel of the wagon made high only to get both bolsters on a level? If so, the design of the front truck needs revision.

It seems to me a comparative table of drafts would be very instructive. I understand, of course, that an absolute standard is impossible because of the difference in circumstances. Let us have a test of wagons on solid road bed and in plowed ground and on stubble, and give us the draft of the ordinary farm wagon plus 1,000 lbs. in the body; first, the wagon with wheels of different height and the ordinary narrow



tire; then the wagon with the four wheels of the same height, and a test with the different width of tires up to six inches and wheels of various heights from twenty-four inches up.

I know this would be no small matter to undertake, but any Experiment Station equipped with a dynamometer would settle a much discussed question and confer a boon on every farmer in this great country by furnishing such a table.

The same idea might also be carried out in regard to implements, but the comparative tests should be accurate.

Dr. Stubbs says, in his article, that "the average plow" cutting a furrow 8 x 10 inches will make a draft of 6 lbs. to the square inch, which would be 576 lbs.

The Hancock disc plow showed a draft on the dynamometer of 550 lbs. cutting a furrow 10 x 15 inches. At the rate given for "the average plow," it would have been 900 lbs.

Are we to assume from that, that the Hancock plow is of much lighter draft, comparatively, than "the average plow;" or, is there so much difference in the estimated draft of the one and the dynamometer measured draft of the other?

If we figure the comparative draft of the incidents mentioned, we would get: English trial, 7.41; American trial, 5.81; supposed plow of the problem, 5.04; average plow, 6; and the disc plow, 3.66.

Now, I would be glad if Dr. Stubbs would tell us if these deductions are correct, and if he would add experiments with other implements, such as the disc harrows with different number and sizes of discs, and mounted on wheels or plain; the smoothing harrow with different numbers of teeth; the walking and riding cultivators with their different attachments, and these set to different depths, and many other things of which he knows, undoubtedly, much more than I, he will add very greatly to our present store of knowledge.

With high appreciation of and best wishes, for the  
*Southern Planter.* AN OBSERVANT FARMER.  
*Nottoway Co., Va.*

### ICE HOUSE.

*Editor Southern Planter:*

Please give directions for building a small ice house on the farm for storing ice for family use in the summer; also, tell how to pack the ice.

*Union Co., N. C.*

H. F. LILES.

We have had several enquiries recently for information as to building ice houses, or pits. Replying, we would say that we do not advise the digging of pits for storing ice. A house above ground is much more convenient, much less costly in the long run, and will

preserve the ice better if properly built. There are three conditions essential to the keeping of ice. The first is that it shall be effectually excluded from the air; the second, that it shall be kept dry, and the third that it shall have abundant ventilation passing over the top of it. Any house that satisfies these requirements will preserve ice. Practically, the simplest description of an ice house is a house within a house. The intervening space between the outer house and the inner one, or lining, should be from twelve to fifteen inches, and this space should be packed tight with saw-dust or some other non-conducting substance, sawdust usually being the cheapest and best. This will exclude air from the ice. Water should be kept from it by having the house set on a high dry place, with the drainage carried away from the house on every side. A drain should be laid into the bottom of the ice house to carry off the melting of the ice. This drain should be trapped by having a bend downwards and upwards in it, which bend will always stand full of water, and thus exclude air from getting under the ice. The roof over the house should be a hipped one, and should have a lattice ventilator in each gable at least three feet by two feet. This provides for carrying off the heated air from the top of the ice. Double doors should be provided, and the space between be packed with sawdust. The outer walls of the house may be either of logs or studding and weatherboarding, and the inner wall should be made of studding and boarding. A floor should be laid of plank with space between each one for drainage, and this should be covered with sawdust to the depth of a foot. As the ice is filled in it should be packed around with sawdust, and be chinked with ice between the blocks to exclude all the air possible, and should have twelve or fifteen inches of sawdust on the top, and over this be covered with marsh or waste hay. Ice weighs a little over fifty pounds to the cubic foot, so that it is easy to calculate the size of house required when the daily consumption is known. A house 10 x 10 x 10 feet will hold 1,000 cubic feet of ice, or about twenty-five tons; this, after allowing for wasting, will provide 200 pounds a day for 150 days—an ample supply for a large household and for a dairy. If the ice house can be placed on the north side of buildings overshadowing it, or under a large tree, it will be desirable to so locate it, as these will protect it from the hot rays of the summer sun, and thus save ice.

### TECHNICAL TEACHING IN PUBLIC SCHOOLS.

We take the following from a report of the proceedings at the recent meeting of the Institute workers at Washington. It is in line with that policy in education we have long advocated, and upon the adoption



of which we believe rests largely the future welfare of the country. We cannot have a successful and prosperous agricultural class which is not an educated one, educated not merely to read and write but educated technically, knowing and understanding the "why and the wherefore" of each process of nature and how best to work in harmony therewith:

Prof. C. C. James, of the Department of Agriculture, Toronto, Canada, in a paper on "Teaching Agriculture in the Public Schools," urged the absolute necessity for such teaching, if the farmer's boys and girls are to be induced to look on agriculture as the most satisfactory occupation they can pursue, as well as an intellectual and profitable calling. He declared that while agricultural colleges are necessary and accomplish much good, the prime necessity now is for primary and secondary schools in which thorough agricultural instruction shall be given. All professions, he thought, would be better if some knowledge of agriculture were possessed by those who follow them. He had rather have money appropriated or given for such schools than for the establishment of great scientific institutions, for the knowledge which would enable a hundred farmers to make a thousand dollars a year was more valuable than that which would enable one man to make one hundred thousand dollars. He regarded a contented, successful farmer as one of the most valuable assets of a State.

At the conclusion of Prof. James' paper, President Amoss introduced Secretary of Agriculture Wilson, who declared that a man cannot be educated in all the sciences necessary to the agriculturist after he had graduated from some college. The work must begin with the child. To give a boy a general education first, to the neglect of the agricultural sciences, is altogether an erroneous idea. This idea, he said, had put him in the predicament now of having in his department two hundred and sixty young men and women who are being educated and treated by that department to do the work for which he needed people who had already been trained. Our system of education is old-fashioned. It was imported from the other side of the water, and is much like the systems from which it sprang. Colleges were originally organized as far back as Bible days to educate the preachers and prophets, and we do now educate doctors, lawyers and dentists, but none of our schools furnish the farmer the education he needs. We have agricultural schools, but they teach nearly everything except agriculture. It is almost impossible to find people for his department who have any knowledge of animal husbandry, plants and soils, so far as their composition and properties are concerned. Consequently the department is compelled to educate its own specialists.

"We must not hope to educate agriculturist if study of subjects relating to their profession or calling is delayed until the beginning of a college course. In the primary schools the rudiments of agriculture must be taught. Pupils must be taught to distinguish between various plants; they must learn to recognize grasses and legumes, and must be encouraged to study nature at all times. Congress is doing much to promote the study of agriculture. But much of the money given to assist agricultural schools is expended in the teach-

ing of other things. Through the Department of Agriculture many specialists are being trained, who are rendering valuable service to the agriculturists of America. The time is not far distant when it will be possible to secure instructors who are prepared to teach some of the things farmers want to study."

### NEW WHEAT.

The first crop of Virginia wheat of the crop of 1902, was offered on the Richmond market on 28th June. It was grown on the farm of Charles Winfree, in Amelia county. It was dry and in good order, but contained some onion seed. It was sold to the Dunlop Mills for 85 cents a bushel. This offering was four days later than last year. The selling price was 12 cents a bushel in advance of last year's price.

### MATING FOR EARLY LAMBS.

Mr. J. S. Woodward, of Niagara county, New York, who is regarded as an authority on mutton raising, says: "Very many methods have been suggested to make the ewes accept the ram in hot weather, a very necessary thing for the winter lamb raiser, and I think we have tried about all of them. Sometimes we have thought we had a sure method, only to find the next year that it had no merit at all. It is not natural for sheep to mate till cool weather in the fall, but there is a great difference in breeds. Take the Dorset, for instance; they have been long used for raising early lambs, and have become accustomed to breeding much earlier than any other breed. In fact, a Dorset ewe, if rightly treated, will breed at almost any time of year. But they are not plentiful enough to fill the demand for early lamb raising, and we want to know how it can be brought about to induce the ordinary grade sheep of the country to breed out of season. Much depends upon the breed of the ram. A Leicester or Cotswold ram can hardly be induced to associate with a flock of ewes before cool nights in October, while a Dorset ram will follow with the ewes at all seasons, regardless of the heat. And there is no disputing the fact that the constant attention of the ram will have much influence in bringing the ewes into condition. I have no faith whatever in any system of medication further than the effect of feed upon the ewes. The largest percentage of ewes we ever had to drop lambs before New Year's was several years ago, when, during the great railroad strikes, we had a flock of ewes tied up in the stock-yards at Detroit for over a week. We could get nothing for them to eat but stock-yards hay—poor, wild hay—with no grain, and before we got them home they looked pretty hard. We then turned them in to good feed, put rams with them, with the result that a remarkably large proportion dropped lambs in December. Since that time I have always found that ewes that were gaining were more disposed to accept the ram, and that is the only thing upon which we place any reliance."

Mention the *Planter* to your friends.



THE  
**Southern Planter**

PUBLISHED BY  
**THE SOUTHERN PLANTER PUBLISHING COMPY.,**  
RICHMOND, VA.  
ISSUED ON 1ST OF EACH MONTH.

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

TERMS FOR ADVERTISING.  
Rate card furnished on application.

TERMS OF SUBSCRIPTION.

The *Southern Planter* is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the City of Richmond, 75c.

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

Always give the Name of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.

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

The Date on your Label shows to what time your subscription is paid.

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

No anonymous communications or enquiries will receive attention.

Address— THE SOUTHERN PLANTER,  
RICHMOND, VA.

Detail Index to Enquirer's Column.

Orchard-Grass Seeding.....	455
Mixing Ashes and Fertilizer—Cover Crop.....	455
Fertilizers for Fruit Crops—Borers—Pruning.....	455
Mixing Fertilizer.....	456
Seeding Clover—Improving Land.....	456
Poultry Raising.....	457
Planting Cow-Peas in Cotton Field.....	457
Crop for Spring Fallow.....	457
Alfalfa Seed.....	457
Preparing Pea Fallow for Wheat.....	458
Sick Sow—Blind Horses.....	488
Alfalfa.....	458
Blight in Apple Trees.....	458
Milch Cow.....	458
Angora Goats.....	459
Squabs.....	459
Seeding for Pasture.....	459
Pea-Vine Hay.....	459
Alfalfa.....	459

PUBLISHER'S NOTES.

To Advertisers.

We have recently repeatedly had our attention called by subscribers to the fact that they have been unable to secure replies to letters addressed by them to advertisers with reference to stock and articles of various kinds advertised in our columns. In all these cases we have at once communicated with the advertisers, and find that the almost invariable excuse offered has been that the advertisers had sold out the stock, etc., advertised. We desire to impress upon advertisers the point that such excuses are not a sufficient answer to the complaint. When a person offers to sell through our columns and then neglects to reply to those who may respond, the failure to do so raises an inference that the advertisement is not *bona fide*, and thus casts a reflection upon us as publishers which is not just. In fairness to the journal and to ourselves, a reply should be given to each enquirer. A one-cent post-card will suffice to do this, and courtesy, let alone justice to us, demands that it be sent. We are most careful to insert no advertisement from any party of whose responsibility we have any doubt, and advertisers owe it to themselves and to us to support us in this course by acting in such a way as shall satisfy every enquirer of the *bona fide* character of the advertisement.

Another complaint has also reached us from one or two parties that stock, etc., advertised does not conform to the description given, and that as a consequence they have been subjected to loss. Whilst it is impossible for us to guarantee the accuracy of description of stock or other articles, we would most earnestly beg of advertisers to be careful not to mislead intending buyers. It must recoil on advertisers to do so, and at the same time do us injury. When we are satisfied that wilful mis-

Best For The South.

**Wood's Turnip Seeds.**

Wood's Seeds are grown and selected with special reference to their adaptability to our Southern soil and climate and give the best results and satisfaction everywhere.

If your merchant does not sell Wood's Seeds write for Special Price-list.

Circular giving prices and information about Turnip Seeds, Crimson Clover, Late Seed Potatoes, German Millet, Buckwheat and all Seasonable Seeds, mailed on request.

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

WOOD'S FALL CATALOGUE issued in August, tells all about Crimson Clover, Winter Vetches, Rape, Rust Proof and Winter Oats, Seed Wheats, Grasses, and Clover Seeds. Vegetable Seeds for Fall Planting. Hyacinths, Tulips, etc. Catalogue mailed free. Write for it.

..ELMWOOD NURSERIES..

**ASPARAGUS**

100,000 2-yr.-old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

**APPLES**

A large general assortment, including WINESAPS and YORK IMPERIALS.

Splendid Assortment of Ornamental, Shade and Fruit Trees.

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

WRITE FOR OUR CATALOGUE.

