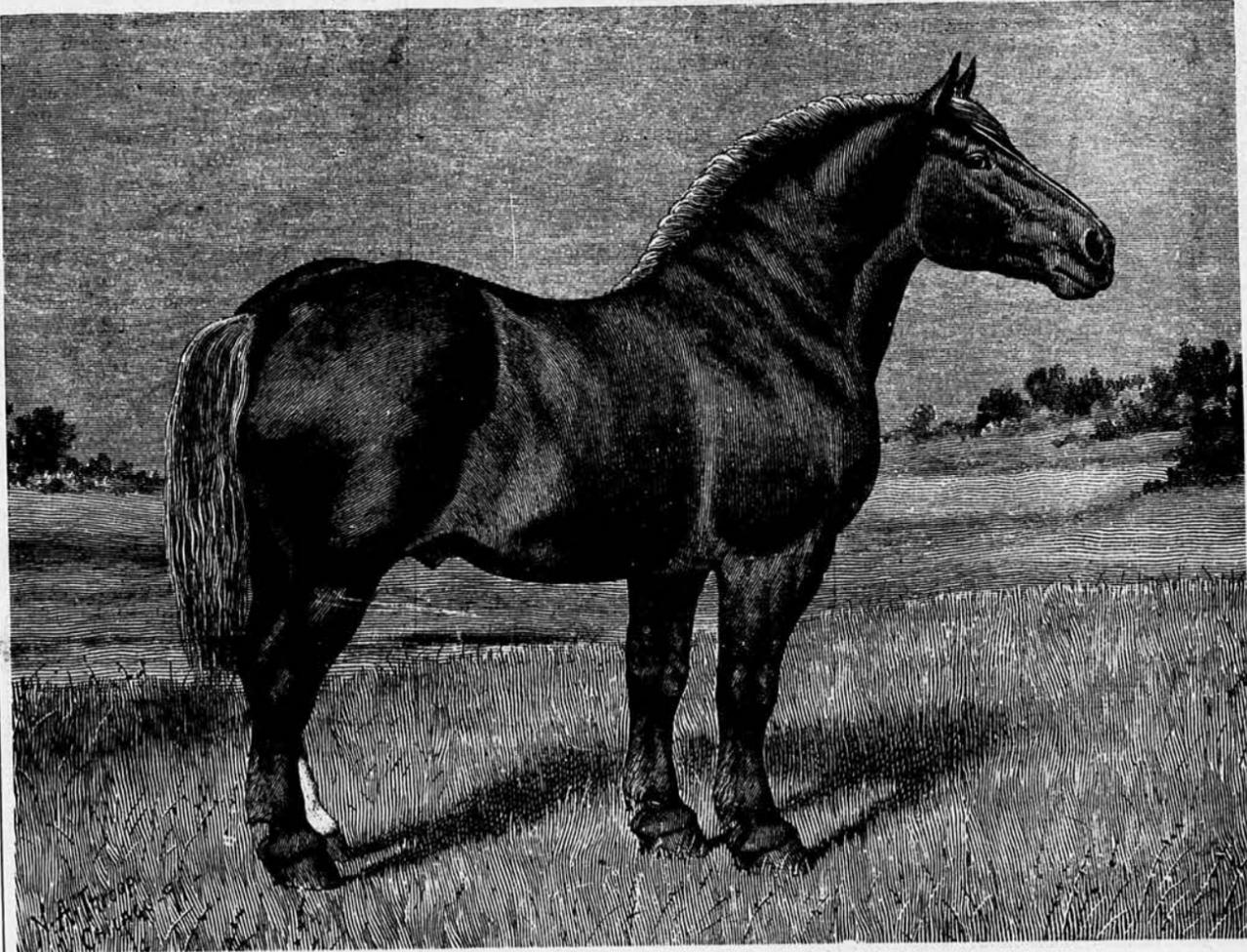


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(Breeders' Directory continued on page 16.)

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Agricultural Matters.

POTATO GROWING, HARVESTING AND MARKETING.

By Hon. Edwin Taylor, of Rosedale, Wyandotte county, read before the twenty-fourth annual meeting of the State Board of Agriculture, at Topeka, January 11, 1895.

Growing potatoes is a very common diversion. Nearly everybody with a garden has indulged in it to some extent. Potatoes are of more value to the world than any other vegetable. They are well-named the poor man's necessity and the rich man's luxury.

The most important factor in potato-growing is the soil. A rich, sandy loam is best. Bottom land is commonly preferred, both because of its fertility and its friability. Where fertility is lacking in soil, it may ordinarily be supplied artificially. The two great sources of artificial fertility are the fertilizer factory and the "beef factory." Some potato-growers report large profits from the use of commercial manures. I have used several of the leading brands of manufactured fertilizers (including the Mapes, Bradley, Coe and Armour) in ton and half ton lots, uniformly at a loss. The best result I ever obtained was from half a ton of Armour's manufacture this summer.

In this case, the product of approximately one acre of potatoes fertilized with one-half ton of Armour's potato manure was carefully weighed and compared with the product of an equal sized plot not fertilized. The result of the comparison showed an increased yield from the fertilized acre of 130 pounds of potatoes. Assuming them to be worth 50 cents per bushel, the manure returned \$2.18 per ton against a first cost at the factory of about \$22 per ton, showing a loss of \$19.82 per ton, besides freight and labor of application. Neither the Bradley, Mapes nor Coe fertilizers did any good in my field. But whenever I have applied "beef factory" refuse, the good effects have been apparent without the test of measure or scales. The manure made from feeding 126 head of steers a trifle over 100 days, and ninety head of heifers about fifty days, was spread upon thirty acres of potato ground, day by day, as it came from the sheds, and plowed under in the spring. The increase in yield, as shown by careful comparison with unmanured ground lying alongside, was sixty bushels per acre. Figuring these potatoes also at 50 cents per bushel, the profit, not counting labor of application, was \$30 per acre or \$900 on the field. I assumed that enough virtue from the manure remained in the ground after the first crop was removed to pay for handling and spreading the manure, and that the increase in the first crop was clear gain. I have read that barnyard manure makes potatoes scabby and rough. With me the reverse has been observed, namely, that where so manured they were smoother and brighter than on unmanured portions of the same field.

My rotation has been, in the main, first year potatoes; second year potatoes; third year potatoes, and then potatoes *ad libitum*. It is a rotation which the best of soils will ultimately repudiate. While continuing it, I have tried in several ways to break its severity. Where the potatoes are dug early, I sow either oats or turnips. Oats planted in August will make a dense growth of top before cold weather. My custom has been to plow them under in November. The result on the succeeding crop of potatoes is very satisfactory. Turnips are supposed by the chemist to draw on the same elemental fertility as potatoes, and should injure the succeeding crop. In this particular, as in many others, the chemist is corrected by the book-keeper. Instead of turnips impoverishing the soil for potatoes, they greatly improve the succeeding crop. I don't know "why;" I don't much care. Should crimson clover do well with us I shall expect great things of it, because the time for sowing it is after early potatoes are dug, and it will be ready to turn under in the following summer in time for planting late potatoes on the sod. Perhaps in this way we can feed the soil and work it at the same time.