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

**Bean Raisers!**

The "Miller Bean Harvester" is the recognized leader of all competitors and has been for TWENTY YEARS. It does good work when others fail. Weeds, Stones or Grass do not interrupt its successful operation. There is but one MILLER HARVESTER, and we own patents and make the original. Catalogue for the asking. LE ROY PLOW CO., 165 Lake Street, Le Roy, New York.



representation has been indulged in, we shall not hesitate to publish the facts, and decline to carry further advertising for the guilty ones. Our care in satisfying ourselves as to the responsibility of advertisers, is the best protection for buyers which we can offer, and we can assure our readers that this care shall continue to be exercised. Every advertiser who desires to do what is right, will appreciate this position. It is as much in his interest as in that of ourselves and our readers. We now carry constantly a line of advertising of which we are justly proud, and we are daily in receipt of testimonials from advertisers as to the good results attained by the use of our columns. To maintain this, there must be no cause given on either side for want of confidence, and hence our appeal to all for frankness, courtesy and *bona fide* dealing.

**BEWARE OF OINTMENTS FOR  
CATARRH THAT CONTAIN  
MERCURY,**

As mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten-fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure to get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by druggists, price 75c. per bottle. Hall's Family Pills are the best.

**AGRICULTURAL LIME.**

In another column will be found the advertisement of Messrs. A. S. Lee & Son, Richmond, Va., in which they offer their celebrated "Prepared Agricultural Lime." This lime has been on the market for a number of years, and has been used by thousands of farmers with great success both as a permanent improver and in increasing the yield of the crop on which it is applied.

Write to Messrs. Lee & Son for testimonials, circulars and prices, mentioning the *Southern Planter*.

Mention the *Southern Planter* when corresponding with advertisers.

# JAMES G. TINSLEY & CO.,

Branch Virginia-Carolina Chemical Co.

MANUFACTURERS AND IMPORTERS OF

## FERTILIZERS,

RICHMOND, VA.

..BRANDS..

Stonewall Tobacco Fertilizer, Stonewall Guano,  
Powhatan Corn Guano,  
Stonewall Acid Phosphate,  
Wheat and Grass Fertilizer,  
Tinsley's Bone and Potash Mixture,  
Powhatan High-Grade Phosphate.

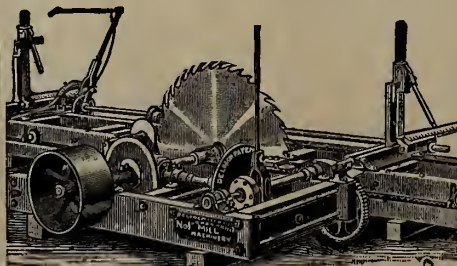
Call on your Local Dealer, and if he cannot furnish you, write to us.

## ARMOUR'S ANIMAL FERTILIZER

Came from the Farm  
Should Go Back on the Farm  
Put It Back  
It's Natural Plant Food

Feed Your Plants —  
They Will Then Feed You

**The Armour Fertilizer Works**  
CHICAGO AND BALTIMORE.



**Farmers' \$125 Saw Mill.**

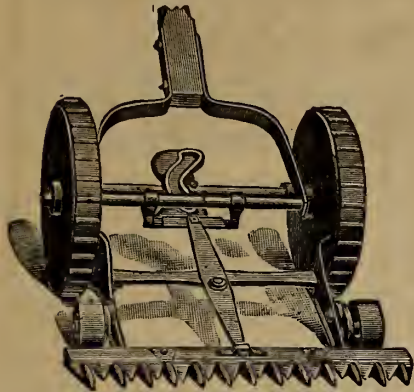
Cuts 2000 ft. lumber a day with only 4 h. p.

Our large, handsome catalogue tells all about the famous DeLoach Variable Friction Feed Saw Mills, 4 to 100 h. p., \$125 up. DeLoach Saw Mill Machinery, Planers, Shingle, Lath and Corn Mills, Water Wheels, etc. Write for catalogue and price f. o. b. your depot. DELOACH MILL MFG. Co., Box 600, Atlanta, Ga. (Branch, 120 Liberty St., New York.)



# THE MOWER

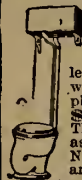
THAT WILL KILL ALL THE WEEDS IN YOUR LAWNS.



If you keep the weeds cut so they do not go to seed, and cut your grass without breaking the small feeders of roots, the grass will become thick and weeds will disappear. **THE CLIPPER WILL DO IT.** Send for catalogue and prices.

CLIPPER LAWN MOWER CO., Inc.,  
NORRISTOWN, PA.

## WATER CLOSET COMBINATIONS,



Porcelain Bowl, Hardwood Seat and Tank, Nickel Plated flush and supply pipes, complete, each \$11.00.

Cast Iron Roll Rim Bath Tubs, length 5 ft. Complete with full set of nickel plated fittings, each, \$11.00.

They are new goods, ask for free catalogue No. 166 on plumbing and building material.



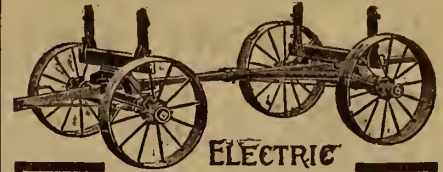
Chicago House Wrecking Co., W. 35th and Iron Sts., Chicago

## ABOUT ELI HAY BALERS.

The excellent showing for an abundant hay crop this year is going to make lively work for the hay balers. The mention of hay baling naturally suggests the "Eli" Baling Press, which is being advertised in our columns by the Collins Plow Co., of Quincy, Ill. Among hay balers it is rated as embodying about all that is known to be good. We do not know what, if any, significance there was originally in the name, but it is safe to say that the name it has made for itself far eclipses any meaning the word may have had at the time of the Eli's coming into the baling field. There are numerous considerations which have given it a wide use. First of all, there is that indispensable requisite of turning out the shapely solid bales which enable the shipper to get the greatest amount of hay in the car. Then there is its extraordinarily large feed opening, easy and safe feeding and great capacity. Being a full circle press, a very important item is the fact that the bridge over which the horses have to step is made very low, and the plan of the power is such that nearly all the resistance is removed while the horses are crossing it, making their duties light and safe. Every part has the necessary strength to enable it to continue long in heavy work.

As the baling season is fast approaching, parties contemplating purchasing should not fail, before placing their order, to send to the above Company for their illustrated catalogue, which fully describes the thirty-eight sizes and patterns they make. Kindly mention this journal when writing.

Mention the *Southern Planter* when writing advertisers.



## Handy Farm Wagons

make the work easier for both the man and team. The tires being wide they do not cut into the ground; the labor of loading is reduced many times, because of the short lift. They are equipped with our famous Electric Steel Wheels, either straight or stagger spokes. Wheels any height from 24 to 60 inches. White hickory axles, steel hounds. Guaranteed to carry 4000 lbs. Why not get started right by putting in one of these wagons. We make our steel wheels to fit any wagon. Write for the catalog. It is free.

ELECTRIC WHEEL CO., BOX 146, QUINCY, ILL.



## WE'LL PAY THE FREIGHT

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

## IMPERIAL

## Pulverizer, Clod Crusher and Roller.



Leads them all.

Send for circulars.

THE PETERSON MFG. CO., Kent, Ohio.

## Philadelphia Butter Worker

A simply constructed, conveniently handled machine that does efficient work. Capacities from ten to 150 lbs.



Send for illustrated catalogue of supplies. Dairymen's Supply Co., Dept. E, Philadelphia, Pa.



# I SELL FARMS.

Parties looking for homes or speculative investments in real estate, stock ranches, truck farms or timber, will receive monthly, for a year, a list of whatever real bargains may be offered, together with confidential reports on any property listed, upon receipt of 25 cents. As my commission to property-owners is only 1/2 to 1%—never more—I may be able to save buyers 9% on property offered anywhere. I have occasionally opportunities offering reasonable prospects for doubling large or small investments, and there are some fine openings for profitable ranches for parties with means to stock cheap lands. Also good locations on main R. R. lines to Northern markets for truck and poultry farms.

At this writing I have just one more inquiry from prospective purchasers than the number of farms listed. If you have a bargain to offer, send 4 cents in stamps for description blank.

## F. H. NAGEL, Doswell, Virginia.



# The Waterloo



**Beat 'em All.**

**3-Horse Power Pumper.**

The best engine for the money on the market to-day.

Every engine fully guaranteed.

Write to-day for Catalogue.

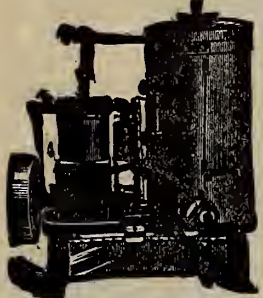
We also have stationary and portable engines.

**WATERLOO GAS ENGINE CO.,**

P. O. Box 56. WATERLOO, IOWA.

After Being on the Market TEN YEARS,

## The ACME Engine Still Leads



For Churning, Cutting & Grinding Feed, Filling Siles, Sawing Wood, Elevating Water, and all Farm and General Uses where

**Small Power is Required.**

Fuel, Kerosene Oil.

No Skilled Engineer required.

ROCHESTER MACHINE TOOL WORKS,  
No. 17 Frank St., Rochester, N. Y.



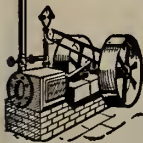
## The MIETZ & WEISS Kerosene Engines.

*Cheapest and Safest Power Known.* For pumping and electric lighting, grinding corn separating cream, sawing wood, and all power purposes. Also sizes from 1 to 60 horse-power.

er. Highest award for direct coupled generator set. Gold Medal, Paris Exposition, 1900. Pan-American Exposition, 1901. Send for catalogue.

A. MIETZ, 128 Mott Street, New York.

## ENGINES, BOILERS AND MACHINERY.



When you want good rebuilt machinery at bargain prices, write for our Catalogue, No. 165 We carry all kinds of engines (gas, gasoline and steam power), boilers, pumps, and mill supplies in general. CHICAGO HOUSE WRECKING CO. West 35th and Iron Sts., Chicago.

## The "Weber Junior" Pumper

Can also be used for other power purposes.

2 1/2 H. P.



Is all complete, ready to attach to pump. Equals 30 men pumping water. Uses but little gasoline. Is shipped completely erected, all connections made. Easy to start, any one can operate it. Every one guaranteed. Other sizes up to 50 H. P. Send for catalogue. Weber Gas & Gasoline Engine Co., Box 128 Kansas City, Mo.

## WORMS IN SHEEP.

The ravages of worms in American flocks are appalling. Stomach worms and nodular disease are killing more sheep and lambs than scab and all other diseases combined. In a wet season like the present the losses from these two causes alone run up into millions of dollars. And yet a simple and comparatively inexpensive remedy for these fatal diseases is within the reach of every flock owner. That remedy is Toxaline, the careful use of which has not yet, in a single instance, failed to cure when administered in season. It seems incredible that flockmasters should see scores and even hundreds of their ewes and lambs go to destruction for want of a saving remedy so cheap and easily obtained. Stomach worms cannot resist the subtle influence of this volatile fluid, which goes almost instantly to the seat of their work in the fourth stomach and suffocates the deadly parasites with unerring quickness and dispatch. In the case of nodular (knotty guts) trouble the parasites not yet encysted are quickly destroyed, and even those encysted checked in their destructive progress in the intestines.

The McCormick Harvesting Machine Co. sends us the following items, which will be read with interest by the host of McCormick friends in the South:

We are advised by our European manager of the following triumphs of the McCormick in the field trials and exhibitions held on the dates and at the places named below:

Edinutz, Bessarabia Government Exhibition held from May 18th to 23d, 1902, large silver medal, the only award on harvesting machines presented by the Imperial Agricultural Society of Russia.

Kampen, Holland, June 12, 1902, gold medal—first prize over thirteen competing machines, including the Johnston, Deering, Osborne, Adriance, Buckeye, Emerson, Champion and Wood. This was the most extensive field trial ever held in Holland.

## THAT INTERNATIONAL STOCK FOOD TEST AT ODEBOLT, IOWA.

If any of our readers have received circulars regarding the above mentioned test made by Prof. Kennedy, we invite them to write to the International Stock Food Co., Minneapolis, Minn., for some further particulars. We do not know personally of the merits of the controversy, but we know that Mr. M. W. Savage, proprietor of the "International," would not make a statement that cannot be verified. If we did not believe that International Stock Food will do what is claimed for it, we would not advertise it. We have heard numerous men who have used it say they wouldn't be without it.

You can get a valuable book free by answering their advertisement elsewhere in this issue.

## ESSEX PIGS.

Mr. L. G. Jones, Bethania, N. C., is advertising pigs of this popular breed in this issue.

## A BOY DOES A MAN'S WORK



## SUPERIOR DISC DRILLS

REQUIRE NO EXTRA HELP IN TRASHY GROUND.

Discs roll over or cut through trash and cover all the seed.

The Disc does better work in hard or soft ground than any Hoe or Shoe Drill. The Superior Disc and Superior Feed make seeding easy and good results certain.

You run no risk when you buy a Superior. It is the drill for drilling all crops—Wheat, Oats, Cow Peas, Corn, etc., as well as all Grasses.

Patents sustained in highest Courts. Your request on a postal card will bring Illustrated Catalogue No. 16.

**SUPERIOR DRILL CO.**  
Springfield, Ohio, U. S. A.

## With a SUPERIOR DISC DRILL

## GRAIN and FERTILIZER DRILL

The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill are close to ground. Fully Guaranteed

Easily regulates quantity of seed or fertilizer, and sows with regularity.