In Colorado they plant potatoes on alfalfa ground with excellent results. In some way, whether by plowing under clover or alfalfa, or by the use of barnyard manure, or by the use of manufactured fertilizer, we must raise the per acre yield of potatoes in the State of Kansas. In the era of low prices, which is plainly upon us, that is the only way to get a profit out of the crop.

It is likely that many soils would not be benefited by fall plowing. I think there is no question but that our bottom lands in Wyandotte county, at least, are improved for potatoes by plowing in the fall. This does not take the place of spring plowing at all. To many it would seem like labor worse than wasted; but the fact that it is almost universal among us shows that there is something in it. In general terms, I think it safe to say that anything which makes the soil finer helps the potato crop. Fall plowing notably assists in this.

The second consideration in potato-growing is water. Potatoes are thirsty, particularly during the development of the tubers. Thrice and four times happy is the potato man, who, like his brother in the State of Washington, makes his crop in a district of assured humidity, or else in irrigated lands where, having plenty of water at command, he can count the constant sun as working for him instead of against him. In a variable climate, like eastern Kansas, he must supplement such deficiencies of rainfall as may occur, with fertility, careful cultivation, strong seed, by planting early as possible or decidedly late, and in some cases by planting under straw.

The third essential in point of importance in potato-growing, is the seed. That should be crisp and unspouted. If buried, potatoes must be covered lightly at first, and the covering added from time to time, but only enough to protect the tubers from frost. This is the most unsatisfactory and expensive way of storing potatoes. The next worse way is a cellar under a building. The most satisfactory and the cheapest way that I know of is to store in a dug-out. In most of our Kansas soils no walls but the dirt walls are needed. The roof will be of earth over poles and brush. In wet weather such a roof will leak, unless covered with boards, cornstalks, straw or other covering. The best location will be a slope or bank facing south. By leaving an alley through the center of a dug-out, with plenty of large ventilator shafts through the roof, a brisk circulation will be set up whenever the door in the end is opened—particularly where the door opens on the level, as it will if the building is dug in the side of a bank. The trouble with a cellar under a building is to give it air enough and keep it cool enough.

The dug-out should be built with a bin on each side of a central alley. The bottom of the bins should be raised six inches from the ground. Both the bottom and sides are best made of fence-boards, with inch spaces between. The sides of the bins should be clear of contact with the walls, whether stone or dirt. Spouts should be placed at intervals through the roof near the outside of the bins, through which to pour down the potatoes into the cellar.

Such a building, carefully managed as to ventilation, opened up on frosty nights and kept closed during the warm days of fall and early winter, will take Early Ohio potatoes through to spring without a sprout. Early Rose, Beauty of Hebron and such varieties may require turning over once. The only antidote for sprouting, aside from the manner of storage, that I know of is the scoop-shovel. Potatoes may be kept in cold storage till August without a sprout. If taken out and planted then they will yield a crop which makes superior seed. I have not been able to detect any difference between it and second-crop seed, by which is commonly meant potatoes grown as a fall crop from seed raised that season.

The question of second-crop seed and Northern seed is very important. In the South, the second crop is raised without much difficulty. With us it is hard to get the sets to sprout. I think

there is no doubt about the superiority for seed of potatoes that are in full vigor of growing when killed by the frost. Whether grown as a second crop in the South or a first crop in northern Dakota or from cold storage seed planted in Kansas, I suspect does not matter much. What seems to be the important factor is that growth shall have been arrested by frost when the potatoes are in greatest vigor, leaving the tubers full of stored energy with which to begin again, instead of having already started on the road to decay. Second-crop seed sends up a larger stalk than first-crop; it makes fewer sprouts; it is a few days longer in coming up in spring; it gives a heavier growth of vines; contrary to what is often printed, the date of ripening is delayed. Instead of second-crop seed coming in earlier than first-crop, it comes in later (in my experience fully ten days), and the yield is often doubled. I never knew of its being less.

Better results will ordinarily be secured from cutting seed potatoes as they are used than cutting them in advance. Where cut in advance, they may be spread out thinly and the cuts will dry up, or they may be dried up by plaster (gypsum), or they may be thoroughly mixed with dirt. The cutting I prefer to have done by hand. An active boy or girl, after two or three days' practice, will cut twenty bushels per day. It takes a smart man to cut forty bushels of potatoes per day with a machine. I prefer to have large potatoes cut to single eyes. I have thoroughly tried Mr. Greiner's plan of planting whole potatoes, both large and small, and am decidedly of the opinion that, although it has a distinguished advocate, under our conditions it will not do.

Where potatoes are planted thirteen inches apart in the drills, with the rows thirty-two inches apart, about eight bushels of seed potatoes, if cut to single eyes, will be required to the acre. From thirty-two to thirty-six inches is the best distance apart for potato rows, in my estimation; and after much experimenting upon the distance between plants, ranging from four inches to two feet, I have settled upon eight pickers for the Aspinwall planter, which puts the sets thirteen inches apart in the row.

In planting potatoes, one of the most important details is the depth. From three to four inches is our usual depth. The "trench system," so-called, has never given as good results with me as shallow planting. The *Rural New Yorker* lays less stress upon it than formerly. Its inventor, Mr. Alfred Rose, deceased, of Penn Yan, N. Y., claimed for it great things. He obtained some remarkable yields, in more than one instance over 1,000 bushels to the acre, and he considered that his method of planting was one of the great features in his success. His plan was to mark out eight inches deep; fill up the furrow two inches with mellow soil; drop the seed upon this bed, cover lightly, and as the plant grew to fill the trench up gradually. I have never been able to approach his yield of 1,000 bushels to the acre. A trifle over 400 is my limit, and about 150 my average. I would rather pay for having potatoes planted with an Aspinwall planter than to have them planted by hand free of cost.

The cultivation, in my practice, begins a few days before the potatoes come through the ground, by running over the surface both ways with a light harrow or weeding machine. If, on account of hardness or otherwise, the crust is not entirely broken up and fined, I should go over it the third time; then rest until the plants are two inches high, when the field should be again gone over with the weeding machine across the rows and also lengthwise or diagonally with them; then start the cultivator, throwing the soil close against the plants. If the man is careful, and the planter has been driven straight, this work can be done perfectly by going once to the row with a Planet Jr. This tool is provided with a spreader, with which the operator can change its width without stopping, to accommodate it to uneven planting, and do with it, and

one horse, fully as good work as any wheel cultivator does with two horses. This first cultivation should be immediately crossed with the weeding machines. By this time the plants will be four to six inches high, and the ground perfectly clean. Cultivation with Planet Jr. should follow at least once a week until such time as the vines cover the ground.

The Breed weeder is the best known weeding machine. I prefer the Hallock. Both are cheap—Hallock's, \$9, Breed's, \$12, I believe—and as they take two rows at once, and use only one horse, it is economy to have enough of them to do the work they are intended to do just when it needs to be done.