Weight, Only 700 lbs.

Agents Wanted.

Write for Catalogue.

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



## BAILEY'S HYDRAULIC RAM

Runs 24 hours a day and 365 days a year

40 years experience. Water for HOUSE; water for STOCK; Water for IRRIGATION. Once started costs but ONE CENT per month. As simple as a wheelbarrow and as efficient as a Corliss Engine. Information and instruction in plain terms. Prices on ram or complete outfit by return mail. Address PRYCE W. BAILEY, Expert, Seneca Falls, N. Y.



## CONSTANT FLOW OF WATER

to the house, the barn, the garden or lawn is assured by the

## RIFE HYDRAULIC ENGINE.

Pumps water automatically. Better than any ram, engine or windmill. Sold on 30 days trial. Fully guaranteed. Catalogue Free.

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





**DOW FARM FENCE**  
 PRICE AND QUALITY  
 WILL PLEASE YOU—  
 WRITE US NOW.  
**DOW WIRE WORKS—LOUISVILLE, KY.**

**FENCE! STRONGEST MADE.** Bull-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.  
**COILED SPRING FENCE CO.,**  
 Box 53 Winchester, Indiana, U. S. A.

**PAGE**  
**THE STRONGEST**  
 friends PAGE FENCE has, are the people who have used it longest and tested its merits.  
**PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

**HARD STEEL**  
**WIRE FENCE**  
 Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance, and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.  
**THE HARD STEEL WIRE FENCE CO.,**  
 Cuyahoga Falls, Ohio.

**ORNAMENTAL LAWN FENCE**  
 Buy from manufacturers direct and save the Dealer's Profit of 20 to 25 per cent. We make many designs, and sell more Ornamental Fence than any other two firms in the business. Why? Because we use nothing but the best material that can be bought direct to the user at factory prices and guarantee any case or reset our fence. We make special prices to Churches, Cemeteries and large Parks. Send us your address. We will take pleasure in mailing you our large 32 page catalogue on Ornamental Fencing, free. If you are interested in Farm Fencing send for our 42 page Catalogue. Address  
**COILED SPRING FENCE CO.,**  
 Box Q Winchester, Ind. U. S. A.

**STEEL ROOFING**  
**FREIGHT CHARGES PAID BY US**  
 Strictly new, perfect, Semi-Hardened Steel Sheets, 2 feet wide, 6 feet long. The best Roofing, Siding or Ceiling you can use. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. We furnish nails free and paint roofing two sides. Comes either flat, corrugated or "V" crimped. Delivered free of all charges to all points in the U. S., east of the Mississippi River and North of the Ohio River  
**AT \$2.25 PER SQUARE**  
 Prices to other points on application. A square means 100 square feet. Write for free Catalogue No. 166  
**CHICAGO HOUSE WRECKING CO., W. 35th and Iron Sts., Chicago**

**RED RIPPER HAY PRESS**  
  
 Full circle. Double stroke. Light draught. Very simple and durable. Will make 20 neat and compact bales per hour. Recommended by Georgia State Farm.  
**Price, \$60 cash on cars at factory.**  
 Write to-day to  
**SIKES BROS. & CO., Manufs., Helena, Ga.**

**CUCUMBER AND TOMATO CATSUP.**

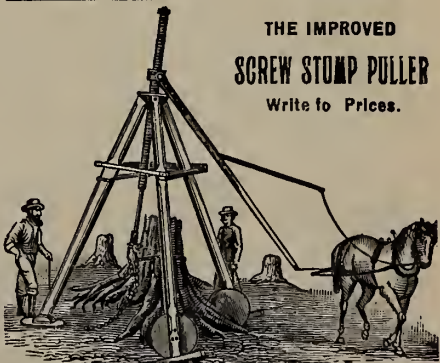
It is a remarkable fact that the cucumber retains its proverbial coolness even when being made into catsup, for it passes through this process without requiring any cooking, hence it is a desirable condiment for a housekeeper to make in hot weather. Peel three dozen cucumbers before they begin to turn yellow, or the seeds be tough. Grate them into a bowl, on a clean grater. Add to this pulp, six large onions chopped up fine. Put the grated cucumbers into a coarse linen towel or bag and squeeze it till every particle of the juice is extracted. Put the squeezed out pulp back into the towel and add to it a half tea cup of salt, a tea cup of white sugar, two tablespoonfuls of black pepper in the grain, and three pints of strong vinegar. Stir all the ingredients together, and then bottle the cucumber catsup. You will find it extremely nice to eat with fish or with fresh pork. The latter is much less apt to produce indigestion when eaten with some acid condiment.

Tomato catsup is best made early in the morning, as soon as the cook takes off her breakfast, and nothing improves it more than to run the tomatoes through a colander, otherwise it will be hard to get the catsup into a bottle, and still harder to get it out. Fill up a large kettle or dinner pot with tomatoes without peeling them, or adding any water, as their own juice will suffice. When the skins begin to come off, and the tomatoes to boil, take them off the stove and put them in a large bowl or dish pan to cool. When they have cooled enough to admit of being handled, squeeze them through a colander, rubbing them over the surface of it with your hands. This gives you the pure juice and pulp, separated from the cores, skins and seed, which may be thrown to the chickens. If you desire to make sweet catsup, observe the following proportions for two gallons of tomatoes. Put back the juice and pulp into a kettle, adding to it one ounce of cloves, or if you prefer it, one ounce of allspice, two cups of salt, and four heaping cups of sugar. When this has boiled down one-third, add a half gallon of strong vinegar. Boil until it thickens, then bottle it, and seal with corks and cement while hot. The above proportions ought to make twelve pints of sweet catsup. If you wish to make an acid catsup, prepare the tomatoes as above directed, but season them differently, adding chopped onions, pepper (either red or black), ginger, and a little mustard.

The nicest condiment I have ever seen made of tomatoes is a sauce made of tomatoes and horse radish. Take a kettle full of ripe tomatoes, boil them in their skins, then mash them with a wooden spoon or paddle, thereby reducing them to fine pulp. Measure this pulp, and to a gallon of it add two pounds of white sugar, six tablespoonfuls of salt and the same of mustard, and a quart of grated horse radish. Put it back on the stove, let it boil awhile, and then add a quart of strong cider vinegar. After the vinegar has boiled take off the sauce and bottle it, and you will find it extremely nice addition to either "fish, flesh or fowl." The scarcity of fruit this year leads me to recommend to housekeepers not to make

Every farmer should know all about  
**POTASH**  
 Our books contain the teachings of the best agricultural authorities.  
 We mail them free to farmers.  
**GERMAN KALI WORKS**  
 93 Nassau St., New York

**Canvas Goods**  
 WATERPROOF AND PLAIN  
**STACK, WAGON,**  
 IMPLEMENT, BINDER AND HORSE COVERS,  
**HAY CAPS, TENTS**  
 LOW PRICES. CIRCULARS AND SAMPLES.  
**HENRY DERBY,**  
 124 Chambers St., New York, N. Y.

THE IMPROVED  
**SCREW STAMP PULLER**  
 Write for Prices.  


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

—AN IMPROVED—  
**SWEET POTATO HOUSE.**

Simple and easy of construction that will keep sweet potatoes in good condition until the new crop comes in. Inclose 50 cents to BRYAN TYSON, Carthage, N. C., and receive, postpaid, a pamphlet containing necessary cuts and full instructions for constructing. Please name this paper.



**VIRGINIA POLYTECHNIC INSTITUTE**(State Agricultural and Mechanical College), at **Blacksburg, Va.**

A Southern Institute of Technology.

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up all their tomatoes in catsup, but to utilize the yellow ones in preserves and jelly, heavily flavored with lemon, cinnamon and vinegar, as otherwise tomatoes have a sickening taste when preserved.

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**THE N. C. AGRICULTURAL COLLEGE.**

We invite attention to the advertisement of the North Carolina Agricultural College. This College has made great progress within the last year, as the number of agricultural students increased from seventeen to seventy-eight. The Trustees have provided for 120 agricultural scholarships this year, and it is expected that the number of students will reach 100. Write to Prof. Chas. Burkett for particulars and catalogue.

**THE VIRGINIA POLYTECHNIC INSTITUTE.**

The advertisement of the Virginia Polytechnic Institute at Blacksburg appears in another column in this issue. Under the direction of Dr. J. M. McBryde, this institution has made wonderful progress. Last year more than 500 students were enrolled. This year there will be, in all probability, more applications than can be accommodated. The V. P. I. has an enviable reputation in that it always has numerous applications for its graduates in all departments, and we know of numerous instances where the boys have been taken at splendid salaries immediately upon leaving school. Send for catalogue.

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Manual training gives tone to the studies, gives a most pleasing variety, and above all, gives application of principles learned in the books—which quickens thought, develops study, and greatly increases the desire for knowledge, says C. E. Vawter, of the Miller School. Each department is a most hopeful aid to the other. It is a sin and a shame to allow the youth of our country to grow up without a proper development of all their powers, and without offering them an education that fits them for the highest order of manhood.

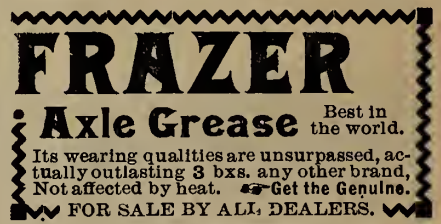
But some will say that this is for the poorer classes. Well, to that I might reply, that surely then, this is the education for us. But to speak soberly, this is a great mistake. All classes should have it. The health, the independence, the knowledge of natural things make it most desirable for all. But it is a fact that in some way nearly all of us work for a living. If one is not under this head, he knows not how soon he may come under it. The rich should have it, the poor must have it, or sink to miserable plodders, scuffling every day to keep the wolf from their door.

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are advertised in this issue by H. Armstrong, Lantz Mills, Va.

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Known as the Hampstead Farm, situated on the Pamunkey river, for sale. Contains nearly 1600 acres, 800 of which is river bottom land, the remainder being upland and timber. Large deposits of green sand marl; brick barn with wood stable attached; also houses for sheep, etc. Splendid dwelling said to have cost \$60,000. Property now owned by stock company. Price, \$20 per acre, on easy terms. For further particulars, address

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All prices and sizes. Free list on application.

WM. B. PIZZINI CO., Richmond, Va.

**THE HISTORY OF A SPRIG OF GERANIUM—A STORY FOR YOUNG FOLKS.**

By MARY WASHINGTON.

[Continued from July number.]

**CHAPTER III.**

As October advanced, the annuals died out, and the threat of approaching frost warned Anna to move her geraniums into the house. She put them in the kitchen as before, but as her stock was more bulky than before, she could no longer make use of her mother's bread shelf, but got her father to put her up two larger slate shelves in another corner of the kitchen, and when the nights grew bitter cold, she pursued the same plan with her flowers that her mother did with her bread, and thus she saved them through the winter. In the autumn, she had earned several dollars, which she gave to her mother, and the latter laid them aside to help get medicines, or extra comforts for her, during the winter, but the fresh air and sunshine, and increased cheerfulness produced by congenial work seemed to have wrought a beneficial change in Anna's health, and she was so unusually well this winter that she needed very little medicine, so in the spring, her mother handed her back a dollar that was left of her little fund, telling her that she was fairly entitled to spend it for her own pleasure. This enabled her to realize a wish she had long entertained—to buy a few roses. As soon as the spring weather became settled, she went in her aunt's market wagon to the floral establishment beyond her home, and invested in four roses, a Jacqueminot, "Pearl of the Garden," "Sunset" and "Bride." Never was a little girl happier or more triumphant. Her father and brothers enlarged her border and got it in nice order for her, and help and encouragement came flowing in from various quarters, for every one who knew of her, seemed interested in her undertaking, and disposed to forward it. Early in the spring, Mrs. Akers had sent her a stock of sweet, old fashioned flowers, honey suckles, pinks, hyacinths, violets and lilies of the valley, and Mr. Akers had sent her a large farm, wagon of rich earth. Aunt Jane had grubbed her up a number of roots of the Virginia creeper, or trumpet flower which Anna planted around the fence and porch. Altogether, her operations were greatly enlarged from those of the year before, and her gains proportionally larger. Apart from what her aunt sold for her, she now sold a good deal for herself, as her bright, pretty flower beds tempted passers by to stop and purchase. In the autumn, her gains justified her in having a pit, by her father's doing the digging and carpentry for her. Fortunately for the furtherance of her wishes, it happened to be a slack time in his business, and as he was especially indulgent to his delicate child (giving her the more real present of his work, where a wealthier parent would have given money) he fell to digging her pit with a hearty good will, and after he had

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



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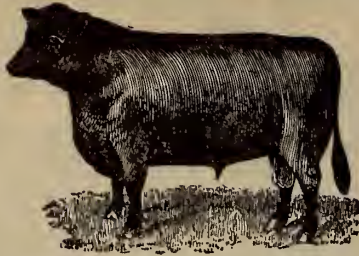
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One reg. Aberdeen-Angus Heifer coming 3 yrs. old, bred to our Imported herd bull, Rubicon Migno 2nd, No 4121, Price, \$125—a bargain.

Several fine milch cows, in calf, by the above-mentioned bull. Price, \$30 each.

Two superb, reg. Aberdeen-Angus bull calves, One reg. Dorset Buck, 4 yrs. old. Very large, fine and vigorous. Price, \$25.

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One grade Dorset Ram Lamb. Price, \$6.

One lot of S. roppshire-Southdown Ewes, 2 and 3 yrs. old. Price, \$3.50.

Six Shropshire-Southdown Ewe Lambs. Price, \$3.

Three Shropshire Southdown Ram Lambs. Price, \$3.

Nine head beautiful, reg. Angora Goats; One Buck; Price, \$20. Six Does; Price, \$12 each. Two Buck Kids; Price, \$10 each.

Address **W. M. WATKINS & SONS,**  
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Randolph, Charlotte Co., Va.

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At a figure which he should earn this season, the

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Reg. in English and American Hackney Stud Books, by Silver Star, dam Lady Fanny, by Rob Roy. A grand individual, nicely broken to saddle and harness, and sires fine colts. Address

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As fine a Jack as there is in the State.

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**H. B. START, - Amelia C. H., Va.**

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finished the wood work, she completed it by buying and adding the sash. She stocked it with geraniums, heliotropes, large double violets, both blue and white, and other flowers desirable alike from being both beautiful and saleable, and she still had money enough to provide for her own needs without calling on her parents.

We will not follow her career step by step. Suffice it to say that in ten years from the time the sprig of geranium was dropped, "by heavenly chance express," at her gate, by thrift, pains and diligence on her part, she found herself at the head of a beautiful and choice little floral establishment, where she was enabled, by the goodness of Providence, to support herself, give employment to her brothers, and help her parents, and all in the pursuit of a calling that added greatly to her health and happiness. Behold! what great results, under Providence, can spring from a small beginning! Like the mustard tree, springing from the tiniest of seed!

### SHOP-MIXED COMBINATIONS

The best machine-mixed paints are better than the shop mixed paints, other things being equal. But many painters have an insuperable objection to using any paint of which they do not know the formula.

This objection does not apply, of course, to the many excellent prepared paints now on the market, with formula, analysis and guarantee printed on the label.

The painter, however, also likes to save the profit of manufacturing for himself, and there is no great objection to his doing so if he makes the combination with the necessary care. The approved formula is about two-thirds American zinc to one-third lead, tinted to the desired shade.

The proper procedure is to procure both the zinc and the lead ground in oil. First break up the zinc in oil or turpentine, according to the nature of the work, then break up the lead in the same manner, and finally stir the latter into the former, always adding the heavier pigment to the lighter. The tinting color is finally incorporated and the whole then run through the painters' sieve or strainer.

This method will insure as close an incorporation of the constituent pigments as is possible without grinding. Such a combination will look better and wear longer than any of the paints ordinarily used, the only precautions being that the surface to which it is applied is perfectly dry, that the work is not done in humid weather, and that each coat is allowed to harden well before the next is applied.

**STANTON DUDLEY.**

### HEREFORDS AT CASTALIA,

Mr. Murray Boocock, Keswick, Va., owner of the Castalia Herefords, informs us that he has thus far this month shipped three bulls and four cows, all registered, to different parts of Virginia. We are glad to note that all of the good stock is not going out of the State. We hope Mr. Boocock will keep up the good work against the "Scrub" by giving an ocular demonstration to our farmers as to what really can be done with thoroughbred stock—Herefords in particular.

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SECOND LARGEST

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Visitors welcome. Address for Book of The Farm, or prices

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

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Desiring to retire from active business, I offer, for immediate sale, my entire herd of 44 pure bred

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36 of which are under 4 years old. I will also sell all equipment of the Dairy, consisting of Engine, Boiler, Separator, Refrigerator, Butter Worker, Cans, etc. \$2,250 will take everything. The purchaser of the above can also purchase or rent 250 acres of my farm on which to continue the business. For further particulars address

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Wishing to reduce my stock, will sell cheap. Every thing from Oak Hill Farm is guaranteed first-class, and as represented. Address

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And POLAND-CHINA PIGS For Sale.

From registered stock. 8 weeks old, \$5.00  
apply to

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RED HORSE and IRISH REDS.

I have a fine lot of these Chickens for sale.  
April hatched, and well-grown. Cockerels \$1.00, Pullets 75 cents each,  
1 Cockerel and 2 Pullets, \$2.00.

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From Pure-Bred Fowls, Cheap.

The Imperial Fruit and Poultry Farm is in a position to offer Eggs from pure bred B. P. Rocks and S. C. B. Leghorns at 50c. setting of 15. Reference furnished.

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CLOVER HILL FARM.

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BARRED WHITE ROCKS, BROWN and WHITE LEGHORNS, S. C. LEGHORNS.

75c. per setting of 15; 3 settings, \$2. Rose Comb Brown Leghorns, \$1 per setting. A few more cockerels of above varieties for sale. Also a Yearling Jersey Bull, entitled to registry.

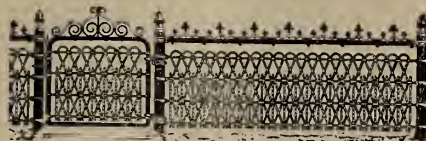
J. B. JOHNSON, Clover Hill Farm,  
Manassas, Va.

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## ORNAMENTAL FENCING.

For several months past the advertisement of the Coiled Spring Fence Company, of Winchester, Ind., calling attention to the Ornamental Fence manufactured by them, has appeared in these columns.

Many years of experience in the fence business has enabled this firm to make a fence that is not only beautiful and a credit to any property but strong and durable as well, affording best protection



and requiring little attention or repair after erection.

The fencing is made in many different styles and sold at prices that are astonishingly low, and under absolute guarantee to give satisfaction. It will pay our readers to send for one of their large illustrated catalogues, which are free for the asking. Kindly mention the *Southern Planter*.

## SUPPLY vs. DEMAND.

SCENE.—The Cook County Juvenile Court.

*Dramatis Personæ.*—Judge, Jurors, State's Attorney, one McGreevy (red headed), Mrs. Casey (probation officer and police matron), spectators, and numerous children, the latter, especially, unwashed.

*Plot.*—An attempt by the State to take away from McGreevy a flock of children whom he compelled to beg and to live in squalor, while he and his wife lived on the proceeds of the begging and—largely—on alcoholic stimulants.

Mrs. Casey, called by the State, takes the stand and is sworn.

"Yer Honor th' Jedge, an' gintlemin av th' joory, I'm Mrs. Mary Ca-asey, an off'cer av this court.

"I wint to this mon's house,—this rid-bidded mon McGreevy, here,—an' rapped on th' dure, an' he come to th' dure an' opened it.

"You're Mrs. Ca-asey?" he says to me. "I am Mrs. Ca-asey," I says to him, I says, 'I'm a probation off'cer,' I says, 'av th' Joov-nile Court.' I says, 'an' I'll see yer wife,' I says, 'she's in the room be-yant.'

"Ye'll not see my wife," says he. 'Any talkin',' says he, 'that's done by this fam'ly,' says he, 'll be done by me,' he says.

"An' thin', yer Honor the Jedge, an' gintlemin av th, joory, he says to me, this rid-bidded mon McGreevy says to me, 'Mrs. Ca-asey,' he says, 'you can go to haitch-e-double-l,' he says to me, 'an', he says [impressively], 'th' the court can go with you,' he says.

"An' Mrs. Ca-asey,' he says,—this rid-bidded mon McGreevy a-standin' here says to me, he says,—'Mrs. Ca-asey, you can take away my childer av ye dee-a-m-n plaze,' he says [pause to gather breath], 'fer,' he says, 'I have more a-comin'.'"

Sensation in court, and finale.—JOHN SWAIN, in the *June Lippincott*.

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My entire flock of Dorsets, registered and eligible,

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44 head, exclusive of present crop of lambs. Fine stock; low price.

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Nice BERKSHIRE PIGS for sale now. Also a few DORSET RAM LAMBS left.

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I offer thoroughbred and high-grade RAWS of this most popular breed; also 300 grade EWES, suitable for raising hot-house or winter Lambs. Rams turned with them in May.

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## Large English Berkshires

AND

## Dorset Horned Sheep

IMPORTED BOARS AT HEAD OF SERVICE. Send for 1902 Catalogue.

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One fine driving horse and a few work mules for sale.

Pasturage for HORSES, MULES and CATTLE.  
JNO. MATHEWS, East Richmond, Va.



**ELLERSLIE FARM**

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

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SHORTHORNS  
FOR SALE,  
SUPERB BULL CALF**

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For price, address  
JAMES F. CLEMMER, Summerdean, Va

**ANGUS BULL CALVES**

Registered and unrecorded. Stock first-class, and breeding the best.

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First class yearling rams, and ewes of all ages. Several FINE FARMS for sale.

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MALE AND FEMALE.  
REGISTERED AND ELIGIBLE.

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**REGISTERED BERKSHIRES.**

Fine lot of Pigs now ready.  
Can furnish pairs not akin.

J. T. OLIVER, Allen's Level, Buck. Co., Va.

**Southdown Bucks**

5 yearlings, 2 early lambs. High-grades; also 1 thoroughbred lamb.  
Price very reasonable.

R. HARVEY BARTON, Dublin, Pulaski Co., Va.

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I offer pure-bred SOUTHDOWN RAMS, three years old, at \$15.00 and \$10.00 each, also two pure-bred DORSET RAMS, two years old, at \$15.00 each.

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Ram and Ewe Lambs for sale. Apply to  
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**TROTTING, SADDLE and  
HIGH STEPPING HORSES**

Educated, bought and sold on commission, and kept by the month or year. High-class POULTRY and BELGIAN HARES for sale at reasonable rates. Write for circulars; no trouble to answer questions. Satisfaction guaranteed.

CHANDLER QUINTIN, Veterinarian,  
40 yrs. experience on the best stock farms in America.

MAGAZINES.

Although the August Century is a Midsummer Holiday Number, with colored cover and with illustrations in color, the general reader will be likely to turn first to the articles relating to the West Indian disasters. These include contemporary records of the action of both volcanoes from day to day, almost from hour to hour. The Martinique material is grouped under the title "The Last Days of St. Pierre," and comprises (1) a long and specific letter from the Vicar-General of Martinique to the absent Bishop, written in the form of a journal and covering the days from May 2d to 21st, the eruption being on the 8th, and (2) a reprint of the evening newspaper of St. Pierre, "Les Colonies," for the week of May 1-7, or so much of it as relates to "Life in the Doomed City," as the article is called. These two documents were preserved through the forethought of Chaplain MacGrail, of the Dixie, and although a portion of "Les Colonies" was given by him to newspaper correspondents, much the larger part is entirely new to the American reader. The letter and the newspaper extracts together make a vivid and authoritative record of historic interest and value.

"The Catastrophe in St. Vincent" is treated by S. C. Reid, who furnishes introductions and notes to two narratives (1) by the Chief of Police of St. Vincent, Captain Calder, and (2) by T. McGregor McDonald, proprietor of the Richmond Vale estate, which was overwhelmed by the volcanic scourge. Each of these gentlemen had a narrow escape, which is here described, and each made particular record of the phenomena of the eruptions of La Soufriere as they occurred. For comparison with these documents the editor reprints the younger Pliny's account of "The Eruption of Vesuvius," the only source of the direct knowledge of the event which exists. The reader is prepared for these articles by a general paper on "Earthquakes and Volcanoes" by James Furman Kemp, Professor of Geology in Columbia University, which is fully illustrated by pictures and sketches, and deals in large measure with the Charleston earthquake and American volcanoes.

The color feature of the number is a paper on "The New New York" by Randall Blackshaw, with pictures by Jules Guérin, a number of which, including the frontispiece, "The New York Public Library," are printed in color. Now that New York is being so largely rebuilt, this review of its recent material progress may be considered a timely article. The papers on "The Great Southwest" by Ray Stannard Baker come to a conclusion with an article on "The Tragedy of the Range," which is illustrated by Maxfield Parrish, and deals particularly with the cattle and sheep questions. Another feature relating to the West is begun in "Chapters from the Biography of a Prairie Girl" by Eleanor Gates, a new writer, which is announced as a sort of natural history of life in Dakota twenty-five years ago, where the writer spent her girlhood. The first chapter opens with a vivid portrayal of a blizzard and imme-

**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.
The Dispatch, Richmond, Va.....	\$5 00	\$5 25
The Times, " " .....	3 00	3 00
The Post, Washington, D. C.....	6 00	6 00

SEMI-WEEKLIES.	PRICE ALONE.	WITH PLANTER.
The Dispatch, Richmond, Va.....	1 00	1 25
The World (thrice-a-week), N. Y.....	1 00	1 25

WEEKLIES.	PRICE ALONE.	WITH PLANTER.
Harper's Weekly .....	4 00	4 00
" Bazaar.....	1 00	1 40
Montgomery Advertiser.....	1 00	1 00
The Baltimore Sun.....	1 00	1 35
Breeder's Gazette .....	2 00	1 75
Hoard's Dairyman.....	1 00	1 35
Country Gentleman.....	1 50	1 75
The Times, Richmond, Va.....	50	65
Religious Herald, Richmond, Va.....	2 00	2 25
Central Presbyterian, " " .....	2 00	2 50
Christian Advocate, " " .....	1 50	1 75
Turf, Field and Farm.....	4 00	4 00
Spirit of the Times.....	4 00	4 00
Horseman.....	3 00	3 00

MONTHLIES.	PRICE ALONE.	WITH PLANTER.
North American Review.....	5 00	5 00
The Century Magazine.....	4 00	4 25
St. Nicholas " .....	3 00	3 25
Lippincott's " .....	2 50	2 50
Harper's " .....	4 00	4 00
Forum " .....	3 00	3 25
Scribner's " .....	3 00	3 25
Frank Leslie's " .....	1 00	1 35
Cosmopolitan " .....	1 00	1 35
Everybody's " .....	1 00	1 35
Munsey " .....	1 00	1 35
Strand " .....	1 25	1 65
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Blooded Stock.....	50	50

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We furnish no sample copies of other periodicals.




diately reveals a human interest in the descriptions of the various members of a farmer's family. In the Century's "Year of American Humor" is a paper by Joel Benton on "P. T. Barnum. Showman and Humorist," fully illustrated, and with a number of anecdotes and incidents setting forth the traits of this "Majordomo or Lord of Laughter and Fun," as Mr. Benton calls him.