The next step is digging. There are many geared machines for this purpose. I have had most of them on trial. They were all failures. One of them, the Hoover, I was so well pleased with that I bought it. It has since been discarded. In some soils I have no doubt it works well. Our Kansas soil, to use a word borrowed from the potato-digger men, won't "flow." With us any machine using an endless apron of slats for elevating and separating the potatoes and dirt will carry the bulk of the dirt, except, perhaps, in very dry weather, clear through into the shaker. This disposition of the soil adds greatly to the draft of such machines and adds to the liability of breakage. In the gravelly soils of Colorado, I am told that the same machine raises no dirt more than half way up the incline. In my neighborhood we have all gone back to the pronged plow for a potato-digger, although there were seventeen Hoovers sold there in one season. Those makes of the potato plow are most in request that open the potato ridge both ways with a sharp, square turn. They all use rods for the mould-board. In weedy ground, a plow with a high beam, like the Hallock, has the advantage. Where used in connection with a weed divider, such as that sold by the Rock Island Plow Co., very fair work can be done even in weedy ground. Ordinarily, if the grass and weeds are heavy, it will pay to mow and burn them.

The two most important factors in cheap potato-digging are shallow planting and a big yield. If planted shallow, the plow will run through the ridge without covering the tubers up; but if planted deep so much dirt must be moved that some of the potatoes will be buried. When the yield is 200 bushels to the acre, a good man will pick up and put in sacks seventy-five bushels per day; where it is 400 bushels he will pick up and sack 100 bushels per day. The best way, where the digging goes forward regularly, is to station the pickers at equal distances along the row, allowing each one to pick up on his own station back and forth, and no more. The plow should take every other row. The one-half bushel wire baskets made by the Kansas City Wire Works, are the best baskets for picking up in that I know of. The pickers will put one bushel in each sack if the potatoes are to be further sorted, or, if sorted on the ground, the sacks will be filled ready to sew.

Ordinarily I practice sorting as a separate handling. A better job can be done in that way: the potatoes will be clean and the small potatoes can be saved for the stock. When prices are low, well-sorted potatoes are the only kind it is worth while to pay freight on. Small potatoes have a value as a hog feed; they are readily eaten also by cattle and horses. The plan of picking up and handling in bushel crates, while a great improvement upon handling in bulk, is entirely superseded with us by substituting sacks for crates, and by using something with a handle for picking into.

The last item in harvesting is the question of packages. Through the hot weather of summer, potatoes are liable to rot if shipped in bulk. At that season, if shipped in box-cars, the doors must be left open for air; frequently they are put in stock cars, that have the cracks battened, for more ventilation. In either case, the potatoes must be handled quickly or they become unsalable through turning

green. Potatoes keep and handle much better in hot weather in barrels or sacks. Where barrels and sacks are well bought the cost of sacks per bushel is about 3 cents; of barrels about 8 cents. The labor of putting into barrels is somewhat greater than into sacks, but some of the largest operators think barrels are, nevertheless, the most economical. For instance, Mr. Sam Clawson, of Ashwood, Tenn., whose shipments frequently reach 20,000 barrels in a season, uses nothing else.

This introduces us to the department of marketing potatoes. In that peculiar game which Ah Sin "could not understand," I am told the basic principle is to "take the trick" whenever that maneuver can be executed. The same idea has a place in selling potatoes. I like to begin among the first and sell enough to balance accounts with the crop. The remainder I feel at liberty to hold or sell, as circumstances seem to indicate. There is a tendency among farmers to hold on for high prices that frequently leads them into disappointment.

Ordinarily the Kaw Valley Potato Association, which places my potatoes, has consigned its stock in the early summer, while the market was uncertain, or else had it sold through a broker. Sometimes at that season it has its own agent on the ground in the principal market which it is shipping to. Later in the season, when potatoes "stand up" all right, and the price has about found its level, we solicit orders from responsible parties. In the spring, when prices are liable to fluctuate, we prefer to sell to operators who see the stock and whom we know to be responsible. Our motto is to take a less price where we are sure of getting our money than to run any risks in pursuing a fancy figure. With respect to commission men, I may say they present more phases and variations of rascality than are easy to enumerate, but there are plenty of honorable men among them. There is no law against a farmer finding out the character and standing of a firm before he sends it a consignment. If we farmers would only use prudence and discretion in our shipments, the dishonest commission people would soon die out for want of prey.

I was once enthusiastic in advocacy of co-operative selling by farmers. The difficulties in its way are too numerous to recite in detail. They are in the main inherent in human nature. To such combinations as have so often failed these limitations of humanity are defects. As forming the basis upon which individual independence rests, they have great merit. If all the potato men could get together and ship and sell their product as one man, the economy would be immense. But the temptation for the head of the concern to "go wrong" would be too great for average human nature to stand, and the subjection of the many to the central authority would result in a manifest loss of individuality that financial gains could not reimburse. Such discipline and subjection as a successful crusade of this sort contemplates cannot be secured, as men are now constituted, in times of peace. I have known of several volunteer associations for selling potatoes. They have never lasted more than one season. The Kaw Valley Potato Association has a different basis. It is a corporation. Its membership is limited. The parties constituting it would be called large growers. They pool their issues without friction and with decided advantage. The expense of such an organization is, however, considerable. It must do a large business or the gun will kick harder than it will shoot.

In closing, I would like to add a word upon several related topics; one is the subject of new varieties. The Early Rose made a fortune for the introducer. Since then fortune-hunting along that route has been brisk. At rare intervals a new potato is brought forward having merit. Ordinarily the extent of the advertising of a new variety is in inverse ratio to its value. The Early Ohio is easily the dominant potato in this State. It was put forward when introduced in very modest terms. Most of the new varieties are

frauds. Never try a new variety in a large way. There are many questions about potatoes that one would like answered. One is relative to small potatoes for seed. My first introduction to the Rural Blush was in the shape of two little tubers sent me by the *Rural New Yorker* in a penny match-box, which was a world too large for them. From those two culls I got thirteen sets. The crop resulting was very fine, many of the potatoes weighing over a pound, the whole turn-out running very large. Those large tubers were in turn planted, and the best, also, of their raising, successively, for several years, but I never equalled the product of the culls. Now, suppose the small potatoes had been continuously thereafter planted instead of the large ones, what would have been the result? Does anybody know that they wouldn't have done as well?

In sweet potato-growing, the small tubers are sprouted year after year. What reliable information is there that the same method might not result with equal advantage if practiced on that other "fruit which grows at the root," the *tuberosum Irish-manum*.

My early practice in planting potatoes, before the advent of the Aspinwall planter, was to have the dropper step on each piece. It was a pernicious custom, adopted on the strength of the argument made for it by agricultural writers, in the callow days before I had learned to distrust conclusions in agriculture based upon *a priori* reasoning. Stepping on the sets thrusts them into the ground too deep, as I discovered by observing that around the stumps where the potatoes were shallow the yield was better.

When I was a boy, up in Michigan, we used to put plaster (gypsum) upon the potatoes, with great improvement to the crop. I have several times tried Kansas plaster on Kansas potatoes with no appreciable result. Is Kansas plaster different from Michigan plaster, or is the natural law in the potato world various, according to locality?