The Review of Reviews for August continues its series of invaluable portraits of men prominent in public life throughout the world. The Rt. Hon. Arthur J. Balfour, just called to the premiership of the British Empire, is the subject of an admirable character sketch by M. A. Maurice Low, a writer whose acquaintance with British politics and politicians attests the value of an article from his pen on such a subject. Mr. W. T. Stead relates a most interesting interview recently held with Mr. George Frederick Watts, A. R. A., the only British artist deemed worthy by King Edward of a membership in the new Order of Merit, just established. Mr. Walter Wellman, in an article on Spooner, of Wisconsin," writes in an appreciative vein of the man who by common consent ranks to-day as the leader of the United States Senate, so far as that body may be said to have a leader. Each of these three men, whose careers are described in the August Review, is at this moment very decidedly "in the public eye." The Review prints these sketches of them at just the right time.

"The New Rice-Farming in the South" is the title of an article by Day Allen Wiley in the August Review of Reviews which is likely to prove an eye-opener to many readers who have underestimated the recent remarkable developments in Southern agriculture. That rice on the prairies of Louisiana and Texas is now seeded, harvested, and threshed by machinery like that employed for wheat on the prairies of Kansas is only one of the facts brought out in this article by (text and pictures) which are likely to cause a ripple of surprise among Northern and Western readers.

The budget of good things in the August St. Nicholas is sufficiently well assorted to tickle the fancy of all sorts and conditions of children. "Tom Jarnagan, Jr.," is the long story. It is vigorous, natural, and decidedly interesting. "Slimme Sir Marmaduke" is a delightful bit of nonsense verse, setting forth the adventures of a very thin knight who in his armor was mistaken for the fire-tongs by the giant's wife. "The Little Maid of the Sea" is a charming story of a fisher lass who mended the nets and took care of her baby brothers and cooked her father's dinner and was cheerful in her work. The League with its prize contests in writing and drawing continues to grow in popularity. These are a few of the many good things in the August number.

Uncommonly attractive features in the August Lippincott, which is essentially a vacation number, are a complete novella by Dr. S. Weir Mitchell; eleven short stories by popular writers; a humorous



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Finest Sprayer ever invented for spraying cotton and tobacco, trees, and whitewashing buildings, etc. Tested to 60 lbs. pressure. Has a safety valve. Can't burst. One minute's pumping will discharge contents of Sprayer in the form of a mist, covering every part of the foliage. Made of Galvanized Iron and Copper. Has a brass cylinder pump. Prices—5-gal. Galvanized, \$5.50; 4-gallon Galvanized, \$5.00; 5-gallon Copper, \$8.00; 4-gallon Copper, \$7.00; special pipe and nozzle for spraying underneath cotton, tobacco and shrubbery, 70c.

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Manufacturer of Sprayers and Spraying Mixtures,  
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**Hill Top Stock Farm OFFERS FOR SALE**  
..... A LIMITED NUMBER OF

**Southdown and Shropshire Sheep**

**A Grand Lot of Berkshire Hogs**

Young Boars ready for service.

Come and see our stock, or write for description and prices to

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Parties will be met at train with conveyance, if we are notified in time. We are always glad to show our stock.

# DEVON COWS....

Ten young DEVON COWS, thoroughbreds and high-grades with Calves by their sides. Want to sell them during this month. Can be seen if day's notice is given. Also JERSEY CATTLE and several YOUNG GUERNSEY BULLS. BERKSHIRE PIGS not akin. Several young BOARS ready for service.

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Cattle of NETHERLAND, DEKOL, CLOTHILDE and PIETERTJE families. Heavy milkers and rich in butter-fat. Stock of all ages for sale.

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N. B.—in the Stud: The Imported Hackney Stallion, "The Duke," registered in E. H. S. B. and A. H. S. B. Address

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Norfolk and Western and Southern R. R.

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department which is humorous, besides seasonable poems.

Dr. Mitchell's new novelette is called "New Samaria." This shows us the author of "Hugh Wynne" and "Circumstance" in a fresh, but no less delightful vein. In it a millionaire from the East finds himself accidentally stranded among strangers in an Arkansas village without a dollar in his pocket. The novelty of such a position soon wears off. His appearance does not beget confidence in his story, and he goes through a series of adventures in a side of the world which his life has not hitherto touched.

Marie Van Vorst's work is compelling attention just now. Her story, "Angelo of the Perfection," promises to deepen this interest by its strength and pathos. "The Governor's Choice," by Joseph A. Altsheler, is a story of love in politics where honesty receives a tenfold reward. Caroline Lockhart ("Suzette") brilliantly and boisterously writes about her summer in the Rocky Mountains. This is accompanied by a portrait of the author on horseback. The title is "A Girl in the Rockies." "The Final Propositions," by Cyrus Townsend Brady, is, to quote the author, "the best short story I have yet written." It is a tragic tale of war and marital misunderstanding. Elliott Flower, the author of "Policeman Flynn," contributes a most amusing story called "The Predicament of Silas Singer."

#### FAITH REWARDED.

Substantial answers to prayer are childhood's fondest expectations.

Rob wanted a drum, and asked his mother to get him one.

His mother answered that if he would be a good boy for three days and pray to God for it, He probably would give him one.

"Do you think He would, honest?" asked Rob.

"Yes, I think He would."

"Well, then, I'll be good for three days and then I'll ask Him."

He kept his promise, and his mother purchased a drum to reward his faith.

On the evening of the third day, Rob prayed earnestly, and wound up with, "And now, do please send that drum."

His mother heard him. While he slept she placed the drum upon his bed.

When he wakened in the morning he gazed at it in astonishment, and then exclaimed, "Where in the dickens did God get that drum?"—CHARLES McILVANE, in *May Lippincott's Magazine*.

#### A PROVIDENTIAL PORTER.

A gentleman, Scotch Presbyterian, travelling with his five-year old son, told the child, as he put him to bed, to say his prayers as usual, which the boy flatly refused to do.

"Don't you want the Lord to take care of you to-night?" asked the anxious father.

"What's the porter here for?" was the child's response.—C. B. KUEHN, in the *July Lippincott's*.

To make cows pay, use Sharples Cream Separators. Book "Business Dairying" & Cat. 805 free. W. Chester, Pa.

## "THE OAKS" HERD 2 Reg. SHORTHORN Bull Calves

2 HIGH GRADE (pure bred) but not eligible to registry. Stock guaranteed as represented or money refunded. B. R. Comb Leghorn Eggs; 15 eggs, 75c.; \$3 per 100.

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POLLED DURHAM CATTLE, SHROPSHIRE and SOUTHDOWN SHEEP. Also POLAND-CHINA HOGS.



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We have more high testing ST. LAMBERT COWS than can be found in any herd in the United States or Canada.

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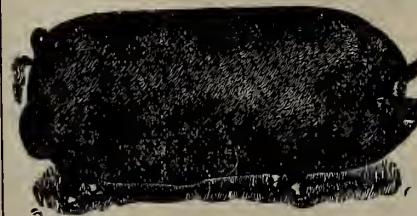
We have also for sale a choice lot of INDIAN GAME CHICKENS—male and female. Also some choice WHITE WYANDOTTE COCKERELS. The Indian Game and White Wyandottes are the best general purpose fowls.

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LET ME HAVE YOUR ORDERS PROMPTLY FOR FALL SHIPMENT OF



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Imported SIR JOHN BULL and UNCLE SAM have become so famous that their pigs are often booked before birth. My supply did not meet the demand by one-third the past season.

A nice lot of Pure Blood BROWN LEGHORNS for sale cheap; also Pure Blood ENGLISH SETTER PUPS at home made price—snow-whites and white and tans.

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Lexington, Va.

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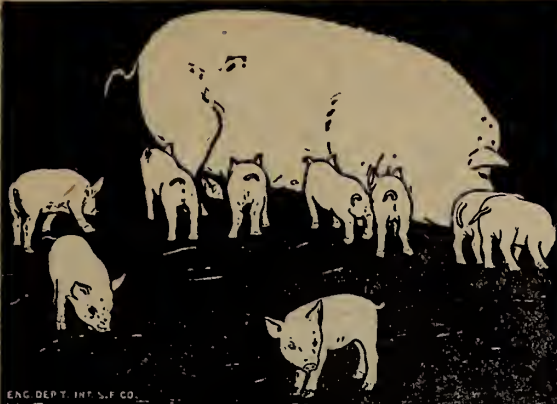
A Fire Insurance Association, chartered by the State for the farmers of Virginia, under an amended and well protected plan.

Insures, against Fire and Lightning, only country property—no stores or unsafe risks. Average cost per year for three years has been \$3.66½ per \$1000, including dwellings, barns, produce, &c.,—about one-third the usual cost of insurance to farmers. Amount of property insured \$325,000. Estimated security in real and other estate, \$600,000.

For further information, address, MENTION THIS JOURNAL.

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 INTERNATIONAL LOUSE KILLER. INTERNATIONAL HARNESS SOAP. SILVER PINE HEALING OIL, ETC.

REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Year Book of the Department of Agriculture, 1901. This is an octavo volume of 846 pages, full of interest to farmers. Application for it should be made to the Senators and Members of Congress.
- Revised Regulations concerning Oleomargarine.
- Rules and Regulations prescribed in regard to Renovated Butter.
- Division of Entomology. Circular 46. Hydrocyanic Acid Gas Against Household Insects.
- Arizona Experiment Station, Tucson, Ari. Bulletin 42. The Cool Side of a House in Arizona.
- Cornell Experiment Station, Ithaca, N. Y. Bulletin 202. Trap Lanterns or Moth Catchers.
- Florida Experiment Station, Lake City, Fla. Bulletin 26. Lumpy Jaw.
- Idaho Experiment Station, Moscow, Ida. Bulletin 32. Steer Feeding. Feeding Lambs. Analyses of Stock Foods.
- Bulletin 33. Some Grasses and Clovers, and How to Grow Them in Idaho.
- Kansas State Board of Agriculture, Topeka, Kas. Report of the Board for quarter ending June, 1902. Russian Thistle Forage.
- Kentucky Experiment Station, Lexington, Ky. Bulletin 100. Inspection and Analysis of Foods.
- Maryland Experiment Station, College Park, Md. Bulletin 82. Thinning Fruits.
- Bulletin 83. Investigation as to the Cause of Pithiness in Celery.
- Agricultural College Quarterly. Analysis of Feed Stuffs Sold in Maryland.

**C. C. Taliaferro,**  
 NASONS,  
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**“MOUNT SHARON STOCK FARM.”**

**Registered Hereford Cattle**  
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- HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.
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  - POLAND-CHINA HOGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.
  - M. BRONZETURKEYS.**—Toms, \$4. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.
  - MUSCOVY DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25; trios, \$3
  - BARRED PLYMOUTH ROCKS.**
  - ROUEN GEESE.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.00
- WILLIAM L, Jr., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.

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**Registered Herefords**  
 YOUNG BULLS AND HEIFERS  
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- Minnesota Experiment Station, St. Anthony Park. Bulletin 73. Growing Swine of Various Breeds and Crosses. Bulletin 74. Human Food Investigations.
- Mississippi Experiment Station. Bulletin 74. Some Mosquitoes of Mississippi, and How to Deal with Them. Bulletin 75. Strawberry Culture in Mississippi.
- New Hampshire Experiment Station, Durham, N. H. Bulletin 87. Thirtieth Annual Report.
- New York Experiment Station, Geneva, N. Y. Bulletins 209 and 213. Treating San Jose Scale in Southeastern New York.
- Ohio Experiment Station, Wooster, Ohio. Bulletin 133. Potatoes. Comparison of Varieties. Fertilizer Tests.
- Columbus Horticultural Society, Columbus, O. Journal, June, 1902.
- Rhode Island Experiment Station, Kingston, R. I. Bulletin 84. Poultry Feeding. Feeding Stuffs.
- Virginia Department of Agriculture, Richmond, Va. Analysis of Fertilizers.
- Virginia Weather Bureau, Richmond, Va. Report for June, 1902.
- West Virginia Experiment Station, Morgantown, W. Va. Bulletin 79. Commercial Fertilizers. Bulletin 80. Fertilizers—Sources and Composition.
- Wisconsin Experiment Station, Madison, Wis. Bulletin 93. Development and Distribution of Nitrates in Cultivated Soil.
- Wyoming Experiment Station, Laramie, Wyo. Bulletin 51. Sheep Feeding on the Range. Lamb Feeding.