I have a neighbor who uniformly beats me in his potato yield. Our farms join; we have used the same seed; our lines of procedure have seemed to be identical until we came to the last cultivation; then he puts his cultivator down deep, especially next the rows, while I cultivate shallow. Since this root-pruning hasn't prevented him from beating me with my surface culture, I am led to inquire whether there isn't more made of surface cultivation than the facts in the case warrant.

The value of clover as a soil-enricher has long been known. It is only in comparatively recent times that it has been called a "nitrogen trap," and in the most recent times, only, has the clover's ability to extract nitrogen from the air been ascribed to colonies of bacteria located in nodules upon its roots. Now, if clover gets its "pull" on nitrogen from colonies of bacteria, why might not the potato itself become a "nitrogen trap" if only the right kind of bacteria could be made to roost in its roots? For myself, I am not wise in such things, but really it doesn't seem at all a discouraging stretch of fancy that a man who could invent a deadly fungus for the chinch bug, could by a flourish of the same magic wand call up a nitrogen-absorbing parasite for potatoes.

I should be slow to give advice, but perhaps I may be pardoned for saying to any enthusiastic young man who may now be contemplating a career in potato culture, that as carried on by many growers that calling partakes of the nature of gambling. The largest operator in the State, after a run of luck quite remarkable, has at last gone completely to wreck. I do entirely believe in the single idea kind of farming within workable limits, but I don't believe in putting everything to hazard on one cast of the die. At the same time, I hope the young man aforesaid does not contemplate as a permanent feature of his routine such a small percentage of potatoes as will make him miserable and yet do him no good. The greatest pull-back of the average farmer is the fact that he is so frightfully "mixed." In his struggle with a confusion of litters, he is like a man

fighting bees—to conquer one brings no relief. The market gardener must have a large assortment of vegetables and fruits, among which may well be potatoes; but the farmer who essays to plant them at all should aim at doing enough to justify him.

It looks now as though for a year or two, or more, potatoes might be the worst crop on the farm, instead of the best. If irrigation by the new methods proves to be half as successful as its advocates claim, its leverage upon potatoes will be greater than upon any other crop. It will result in moving the potato center for the West from Greeley, Colo., to Topeka, Kas. There never was a better time than now for the apprentice to tentatively take hold of this branch of farming, nor a worse one for the adventurer to go into it recklessly.

There are but three rules necessary for the novice to observe in this art to insure him success. They are, first, to do his farming in the best manner by putting good seed into good ground, and to follow that with good cultivation; secondly, to do his selling intelligently, and handle himself in the market as well as in the field; thirdly, having undertaken this departure, to stay with it. If profits for one year or two years should be small, he must not permit that to discourage him; neither, if they rule high for a year or two must he allow that to tempt him into extensions for which he is not prepared.

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.

FEBRUARY 13—J. F. & P. C. Winterscheidt, Horton, and M. C. Vansell, Muscotah, Poland-China swine combination.

FEBRUARY 14—Dan W. Evans, Fairview, and J. A. Worley, Sabetha, Poland-China swine, combination.

FEBRUARY 28—Jno. A. Dowell, Robinson, Po and China swine.

Pure-Bred Swine Best.

By D. Trott, Abilene, Kas., read before the Kansas Improved Stock Breeders' Association.

As the advantages are all on the side of pure-bred swine, it seems to me there is no question about it. And as I have had such little experience with the common hog, or scrub, it seems to me I am not a fit person to say much on the subject. I was always brought up amongst the pure breeds. My father was a breeder before my time and during my younger days, so you see I am not very well able to draw a comparison. Yet I know the pure breeds are the best. The question may be asked: "How do you know?" In order to show how, we have only to go back a little way and find out what they were, and how long it took to get them to market before the pure breeds were started.

In speaking of the old-fashioned hog, we call him "razor-back," "rail-splitter," "scrub," "racer," and such names. We understand by this that they have noses long enough to root the third row of potatoes, ears like side-boards of a wagon, backs as sharp as a razor, without any sign of flesh to hide their back-bone, long, fine legs, fit for racers, able to run from the grayhound and jump the garden wall, and every other thing that comes in their way. Hair like bristles, standing straight up, and strong enough to make harrow teeth, very ferocious in disposition, took three or four years to mature for market, and eat their heads off a dozen times to do it. And when matured, the meat, what was of it, made good food for dogs, but scarcely fit for humanity, or at least people thought so, which amounts to the same thing.

I remember, thirty-five or forty years ago, in one of the old countries, some American bacon had been put into a certain store for sale. After being sampled by some of the citizens, it was impossible to dispose of it. It was so hard and tough some one started the story that it had been raised on rattlesnakes and mast. No one would eat it. This was before the pure-bred swine had got a foothold in America. How is it now? American hams and bacon are almost at a premium.

Our swine now are almost perfection. Nicely-shaped heads; short, nicely-

dished face; beautiful tipped ears, either up or down; intelligent, sweet eyes; short, arched neck; wide, straight back; broad, deep hams; short, strong legs; tough, strong feet, able to carry the large weight of delicious meat that is made in a few short months—meat fit for rich or poor, which leaves a handsome profit to the feeder; fine, silky coat; color, black, white or pure gold, and kindly disposition.

What has brought all this change? Pure-bred swine, which took long years of study, experiment and toil. Something was needed to convert the cheap, rough, raw foods into valuable, delicious meat. The scrub could not do it. "Necessity is the mother of invention." Man is of an inquiring mind and inventive nature. When the call came for something better, something more profitable, something that was needed to help the poor man, and furnish food and clothing for the little folks, then inventive man worked out the problem and produced, or evolved, the pure-bred swine.

These pure breeds are still the greatest advantage to all who raise many or few hogs for the market, to use on their common hogs or grades to give form, size, substance, feeding qualities to the offspring, to have them always ready for the market, to grow them on so much less food, and in such a short time in comparison to former times.

Sometimes I hear some one say: "Well, I have good hogs, and not pure-bred, either." How did you get good hogs? Why are they better than the old razor-back hogs? The pure breeds were used in building up the common hogs of the country, and were the means of removing them above the rail-splitter in point of excellence. So, my friend, you are greatly in debt to the pure-bred for any advantage your hogs have over the old-fashioned hog. And you still need them in order to hold and improve what you already have. There is no standing still. If we do not move forward, we will certainly go back. We must not lose ambition or neglect anything that will keep up or improve what we already have. So the purity of our stock must be kept up. Pedigrees must be studied, in-breeding must be avoided, individuals must be criticised in order to properly mate, so that the offspring will be as good or better than their parents, both as to constitution and feeding qualities.

Swine husbandry is one of the largest and most profitable branches of farm industry, and the United States of America stands first in the production of all countries in the world. Besides furnishing food cash and to the grower, it furnishes work for thousands of men in the different packing-houses of the country. This never would have been, only for the pure breeds of swine, which made it possible to produce 300 pounds of delicious pork on one improved hog, in eight short months, instead of three times eight, as before the pure breeds were started, to produce half the amount.

What a pleasure to care for and feed a nice lot of thrifty hogs, that grow and get fat, when you are getting pay for your feed and trouble, and also good interest for your investment.

Let us resolve, on this commencement of another year, to go forward in the good work. Let us do all in our power to better the condition of humanity, and also all we can for the Kansas Swine Breeders' Association, which will in the end prove advantageous to all concerned.

Experience in Feeding Oil Cake.

Peter Jansen, of Jansen, Neb., who is one of the largest sheep-feeders in the United States, has written the following letter in reference to the value of oil meal cake as a stock food. He writes under date of January 11, 1895: "I regard old-process oil cake, such as made by the Kansas City Lead and Oil Works, of Kansas City, Mo., as the best possible food for sheep and all other kinds of live stock. I am feeding it, not as a 'medicine,' but as a food, and consider it cheaper than corn or wheat."

Further information on oil cake in any quantity can be secured on request to Kansas City Lead and Oil Works, 928 and 929, New York Life building, Kansas City, Mo.

Irrigation.

EVAPORATION AND SEEPAGE.

EDITOR KANSAS FARMER:—Some very interesting and important questions were raised by the papers and discussions on Friday, at the meeting of the Board of Agriculture. If the space in your valuable paper is not fully taken, permit me to say a few words through it, on one of them, viz., evaporation from and percolation through soils.

As far as I can learn, no experiments have been made in Kansas or in the United States to determine the evaporation from soils or the amount of water which passes down through them and out of the reach of vegetation. A very complete set of such experiments was made by Mr. Chas. Greaves, near London, England, between the years 1860 and 1873. While the atmospheric conditions are not the same there as in Kansas, we may, nevertheless, learn some important facts from them.

Four water-tight tanks were used in these experiments. One 3x3x3 feet was filled nearly to the top with ordinary soil, packed a little so as to be in the condition of ordinary grass land. A second one of the same size was filled nearly to the top of filter-bed sand; the other two were three feet square and one foot deep. To the bottoms of the first three were attached tubes which led away the water that reached them to a measuring vessel. The third tank served as a rain-gauge, and from it the rainfall on the other three was determined. Water was kept in the fourth tank and it floated on the Lee river near by. From it the evaporation from a water surface was found. Provision was made to catch the runoff from the soil and sand tanks, but there was none during these fourteen years.

Now, the water which passed down through the soil and the sand was collected and measured, and thus the percolation through each was found. As all the rain which fell on the tanks was either evaporated or passed through and was measured, the difference between the measured rainfall and the measured percolation gave the evaporation.

The annual rainfall for these fourteen years varied from 15.98 to 37.17 inches, the mean being 25.72 inches.

The mean percolation through soil was 7.58 inches or 29 per cent. of the mean annual rainfall.

The mean percolation through sand was 21.41 inches or 83 per cent. of the mean annual rainfall.

The mean evaporation from soil was 18.14 inches or 71 per cent. of the mean annual rainfall.

The mean evaporation from sand was 4.81 inches or 17 per cent. of the mean annual rainfall.

The mean evaporation from water was 20.61 inches or 80 per cent. of the mean annual rainfall.

The evaporation from sand was, therefore, about one-fourth that from soil, and the percolation through the former about four times that through the latter. The evaporation from water was only slightly greater than that from soil.

The evaporation from water in western Kansas is about three times that from water given above, hence, for the same soil and mean annual rainfall, we would expect the percentage evaporation from soil there to be more than 71 per cent. of the rainfall, but the rain falls more rapidly in Kansas than in England, and hence less water is left in the soil to evaporate.

We are apt to under-rate or neglect evaporation loss. We cannot see the water as it passes off into the air. We see it as it soaks away and disappears into the soil and we strive to make reservoirs water-tight, but some people talk of building shallow ponds for storing water, just as though evaporation loss was nothing.

As an example of the losses from a canal, in which no special precaution was taken to reduce them, we may mention the case of the Perry ditch, in Clark county. This ditch is eight and one-half miles long, fifteen feet wide on top, nine feet wide on the bottom, two feet deep, and has a grade of two and one-fourth feet to the mile. When water was first admitted to it, it

was fourteen days from the time the water entered until it reached the other end. There were places along it where the up-hill bank had not been constructed and the ditch widened out into shallow ponds, the area of which was estimated to be three acres, with an average depth of six inches. From this data we find that about 55,884,000

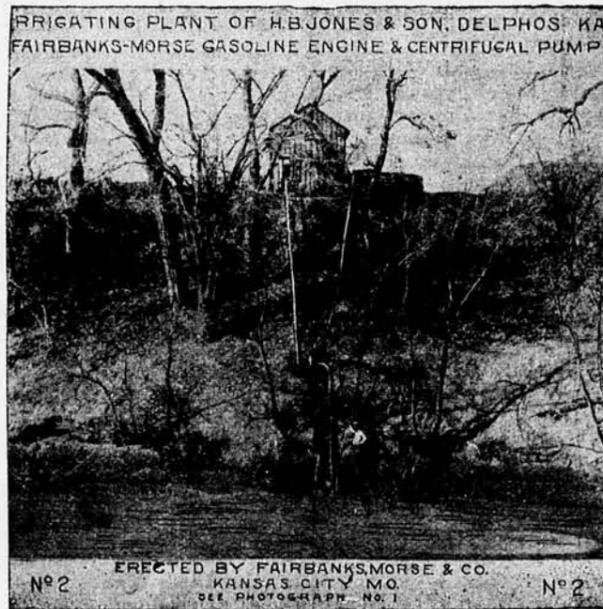
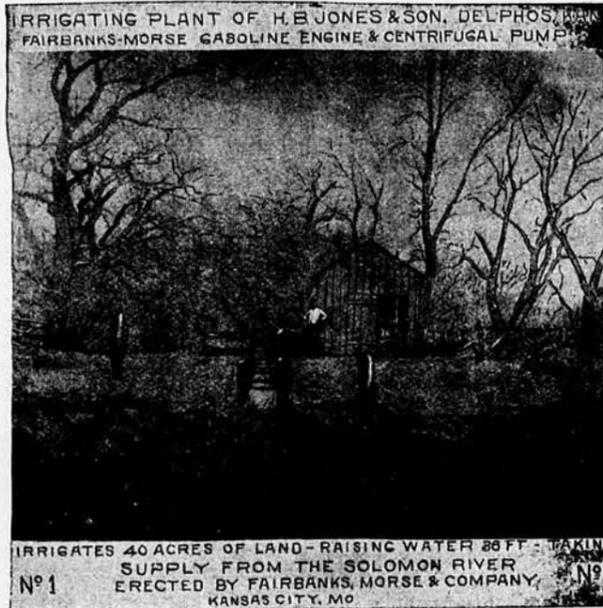
after several years of use and with the ponds cut off from the ditch, water, when let into it after being shut out for a short time, will run the length of it in seven and one-half hours.

E. C. MURPHY.

University of Kansas.

No hard times, no appeals to the

A LITTLE IRRIGATION STORY—TOLD BY THREE PHOTOGRAPHS.