A drunken man staggered into church one Sunday and sat down in the pew of one of the deacons. The preacher was discoursing about prevalent popular vices. Soon he exclaimed, "Where is the drunkard?" The drunken man was just far enough gone to think the call personal, so, rising heavily, replied, "Here I am," and remained standing while the drunkard's character and fate were eloquently portrayed. A few minutes later the preacher reached another head of his discourse, and asked, "Where is the hypocrite?" Gently nudging his neighbor, the drunkard said, in an audible whisper, "Stand up, deacon, he means you this time. Stand up and take it like a man, just as I stand. It will do you good."

It's a source of irritation  
Leading to ejaculation,  
Don't you know,  
When you get an invitation  
From a hayseed publication  
Southern Co.

Which insists as your salvation  
From the fire of law's damnation

For a dollar said to owe—  
Then to such publication  
I say with veneration,

Let it go,  
To memory's vacation,  
A dream, a past sensation,  
To sheol. W. M.

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Will harvest them for  
one-tenth of what  
it costs by hand.

Write  
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Also get of TREVARTH and GEN. MARIGOLD. \* \* \*

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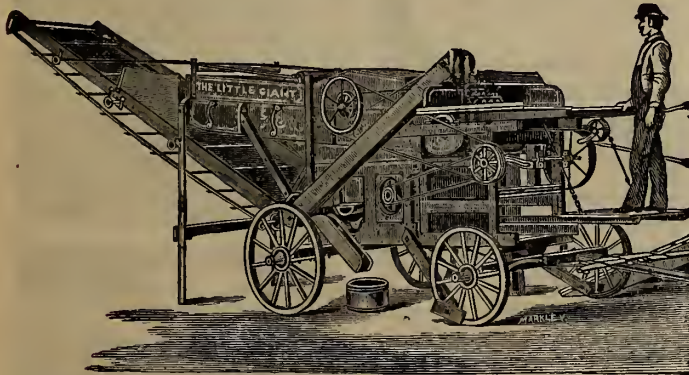
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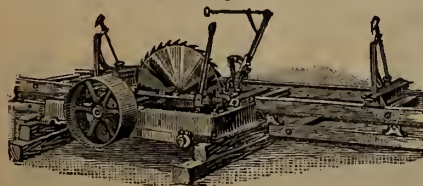
Machines, and they have splendid improvements for 1902. They are built in first-class manner, and are strong and durable. We guarantee them to do the work satisfactorily.

We will mail descriptive catalogue and testimonials, and quote prices on application.

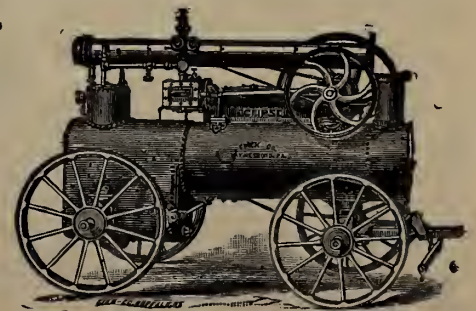
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Cuts 2000 feet of lumber per day with only 4 horse power. LATH & CORN MILLS,**



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**KENTUCKY STATE FAIR.**

The Executive Committee of the Kentucky State Fair announces that classifications have been opened for the different breeds of cattle, sheep and swine, and offering a premium list equal in all respects to those offered by the great State Fairs of Indiana, Illinois and Ohio, and in the case of Shorthorn cattle, surpassing the premiums offered at any State Fair in the United States, except Minnesota, which State is the home of the American Shorthorn Breeders' Association.

The breeds of cattle, swine and sheep recognized, with the respective premiums, are as follows:

**Beef Cattle**—Shorthorns, \$2,000, one-half of which is offered by the Kentucky Fair Association and one-half by the American Shorthorn Breeders' Association; Herefords, \$900, of which amount \$300 is given by the Hereford Association; Aberdeen-Angus, \$500; Galloways, \$300; Red Polls, \$250; Polled Durham, \$650.

**Dairy Breeds**—Jerseys, \$800; Holsteins, \$250; Guernseys, \$250; Ayrshires, \$250; Dutch Belted, \$150.

**For Swine**—Berkshires, \$300; Poland-Chinas, \$300; Duroc Jerseys, \$300; Chester Whites, \$200; Victoria, \$100; Thin Rinds, \$100; Tamworth, \$100.

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For the following classes of horses, aggregate premiums of \$4,000 are offered:

**Heavy Horses**—French Draft and Percheron, Clydesdale and English Shire, French and German Coach, Cleveland Bay, Hackney.

**Light Horses**—Roadsters, Carriage Horses, Gaited Saddle Horses, Ponies, Light Saddle Horses.

For mules and jacks premiums of \$500 are offered.

**WALKING AS AN EXERCISE.**

The Latin advice, "*Post coenam stabis seu passus mille meabis*," I modify by resting after every meal. It is pernicious to strain an overloaded stomach, and I would rather go without food than without walk. Obstacles increase the pleasure, vexations cannot dampen the ardor for the luxury I covet most. Rain or shine, in every degree of heat or cold, I go, when feasible, several hours a day—twice as long when my spirits are depressed. In warm weather it may increase perspiration, but that is a discomfort which must willingly be borne. H. W. Beecher said: "There are many troubles which you cannot cure by the Bible or hymn-book, but which you can cure by perspiration and fresh air." External gymnasiums are scarce; golf and most other outdoor plays require some exertion of the brain. But when we walk we can give the mind a complete rest, and graduate our effort according to our strength. Let those who are feeble walk, at an easy gait, half a mile—when their muscles strengthen, a mile—and they will soon find the exercise a pleasure instead of a penance; it will dispel the gloom which they bugged,

# SAVES ITS COST ON THE FIRST CROP.

It spreads all kinds of manure, lime, salt, ashes, compost, etc., either broadcast or in rows. Does it better than it can possibly be done by hand.



Do you know of any other piece of machinery for use on the farm of which this can be truly said?

## The Improved Kemp Manure Spreader

not only makes easy work of getting out the manure, but by the way in which it breaks it up and makes it fine, it more than trebles the value of the same. It will break up and spread evenly, manure that cannot be handled with a fork. It doesn't matter how hard, lumpy, caked, strawy, or stinky the manure is, this machine will spread it. It makes fine, well rotted manure go a long ways in top dressing wheat in the spring, meadow lands, pasture, etc. Being mounted on broad faced wheels, it can be handled on any kind of ground without serious cutting in or rutting. Can spread back and forth, as front wheels turn entirely under. Can be turned on the ground it stands on. 1902 machine has our new **Beater-Freeling Device, Apron-Returning Device** and numerous other improvements. Send for latest catalogue (free) and read about these and other advantages and also about "How to Grow Big Crops."

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It is not a buncher or bundler. It is a hay baler. It delivers the hay in solid, shapely bales that permit you to ship all you pay freight on. There is **NO COMPETITOR IN THE "ELI" CLASS.**

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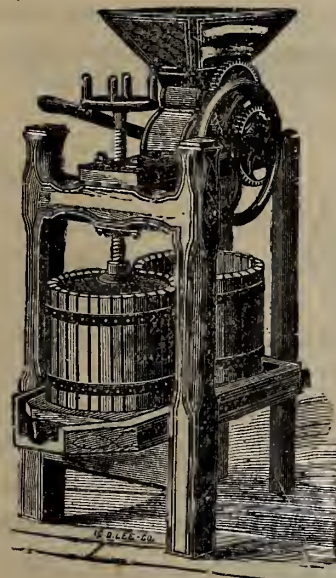
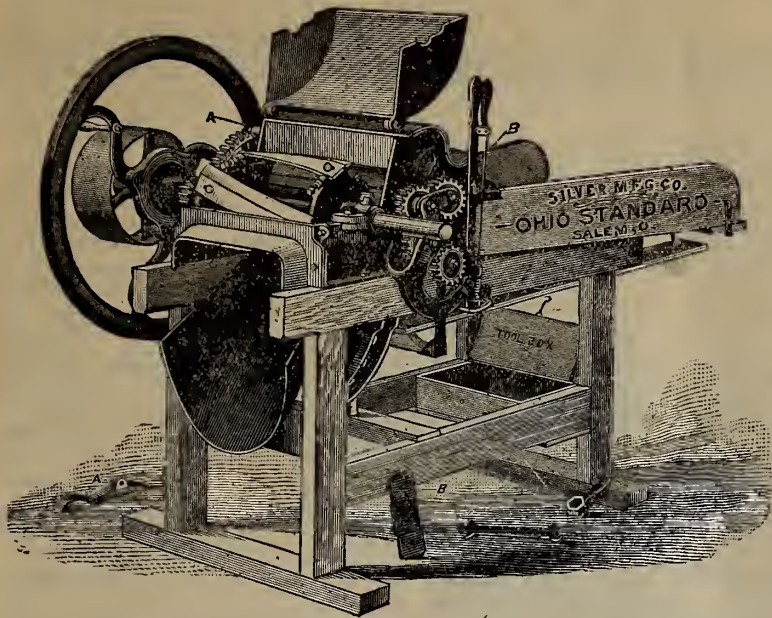
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Has no equal for grinding shelled grain, corn and cob into excellent feed. The **HORSE POWER** is very useful for running other machinery as well. A full line of mills for horse and steam power.

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For one-horse. A very useful size for small farms.  
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We are agents for the celebrated "Kentucky" Mills and "Cook's Improved Evaporator." At least the equal of any made, and far superior to most.

**CIDER MILLS.**—Single or double for hand power,

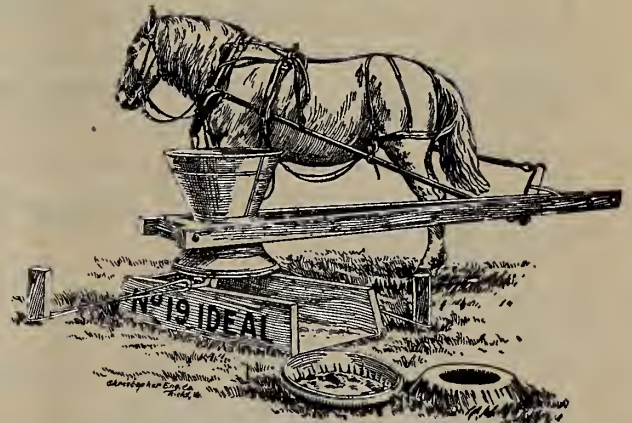
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Everything the farmer needs we can supply, and that at a close price.

**Wagons, Buggies, Carriages, Harness and Saddles.** The most complete line in the State. Write for special catalogues.



**FANNING MILLS.**—We can strongly recommend the "Lyons" for cleaning any kind of grain or grass seed. Does its work clean, and praised by every one who has used it.

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**THE IMPLEMENT CO., 1302 and 1304 East Main Street, Richmond, Va.**

and their aches will vanish. Air is man's element; he has no more excuse to refrain from walking through it than a fish would have from swimming in water.—From "Amenities of City Pedestrians," by Louis Windmuller, in the *American Monthly Review of Reviews* for August.

Mr. E. M. Gillet, of Bacon Hall Farm, writes us:

"Have just closed sale of three fine Herefords, two yearling heifers, sired by "Gold Standard" and "Tommy Atkins, no akin to the heifers. They go to Mr. S. L. Benson, of Connecticut. His remarks on my herd, and especially "Gold Standard," were very pleasing."

When writing mention the *Southern Planter*.

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FILSTON FARM.

GLENCOE, MD., July 25, 1902.

Editor Southern Planter:

Dear Sir,—Filston Farm Stock Sale Department takes pleasure in reporting the following recent sales—viz.:

Berkshires—Registered—S. W. Jewett & Son, of Vermont, bred sow and boar; T. B. Quinby, of Virginia, one boar; E. J. Wiggin, of New Hampshire, one boar; D. B. Dote, of Pennsylvania three sows and boar; H. B. Carl, of Long Island, two sows and one boar; E. M. Wheeler, of New York, one sow; G. H. Sweet, of New York, one sow; C. R. Atkinson, of Maryland, four sows and boar; R. W. Fisher, of Virginia, one boar.

Jerseys—J. M. Anderson, of Maryland, September bull; L. M. Starr, of Connecticut, bred heifer.

Expect to exhibit some fine Jerseys and Berkshires at Timonium, Syracuse, Trenton, York, Hagerstown and Frederick Fairs, where I will be pleased to meet all old or new customers.

Yours truly,

E. M. GILLET, Mgr. Sales Dept.

# Seed House of the South.

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- HAMMOTH CLOVER.
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- ORCHARD GRASS.
- RED TOP or HERDS GRASS.
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- TALL MEADOW OAT GRASS.
- JOHNSON GRASS.
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- OATS and
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“Whatsoever One Soweth, That Shall He Reap.”