Copies of the above photographs, with any further particulars desired, will be sent free by addressing Fairbanks, Morse & Co., Kansas City, Mo.

cubic feet of water entered the ditch in the fourteen days, and 1,177,000 cubic feet were in the ditch and ponds at the end of this time, hence, the difference between these, or 54,706,000 cubic feet of water, was lost by evaporation and percolation while the water was going the length of the ditch for the first time. Stating this in another way, more than fifty ditch-fulls of water were lost before any water reached the land to be irrigated. Now,

public for help are heard from any section of America where irrigation is in use. Sure crops insure continuous prosperity.—*The Mid-West.*

We want our readers to secure for us thousands of new subscribers for the KANSAS FARMER and we will pay well for such work. If you will get up a list, write this office for liberal terms.

Prof. Haworth's Experiments With Soils.

EDITOR KANSAS FARMER:—Along with other lines of work, the University geological survey is making an extended study of the Kansas soils. As an aid to this study, experiments are being made with different kinds of fertilizers applied to different soils. The survey chooses the farms on which to experiment with reference to the different kinds of soils, and furnishes the fertilizers. The farmer applies it and makes his report upon the results. The work was begun last spring, at which time three different kinds of fertilizers were placed upon corn ground on four different farms, three in Cherokee county and one in Crawford county. At this date partial reports have been received from those in Cherokee county. In the autumn animal fertilizers from the Armour & Co.'s packing-houses were sent to four different farmers, to be placed upon wheat ground, a report of which I will mail you when it is received after harvest.

The materials used on the corn were gypsum, or land plaster, common lime, and ordinary salt obtained from the markets. The latter was tried out of deference to a widespread public opinion that it is good for some soils. The results seem to show that it is a hindrance rather than a good, but more widespread experimenting must be done to draw positive conclusions.

The gypsum, or land plaster, was obtained from the Best Bros.' Keene Cement Company, of Medicine Lodge, the only place in the State known to the writer where fresh gypsum properly ground can be procured. It was applied at the rate of 400 pounds per acre. One farmer reported that the chinch bugs nearly destroyed the part of his corn experimented upon, along with other portions of the crop. The portion on which the plaster was put, however, produced the most and the best grade of corn, fully twice as much as that treated with salt. Another one reported that he obtained about forty bushels per acre where given plaster, thirty-six where given lime, and less than thirty where given salt, but I have not yet learned what the yield for the field was. A third reported that his corn was so completely destroyed by drought that he could not report details of results of experimenting.

It is well known that gypsum is of great value for some soils. It is extensively used in England and on the continent, and in eastern United States and parts of Canada. Its detailed action upon the soils seems not to be fully understood by our agricultural chemists. It seems to be used very sparingly by plants as food matter, although they take up a little lime and sulphuric acid. It is thought that its greatest benefit is due to its action on insoluble potash compounds, breaking them up in some way so that the potash is made soluble, and thereby rendered available as plant food. From what is known of its action in other parts of the world it is safe to advise its use on many of our soils, especially the light, ashy ones so common in portions of our State.

Lime is known to be exceedingly beneficial to many soils. Plants use a small amount of it for food, and it is known that most cereals and grasses are more vigorous on soils relatively rich in lime. Probably its greatest good, however, is indirect. All soils have more or less clay in them, while some soils and nearly all subsoils are largely composed of it. The clay is an intermediate product between the rocks from which soils are produced and the perfect soil, with its loose, loamy character. One of the common properties of most clays is its plasticity, or stickiness, by means of which it becomes impervious to water in wet weather, and dries into hard clods in dry weather. It has been found by laboratory experiments and otherwise that lime tends to destroy this plasticity, so that soils may become more pervious to water in wet weather and more loose and granular and open all the time. Probably herein lies the chief benefit of lime as a fertilizer, but this is enough to recommend its use on nearly all soils, and particularly the

clay soils with "gumbo" subsoils, which is nothing but a soil more nearly all clay.

Lime may be applied in a great variety of ways. It may be spread upon the surface and left to be dissolved and worked down into the soil by rain; or it may be cultivated into the soil; or it may be strewn in the bottom of each furrow in stirring the ground. It may be applied at from fifty bushels to 150 bushels to the acre, and at any time of the year, or with any kind of a crop. Air-slacked lime is as good as any and often can be bought for almost nothing. One company is selling it in Lawrence at 25 cents a wagon-load or six loads for a dollar.

Let every one cultivating a clay soil try the liberal use of lime. I should be glad to receive reports from the same.
ERASMUS HAWORTH.
Lawrence, Kas.

Agricultural Reports.

EDITOR KANSAS FARMER:—Your editorial, "Twelve Months' Work," in the FARMER of January 16, is one that should interest all of your subscribers. In regard to the publication of the State agricultural reports, why not charge about enough to cover the cost of paper and press-work, so that all can have copies that are willing to pay something for them? The paper, press-work and postage would not be so much as to prevent any one from sending for copies.

The agricultural department of the State of Kansas should give special attention to the subject of irrigation during the present year. All of the different methods of irrigation and all the information that can be obtained from the experience of those that have already been in the business, and from further surveys and observations during the coming year, ought to be put in pamphlet form and circulated among the farmers of Kansas. Full directions for digging wells on various kinds of soil also ought to be given. Reports from irrigators in answer to questions, similar to those in the pamphlet on alfalfa, would be valuable.

I read with much interest the article on the irrigation of a 500-acre orchard in Greenwood county. It will be a matter of interest to know how much such an irrigation outfit as that established by Mr. Munger costs when completed. One important item in connection with his dam and pond is, that he has a clay and gumbo subsoil which can be easily made impervious to water, and it will not wash away. In Barber county, the soil, if there is any decline, will wash away about as fast as so much snow. About every rainfall that raises the streams, gullies out the roads so that they have to be repaired before the people can travel much.

Can any one give any information about irrigation on lands that are underlaid with rock? Nearly all the red soil country in southwestern Kansas is underlaid with red rock. How deep down does it extend, and what are the chances for finding an abundant supply of water? If there are any of the subscribers to the KANSAS FARMER that have had any experience in that kind of soil we would like to hear from them.
INQUIRER.

Wants Dimensions of "Jumbo."

EDITOR KANSAS FARMER:—Can you give any information in your valuable journal how to make that cheap power called a "Jumbo," that is used in many parts of Colorado and western Kansas for attaching to a pump, lifting water for irrigating and other purposes? From what I have heard, it is like a reel of a binder set in a box, the wind operating on the upper half of it. Instructions regarding the length and width proportionate to the depth of well would, no doubt, be appreciated by many readers who, like myself, want to irrigate an acre of garden, and at the same time test the capacity of well, which, in my case, is thirty feet in depth, twenty feet to cylinder.
ARCHIBALD BARNES.
Delphos, Kas.

BRONCHITIS. Sudden changes of the weather cause Bronchial Troubles. "Brown's Bronchial Troches" will give effective relief.

Publishers' Paragraphs.

Remember, you can get the KANSAS FARMER one year and the Kansas City Daily Star for \$4, by sending amount to this office.

LIQUID EXTRACT OF SMOKE—Made by and advertised by E. Krauser & Bro., Milton, Pa., is an article of merit and is the only one on the market for the purpose of curing meat in a wholesome manner and at little cost.

FARM RECORD.—Our "Farm Records" have been such a splendid seller because of their practical value that our supply is now quite limited. We have a number of the best binding only, which the KANSAS FARMER will deliver to any address for only one dollar.

TOPEKA SEED HOUSE.—This sterling old seed house was established in 1876, by S. H. Downs, of Topeka, and has enjoyed a splendid trade because of the practice of fair dealing in reliable seeds. This house has out a new catalogue of seeds of all kinds, flowering bulbs, plants and garden tools, which they will send free on application.

BURLINGTON BLANKETS.—The Burlington Blanket Co., of Burlington, Wis., have made such a success with their goods that envious competitors have infringed on their rights, therefore they are entitled to the patronage of our readers, who should see that in blankets that they surely get the "Burlington," which represents the first thorough, practical idea in the direction of stable coverings.

ROSE LAWN FRUIT FARM.—F. W. Dixon, Netawaka, Kas., has thirteen acres in new strawberry fields, owing to the fact that his business for 1894 was four times as great as the preceding year. He can supply Crescent, Captain Jack, Warfield and Stayman varieties by the 100,000, and Robinson, Bedlow, Wood and Bubach in very large quantities. He believes that 1895 will be a prosperous year for fruit-raisers.

A little book on "Potatoes and Beans, How to Grow Them With Profit," has just been published by S. A. Thomas, of Bingham, Iowa. It comes right to the point in short order and can be had by sending a postage stamp to Mr. Thomas. It treats of potato and bean culture, subsowing, melon-growing, seed potatoes, seed corn, etc., and contains hints on gardening and the kind of tools to use. It is worth sending for.

GOOD POULTRY.—There are many varieties or breeds of poultry now before the public, and one can scarcely go amiss in making a selection. Each breed has its particular points, of which fanciers take great pride in relating. Read our advertising columns closely, and then drop a card to each of the poultry breeders, asking for the information wanted, and they will gladly answer you, provided you mention the KANSAS FARMER when writing.

Eight hundred and sixteen bushels and twenty-one pounds oats from seven bushels seed, or an average of 116 bushels from one bushel of seed sown, is what has been reported to the Farmer Seed Co. as being harvested in 1893 from the Lincoln oats. These grand new oats yielded last year everywhere twenty to forty-five bushels more than any other kind of oats sown side by side, and it was a very dry and unfavorable season. Lincoln oats should be sown by every farmer. The Farmer Seed Co. will send their new catalogue or book on "Permanent Pastures and Meadows" free to all farmers, and they should write for it to them at Faribault, Minn.

A BIG OFFER.—The *Agricultural Epitome*, whose advertisement appears in another part of this paper, is making a very liberal offer to subscribers this season. Besides giving their readers a practical, instructive and interesting farm, garden and household paper, they give with every yearly subscription a due bill for 35 cents, good on one of seven of the leading seed houses in the United States. They are also offering \$1,000 in gold, to be divided into twenty-eight prizes and awarded those sending them the largest list of subscriptions, and each subscriber gets a due bill for 35 cents or any premium they may wish to select from their premium list.

The controversy over the Norwegian system of liquor-selling is very hot in Massachusetts and is rapidly spreading to other States. No one in Massachusetts has been a more earnest champion of the system than Rev. D. N. Beach. His interest in the subject is so great that last summer he went to Norway for the express purpose of studying the operation of the system in its home. The results of his observations are given in a paper of unusual interest and importance in the February number of the *New England Magazine*. The paper will be read with eagerness by the temperance people all over the country. Warren F. Kellogg, publisher, 5 Park Square, Boston.

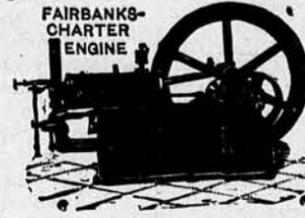
We have just received from the P. C. Lewis Manufacturing Co., of Catskill, N. Y., a valuable treatise on spraying, together with a report from the Cornell University Experiment Station, and a spray calendar

IRRIGATION SUPPLIES.



GET OUR CATALOGUES.

Windmills, Steam Pumps, GASOLINE ENGINES, ETC., ETC.



FAIRBANKS-CHARTER ENGINE



FAIRBANKS-MORSE STEAM PUMPS.

WE WILL ERECT PLANTS COMPLETE, GUARANTEEING RESULTS.

FAIRBANKS, MORSE & CO.,
1310 UNION AVE., KANSAS CITY, MO.

Irrigated Farms---\$1,000!

Out of a thousand farms in **SOUTHWEST KANSAS**, of 160 acres each, we are selling a limited number equipped with an independent and permanent irrigation plant sufficient for at least ten acres on each farm. The price at which these 160 acre farms are selling is merely about what the ten acres and irrigation plant are worth.

Before buying a farm investigate this. Special terms made for Colonies. Call on us or write for particulars.

THE SYNDICATE LANDS & IRRIGATING CORPORATION,
Room 412 New England Life Building, 9th and Wyandotte Sts., KANSAS CITY, MO.

which tells what kinds of trees and plants to spray, when to spray and what to spray with. The formulas given on this calendar are the latest from the Department of Agriculture, at Washington. The above mentioned matter will be sent free upon application. We would advise our readers to write for the catalogue, report and calendar to the above address. The P. C. Lewis Manufacturing Co. are reliable manufacturers of spray pumps, which they guarantee to give absolute satisfaction or money refunded.

ART OF PRUNING.—To be a good pruner requires the discerning faculty that is required to make a good artist. The pruner must be able to not only see the tree as it is, but as it will appear years afterward. On a tree 4 or 5 years old, branches one to three inches apart do not seem to be too near, but how, when those little half-inch branches become each three or four inches in diameter, provided they are left undisturbed? Is it not plain that they would, in time, all run together in a mass, with rotten bark and rotting wood between? The good pruner, therefore, must be able to picture in his mind the future tree, so as to allow proper space for its development. The best instrument with which to perform this work, as it should be, is the Bingham Pruner. With it a person can cut any size limb, not exceeding one and a half inches in diameter, and one man can prune more with it in one day than five men can with any other device now upon the market. This valuable pruner is made by the Orchard Pruner Co., Ottawa, Kas., and will be sent to any one, anywhere, on receipt of \$3.50—a price very low for so useful an instrument. Better secure one now, while you think of it, as you will certainly need it. In writing always mention the KANSAS FARMER, and remember that it is much better to have the head of a young tree appear too thin than to allow it to become crowded. Furthermore, when it comes to spraying you will find that a tree, properly pruned has the advantage over a tree not pruned, in that the spray solution will reach all parts of the pruned tree, while the crowded top and dense foliage of an unpruned tree prevents spraying from performing the purpose intended.

Forestry Notice.

Those wishing to receive a share of the free distribution of seedling forest trees by the State Forestry Department can make application at any time previous to March 1, 1895. The report of this department is now in the hands of the State Printer and will be furnished applicants as soon as printed. Owing to a lack of sufficient printing fund they may not be finished before the last of January. County papers please copy.
E. D. WHEELER,
Commissioner of Forestry.
Ogallah, Kas.