We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at **Lowest Market rates**, included in which are **RAGLAND'S PEDIGREE TOBACCO SEEDS.**

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For Tobacco, Corn, Wheat, Potatoes, &c.  
**Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.**

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

**Wm. A. Miller & Son,**  1016 Main Street LYNCHBURG, VA.

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We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

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| Apples,   | Nectarines, | Pecans,       | Ornamental and |
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CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

..AGENTS WANTED..

**FRANKLIN DAVIS NURSERY Co.,** Baltimore, Md.



**AN UNWILLING JUROR.**

A New Hampshire judge has in his possession the following letter sent to him by an old farmer who had been notified that he had been drawn as a juror for a certain term of court:

"DEER JUDGE,—I got your letter tellin' me to come to manchester an' do dooty on the joory and i rite you these fue lines to let you know that you'll have to git some one else for it ain't so that I kin leave home now. I got to do some butcherin' an' sort over a lot of apples just about the time the joory will be settin' in your Court. Si Jackman of this town says that he would as soon as not go, fer he ain't nothin' else to do jess now, so you better send fer him. I hate the worst way not to oblige you, but it ain't so I kin at present. Ennyhow I ain't much on the law, never havin' been a jooryman 'ceptin' when old Bud Stiles got killed by the cars here some years ago when I was one that set on the boddy with the koroner. So you better send fer Si Jackman, for he has got some kin in manchester he wants to visit ennyhow, an' he'd be willin' to go fer his car fare there and back. Ancer back if you want Si."—*Lip, Arcot's for July.*

**CATALOGUES.**

H. Lightfoot, Chattanooga, Tenn. Catalogue and price list of Standard Varieties of Strawberry Plants and Peach Trees.

**..FOR SALE..**

A large, pure-bred Poland-China Sow with 6 pure-bred pigs at her side. Price, \$25.00 for the lot. Address G. F. COX, - - IRWIN, VA.

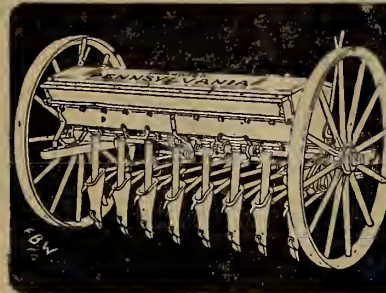
**IT STANDS FOR BIG CROPS.**

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

**SPANGLER Low-Down Drill**

Grain and Fertilizer Drill  
Positive force feed for fertilizer, grain and grass seed. Drills any depth, perfect regulation, low steel or wood frame, high wheels with broad tires. Easy to fill and operate. Light draft. Investigate before buying. Write for free catalogue. SPANGLER MANFG. CO., 5C. QUEEN STREET, YORK, PA.

STANDARD EVERYWHERE. FULLY WARRANTED.



**KEEP THE MONEY**

that you intend to spend for a drill until you inquire into the merits of our

**Improved Low-Down Pennsylvania Force Feed Fertilizer Grain Drill.**

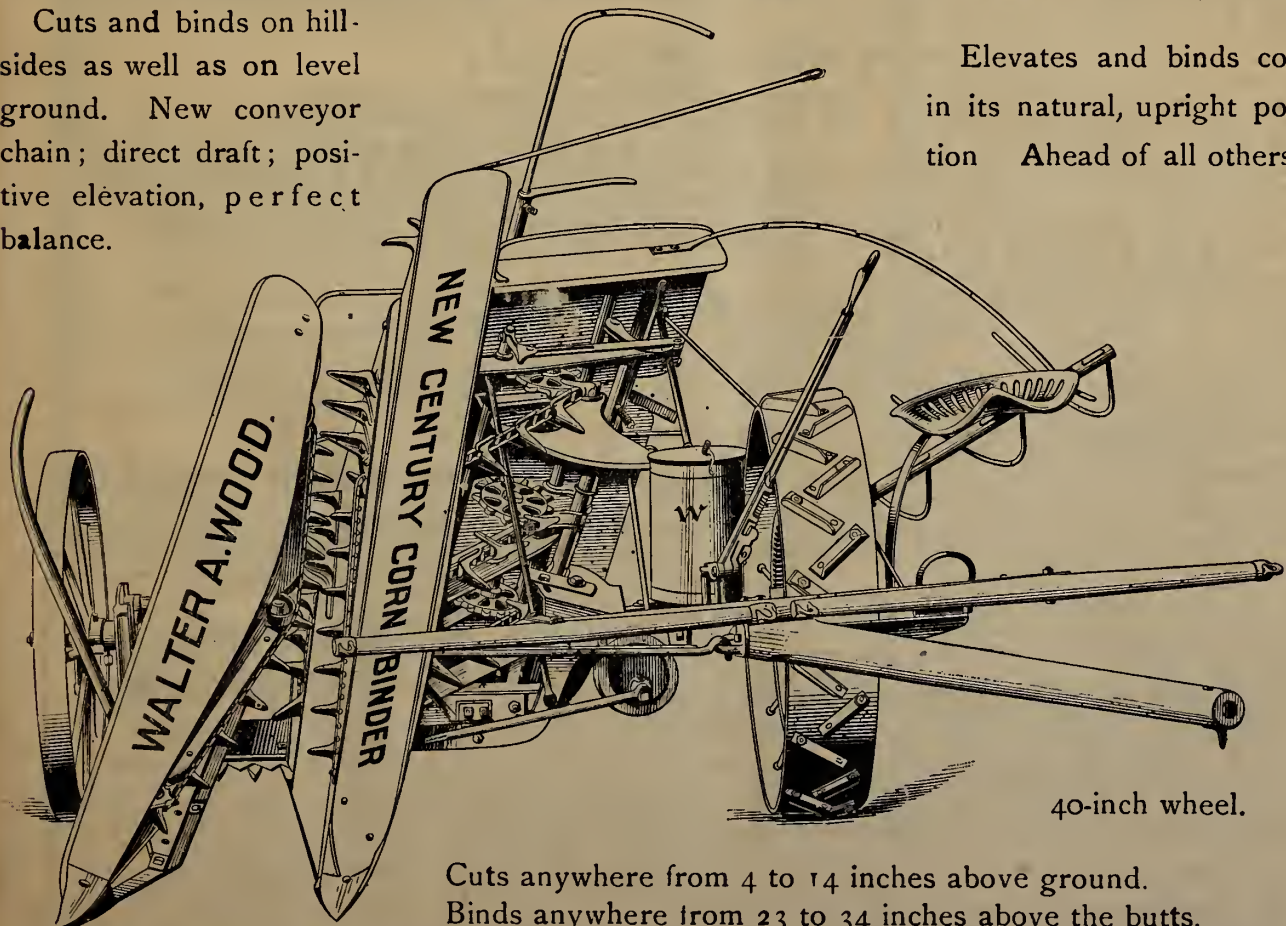
Sows all kinds of grain, corn and peas in any quantity per acre. Puts on any kind of phosphate, damp or dry, 60 to 100 lbs. per acre. Sows timothy, clover and other grass seeds either in front or behind hoes. Low down—easy to load. Easiest draft known to drills. Send for Farm Machinery, Engine, Saw Mill and Threshing Machinery Catalog—Free.

**A. B. FARQUHAR CO., Ltd., York, Pa.**

**The Newest and Latest CORN HARVESTER**

Cuts and binds on hill-sides as well as on level ground. New conveyer chain; direct draft; positive elevation, perfect balance.

Elevates and binds corn in its natural, upright position Ahead of all others.



Cuts anywhere from 4 to 14 inches above ground. Binds anywhere from 23 to 34 inches above the butts.

**WALTER A. WOOD, M. and R. M. Co., Southern Office, 1422 E. Main St., Richmond, Va**



## PLOWING WITH ELEPHANTS.

BAENUM'S WITTY REPLY TO THE FARMER WHO ASKED WHETHER IT WOULD PAY.

It may be said of P. T. Barnum that he was the Majordomo or Lord of Laughter and Fun, the protean Dispenser of Amusement. How well he became known through this function one curious incident certifies. Some years before he died, an obscure person in some remote part of Asia wrote a letter, which he dropped in the post-office near him, directed to "Mr. Barnum, America." The letter reached its destination without an hour's delay. The great showman unaffectedly enjoyed being known from the very beginning of his celebrity was a tremendous factor in his success, he did everything that he could think of to extend the exploitation of his name. This was not to nourish vain imaginings or because he felt exalted; it was to promote business.

Around his successive homes at Bridgeport, Conn., he was fond of putting something that suggested a show. Queerly marked cattle, the sacred cow, or an elephant, were frequently among the stock to be noticed in his fields. On one occasion he had an elephant engaged in plowing on the sloping hill where it could plainly be seen by the passengers on the New Haven and Hartford railroad, an agricultural innovation that he knew would get notice of some sort in every newspaper in the country. It was even said that he received letters from farmers far and wide asking how much hay one elephant ate, and if it was more profitable to plow with an elephant than with horses or oxen. His replies were invariably frank, and were of this purport: If you have a large museum in New York, and a great railway sends trains full of passengers within eyeshot of the performance, it will pay, and pay well; but if you have no such institution, then horses or oxen will prove more economical.—From "P. T. Barnum, Showman and Humorist," by Joel Benton, in the *August Century*.

### BACON HALL FARM.

*Editor of the Southern Planter*.—I beg to announce that hereafter the Bacon Hall Farm herd of registered Hereford cattle will be managed by E. M. Gillet & Son, and the same care and terms, "satisfaction or no sale," will be followed by the new firm. Owing to E. M. Gillet, Sr., being in charge of the stock sale department of Filston Farm, who breed extensively registered Jerseys and Berkshires, hereafter old customers of Bacon Hall Farm can be supplied with fresh imported Berkshire blood from the Filston herd. I am always pleased to write or show stock at Filston Farm, or my Bacon Hill Farm Hereford herd, headed by Gold Standard, half-brother to Wood's Principal, the 2-year-running champion over all beef breeds at the International Show, Chicago, 1901-1902.

E. M. Gillet.

*Bacon Hall Farm, Glencoe, Md.*

A Neat BINDER for your back numbers can be had for 25 cents. Address the Business Office.

# LEE'S PREPARED LIME

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

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

## FRUIT TREES.

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

## OUR SPECIAL WHEAT FERTILIZER.

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

## PLAIN SHELL LIME

Constantly on hand at lowest prices.

## No. 1 WOOD-BURNT LIME

In car lots at lowest market price from kilns.

Send for Circular and Prices.

**A. S. LEE & SON, 102 S. 13th Street, Richmond, Va.**

### A LIVELY LIAR.

I began to see how hard it was to tell a true story so as to be believed. I concluded that, as I meant to make my tongue secure my breakfast, I would fall back upon fiction. I went up to the open door of the little cottage and smelt tobacco. This had the double effect of making me greatly want to smoke and of assuring me that a man was within, and that I was, therefore, less secure of a meal than I should have been without the too critical charity of my own sex. I knocked with the timidity of the hungry. A very young woman came out of the back room. "What is it?" she said.

I replied: "I am an unfortunate man just out of the hospital. I have a wife

## "Crop Growing 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

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Old or new subscriptions.



and nine children; the youngest is blind and my wife is sick."

"Poor thing. How old is she?"

"About twenty-five."

This seemed to strike the woman as comical. She laughed aloud. "Well, you are certainly a very lively liar. Aren't you the man that got drunk and drove poor Mr. Smile's horse into a circus and broke my husband's leg, and told him you were a banker and worth three millions? Oh, dear, but you can fib, and you don't do it well. I could fib better, and oh my! that poor wife and nine children at twenty-five years of age!"

Upon this she fell into a chair and laughed herself into prodigality of tears.—S. WEIR MITCHELL, in the *August Lippincott*.

An educated man is a wealth producer, an uneducated man is merely a day laborer. One has his brains to assist the skill of his hands, and the two together—brains and skill—is a combination which has made nations wealthy and powerful. The laborer has only the power of his muscles, and that limits the product of the work.—S. G. KEISKELL.

#### Binders for the Planter.

We have received a new supply of binders for the *Planter*, and shall be glad to send one holding the numbers for a year to any one sending us 25 cents in stamps or coin.

## PRACTICE ECONOMY.

It is never too early to start to save money By the use of our SEWING MACHINES you save both Time and Money.

EASY RUNNING, FULLY  
EQUIPPED AND  
GUARANTEED FOR TEN  
YEARS.  
LATEST IMPROVEMENT,  
DROP-HEAD STYLE.



A CERTIFICATE OF GUARAN-  
TEE SENT WITH EACH  
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FOR STYLE AS SHOWN IN  
CUT, FOR THE SUMMER  
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ONLY \$17.00, WORTH \$30.00.

SEND MONEY BY EXPRESS, OR U. S. MONEY ORDER TO

**M. ROSENBLOOM & SON**, The Mail Order House,  
1536 E. Main Street, Adjoining New Main Street Depot, RICHMOND, VA.

We also sell the Celebrated FITZ LEE Stoves, and everything  
for House Furnishing. Write for Circular.

## The ...Locomobile

### A HORSELESS CARRIAGE

Is a special feature of my business this season.

**BUGGIES, CARRIAGES AND RUNABOUTS.**  
**All Kinds Pleasure and Business Vehicles.**

It will pay you to see my stock before purchasing elsewhere. Rubber Tiring, Bike Work and all kinds of Repairing done.

ESTABLISHED 1840.

**W. G. SMITH, 314 N. 5th St., Richmond, Va.**

Pedigrees traced and tabulated. Catalogues compiled and circulars prepared. Special attention given registration matters pertaining to thoroughbred and trotting horses

..BY..

**W. J. CARTER** (Broad Rock),

P. O. Box 929, RICHMOND, VA.

Correspondent of

RICHMOND TIMES, Richmond, Va.  
SOUTHERN PLANTER, Richmond, Va.  
SPIRIT OF THE TIMES, New York.  
KENTUCKY STOCK FARM, Lexington, Ky.

REFERENCES.—Mr. A. B. Gwathmey, Cotton Exchange, New York; Mr. W. N. Wimer, of Wilmer & Canfield, Lawyers, 49 Wall St., New York; Col. K. M. Murchison, Banker, Wilmington, N. C.; Mr. L. Banks Holt, Proprietor Oneida Cotton Mills and Alamance Farm, Graham, N. C.; Col. B. Cameron, Fairintosh Stud Farm, Stagville, N. C.; Maj. P. P. Johnson, President National Trotting Association, Lexington, Ky.; Mr. Thos. N. Carter, President Metropolitan Bank, Richmond, Va.; Mr. Jas. Cox, Belgravia Stock Farm, Mt. Jackson, Va.; Capt. John L. Roper, Foxhall Stock Farm, Norfolk, Va.; Capt. R. J. Hancock, Ellerslie Stud Farm, Charlottesville, Va.; Sam'l Walton, Walton Farm, Falls Mills, Va.

1902. IN THE STUD AT 1902.

SPRING GARDEN STOCK FARM.

## Ed. Kearney,

The property of Robert Tait, 78 Commercial Place, Norfolk, Va.

Chestnut horse, 16.0½ hands high, weight 1,150 pounds. By Tom Ochiltree, son of Lexington and Katona; dam Medusa, by Sensation, second dam Hilda, by imp. Eclipse. (For extension of pedigree see Amer. Stud Book, Vol. 6, page 740).

ED. KEARNEY was a fine race horse, and won a number of races both in the East and in California. He is a grand specimen of the thoroughbred stallion. No horse sires finer colts from all classes of mares.

ED. KEARNEY will stand for mares during 1902,  
at \$10.00 the season, Cash at time of service.

Address

Captain JAMES N. LAMKIN, Manager,  
Coolwell P. O., Amherst Co. Va.

## RICHMOND HORSE SHOW ASSOCIATION.

SECOND ANNUAL EXHIBITION,

OCTOBER 14, 15, 16, 17, 18, 1902.

\$7,000 IN PRIZES.

Entries Close Sept. 27.

J. T. ANDERSON, Pres., W. O. WARTHEN, Sec.,  
C. W. SMITH, Manager, Richmond, Va.,



## FEW WORDS NECESSARY.

A story shedding new light on the character of General Robert E. Lee has been unearthed by Mr. Carter R. Bishop, of Petersburg, Va. Some correspondence relating to the military affairs of the Confederacy recently came into the possession of A. P. Hill Camp, Confederate Veterans, of which Mr. Bishop is adjutant. During the fighting in and about Petersburg the case of Private Nelson Eams, First Virginia Cavalry, was brought to the attention of the authorities. Eams stammered badly, and for this reason was regarded as unfit for active service. Following is the official correspondence, with the endorsement relating thereto:

"PETERSBURG, November 22, 1862.

"This is to certify that I have attended Private Nelson Eams for some time and have known him for some years. He stutters very badly and I think makes a poor soldier—unfit for active service.

"JOHN H. CLAIBORNE, Surgeon."

Next comes a recommendation from the Quartermaster's Department:

"QUARTERMASTERS'S DEPARTMENT,

"PETERSBURG, November 27, 1862.

"Respectfully forwarded to General G. W. Smith, Richmond, with the request that Private Nelson Eams, Company K, Fifth Virginia Cavalry, be detailed to serve as teamster in my department. Surgeon Claiborne states he stutters very badly. He will, however, answer as a teamster.

"E. A. BRANCH, A. Q. M."

Following is General Lee's disposition of the case:

"HEAD-QUARTERS,

"FREDERICKSBURG, November 30, 1862.

"Respectfully returned, disapproved. A soldier requires but few words in the discharge of his duty.

"R. E. LEE, General."

—Lippincott's Magazine for August.

## THE SELF-SUSTAINING PRODIGAL.

They had waited a long time for the return of the prodigal. At last he came. After appropriate greetings his father said, rather sadly for so glad an occasion:

"My son, I'm very sorry, but we have no fatted calf to mark your return. Neither can I afford to buy one, having of late fallen upon evil days."

"I feared as much," replied the son, "so I stopped at the drover's on my way up and ordered the best fatted calf he had. There it comes now," and on looking out they beheld two strong butcher men struggling in with the largest and fattest calf they had ever seen.

This fable, simple though it may be, shows how even a prodigal may succeed by the strict application of modern business methods.—H. C., in the August Lippincott.

If girls had less of a smattering of high-sounding knowledge, and were better grounded in the practical lessons of living, it would be infinitely better for their future happiness.—June Ladies' Home Journal.

Mention *The Southern Planter* when corresponding with your friends.



# Japan Plums

And all other desirable standard and new varieties of PLUMS, APPLE, PEACH, PEAR and ORNAMENTAL TREES, SHRUBS, ROSES, Etc.

## HEADQUARTERS FOR TENNESSEE PROLIFIC STRAWBERRY.

The Most Reliable Variety Ever Grown in the South.

Three hundred and fifty acres under cultivation. Write us if you contemplate planting. Catalogue free.

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

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## FORMS THE MOST DIRECT ROUTE.

And from Five to Twelve Hours the Quickest

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ANYTHING you need in Seeds, Nursery Stock, or other supplies, write us about it. OUR REFERENCES, any business house in this City.

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YOU CAN ALWAYS DEPEND ON GETTING THE CHOICEST GROCERIES FOR THE LEAST MONEY AT THIS STORE. IT'S JUST AS NATURAL FOR US TO LEAD IN VARIETY AND VALUE AS IT IS FOR OTHERS TO FOLLOW.

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80,000 bushels Choice Feed Oats.....	\$ 52
16,000 " " " Corn.....	73
10,000 " Water Ground Meal.....	78
10,000 pounds Pork Butts.....	10
50,000 pounds Bacon Sides.....	12 1/2
40,000 pounds Pork Sides.....	11 1/2
85 tierces Lard.....	10 1/2
300 bbls., N. O. Cut Herrings.....	5 7/8
60 " N. O. Molasses, new crop.....	28 00
40 " Porto Rico, something fine.....	23 00
500 boxes Full Cream Cheese.....	11 00
8,000 bags Finest Golden Rio Coffee.....	8 1/2
604 bags Finest Laguayra Green Coffee.....	9
10,000 lbs. Roasted Mocha and Java Coffee	10 1/2
1,000 bxs. Finest Laundry Soap (100 bars)	2 25
603 barrels Water White Kerosene Oil.....	10 1/4
9,000 bales Choice Timothy Hay.....	60
9,000 3 lb. Cans Tomatoes, per dozen.....	1 20

sell it to you in 1 to 4 1/2 gallon packages at the same price as you pay for a barrel; then you can measure your goods and you know just how much you get. I make no charge for packages.

Fine Old Gibson XXX Pure Rye Whiskey, 4 years old, 4 1/2 gallon lots..... \$2 25

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SUGAR.	
Best American Granulated Sugar.....	4 1/4
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**We sell entirely for CASH, send Money-Order or Registered Letter to insure safe delivery.**

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Out-of-town customers are constantly sending us Cabbage, Beets, Corn, Onions, Peas, Beans, Irish and Sweet Potatoes, Bananas, Oranges, Lemons, Apples, Grapes and anything that come out of the ground, or in fact out of the heavens above, such as Walnuts, Persimmons, etc.

**If you have Country Produce such as** Butter, Eggs, Chickens, Smoked Meats, Live Stock of any kind; Wood, Lumber, Wool. I will give you the highest market price, make you prompt returns and liberal advances.

**If you handle WINES and LIQUORS here is where you can SAVE BIG MONEY**

We will give special guarantee that all of our goods are four years old, fully cured and absolutely pure. There is no occasion for you to buy Wine or Whiskey by the barrel. I can

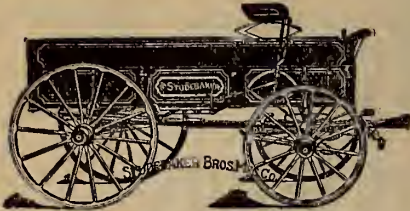
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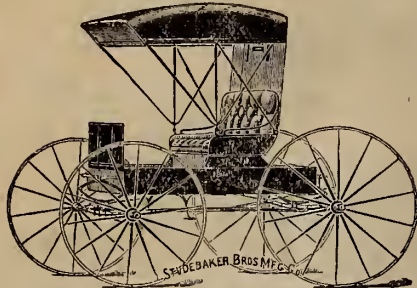
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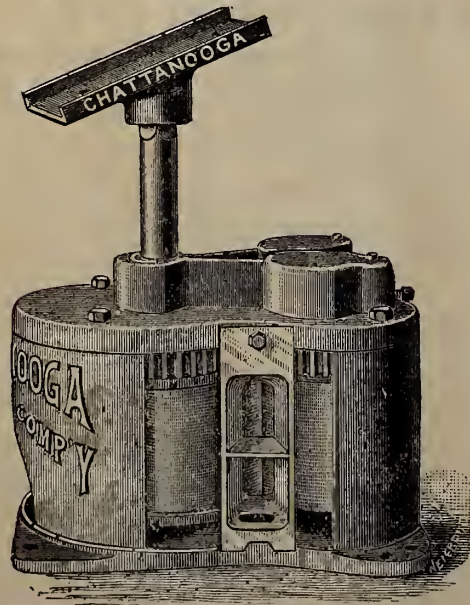


Studebaker Buggies, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.

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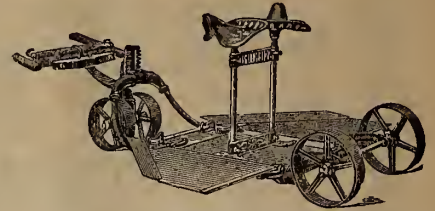
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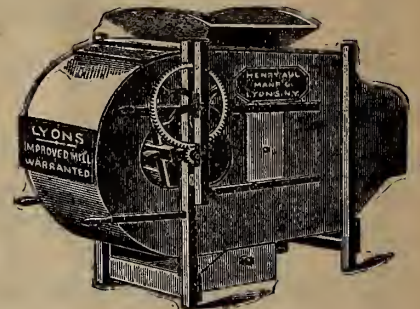
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The best Harvester on earth. For standing corn. Safety seats. Safety shafts.



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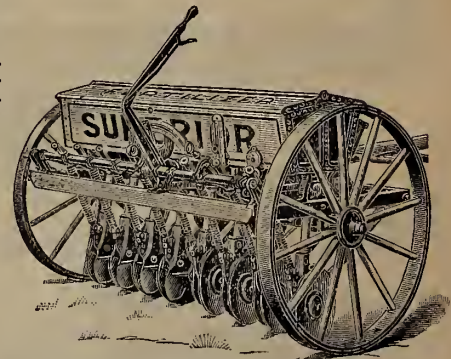
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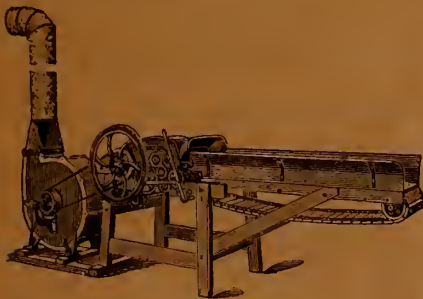
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**The Hocking Valley Cider and Wine Mills**  
Have crushing rollers made of wood, which impart no taste or discoloration to the juice.

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With hoes or disc. Drills grain of all kinds, corn, peas, grass seed and fertilizers.

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For seeding between rows of standing corn is a great success.

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Changed to straight or slanting tooth without stopping team.

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Capacities from 600 to 16,000 pounds per hour.

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Crushes the stalk after it leaves the knives—far superior to shredding.

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The most complete machine of its class made. The very low price brings it within the means of all.

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For hand or power, separating corn from cob.

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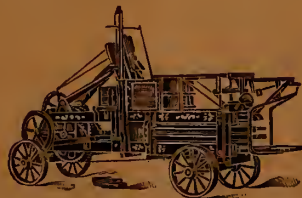
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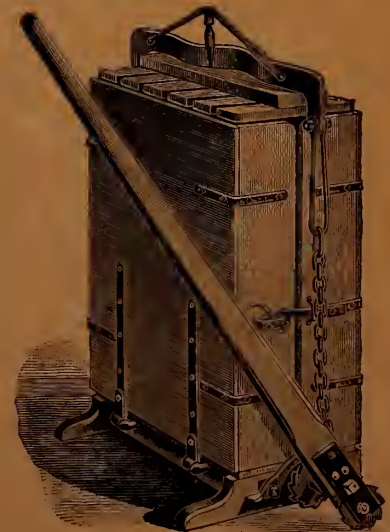
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