DO YOU USE POWER?

WEBER Gasoline Engines run anything. For catalogue and testimonials address Weber Gas and Gasoline Engine Co.,

262 Bushels Danvers' Yellow Onions

Were grown by John L. Rath, East Saginaw, from one pound of seed. This tremendous yield, at the rate of 1,048 bushels per acre, Mr. Rath says, was only possible because he used Salzer's seeds. We understand that Mr. Salzer's seeds are the earliest in the world, especially his beets, carrots, cabbage, cucumbers, onions, peas, corn, radishes, tomatoes, etc., and that he sells to market gardeners and farmers at lowest wholesale prices.

If You Will Cut This Out and Send It with \$1 money order, to the John A. Salzer Seed Company, La Crosse, Wis., you will get free thirty-five packages earliest vegetable seeds and their wonderful catalogue, or for 13 cents in stamps a package above Prize Danvers Onions and their catalogue free.

Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for home-seekers.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

Florida, Cheap.

Special one-way excursions via the Memphis Route (Kansas City, Fort Scott & Memphis railroad), on Tuesday, March 5, and April 2, to all points in Florida, at greatly reduced rates, 1 1/2 cents per mile.

The "Memphis" is the daily through car line from the West to Florida—and the only one.

For maps and full particulars, ask a Memphis Route agent, or
J. E. LOCKWOOD, G. P. A.,
Kansas City, Mo.

Interesting circulars sent to farmers. Send name to Bureau of Immigration, Spokane, Wash.

WATER PIPE.

Our Hard Burned Vitrified and Glazed Clay Pipe is everlasting. With our Improved Joints this pipe will stand same pressure as iron and costs about one-fourth as much. Write for particulars.

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Makers of all kinds of Burned Clay Goods.
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The Home Circle.

To Correspondents.
 The matter for the HOME CIRCLE is selected Wednesday of the week before the paper is printed. Manuscript received after that almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

BID ME GOOD-BYE.

Bid me good-bye! No sweeter salutation
 Can friendship claim
 Nor yet can any language, any nation,
 A sweeter frame.

It is not final; it forebodes no sorrow,
 As some declare,
 Who, born to fretting, are prone to borrow
 To-morrow's share.

Good-bye is but a prayer, a benediction
 From lips sincere;
 And breathed by thine it brings a sweet conviction
 That God will hear.

Good-bye! yes, "God be with you;" prayer and
 ble-sing
 In simplest phrase;
 Alike our need and His dear care confessing
 In all our ways.

However rare, or frequent be our meeting,
 However nigh
 The last long parting, the endless greeting,
 Bid me good-bye! —Exchange.

THE NOW AND THEN.

The al-b, like all the universe
 That fills the niche profound,
 Whir-son, as e-d-e-s-y-les tick
 Its high appointed round
 The must of need is laid on man,
 He meets it with his will,
 Their contact brings forth fate; and Jack
 And Jill went up the hill!

O, b-ue'ss fabrics of the air!
 O, Youth's enchanted lands!
 What castles made of dreams are reared
 On fancy's shifting sands!
 A while an Eden is the lot
 Of every son and daughter
 Ere gave unto the world. They went
 To fetch a pail of water.

What are we but toys of fate?
 Dark cour-ee in the sky,
 Map on to E-udition's gaze
 Where suns lived but to die;
 Volcanoes yawn and jibe at man,
 His mocks the earthquake's laughter,
 Then Jac c fell down and broke his crown
 And Jill came tumbling after.

Each heart some race of Egypt has,
 Where ruins, deserts, lie;
 And o'e them all the sphynx looms up
 With its eternal why;
 Perh-ee the hill the p-ir went up
 Was a tank built by the town,
 His ear d to death, they feared its banks
 Might break ere they walked down.

WOMEN MONEYMAKERS.

A New Business Is That of Decorating Bachelor Quarters.

Women as art decorators have done a good deal of work within the past year or two, but a unique specialty is that of Miss Minnie Lewis, a New York artist, who has devoted herself largely to furnishing bachelor quarters. One suite arranged by her is called by Chauncey M. Depew the handsomest in the town, and this is how the rooms appear:

The sitting-room is done in green, drab and ecru, and the windows are



MISS MINNIE LEWIS.

hung with very heavy ecru net, with shades of deep yellow. The window transoms are filled with silk of an odd shade of green. The side transoms are filled with fine plaits from top to bottom and the middle one is gathered into a huge sunburst.

The walls are covered with greenish drab buckram, and the frieze formed of green empire wreaths stencilled on it. The floor is painted to match the buckram and is covered with kokhara rugs. The mantel is colonial—picked up in an old shop on Avenue B. A large mirror is placed opposite the fire-

place with a yellow angora rug draped below, and above is a shelf holding steins of various beer-drinking countries. A mahogany buffet in colonial style stands in one corner of the room, and by the window is a mahogany desk with brass fittings.

Another "den" arranged by Miss Lewis has its walls covered with burlap, against which are hung all sorts and conditions of pipes, daggers, swords, armor, camel and Indian trappings, Zulu shields and assagai. The windows are covered with oriental drapery run through a ring in a lion's nose. The rugs are of lion and tiger skins, and the low tables hold Turk-pipes, unique ash stands, and jars for tobacco.

"I really think," says Miss Lewis, "I like furnishing bachelor rooms better than the boudoir of my lady. It seems to me a larger field."

THE ART OF CARVING.

Hints for Women Anxious to Excel in This Masculine Accomplishment.

In these revolutionary days, when women are usurping most of men's privileges and prerogatives, and are having thrust upon them so many of men's burdens, it is eminently fitting and proper that they should consider the question of carving seriously. Not very many families dine in Russian fashion from the sideboard with the aid of a dignified butler. In most households some one has to carve, before the eyes of the assembled diners, and it behooves women that they should be able to perform the little rite with grace and skill. If they succeed in doing this they will do more than their lords and masters have often succeeded in doing.

A good knife of moderate size and sharpness is a necessity. The platter should be placed near enough to the carver to give her control of it. In roast pieces, such as loins, breast, fore-quarters and the like, the butcher should have been instructed to separate the joints so that carving may not be impossible. In carving beef, mutton, lamb and veal, thin, smooth, neat slices are desirable. They should always be cut across the grain, taking care to pass the knife through to the bones of the meat.

In carving a leg of mutton the best slices are obtained from the center and the next best from the broad end. The pieces from the part next the knuckle are apt to be dry. A sirloin of beef yields its best slices from the end near the tenderloin. If it is cut through in this part the pieces must be fairly thick; if long, thin slices are desired it should be cut across.

In carving turkey or chicken place the head to the right, cut off the wing nearest, then the leg, and then the second joint; then slice the breast until a rounded piece appears. Insert the knife between that and the bone and separate them; this is considered the best part of the bird. Next comes the "merry-thought." After this turn over the bird a little and just below the breast will be found the "oyster," which can be separated as the inner breast can be. The side bone lies beside the rump, and the morsel can be taken out without separating the whole bone. Proceed in the same way with the other side.—N. Y. World.

How to Make Meat Croquettes.

For six persons, have about one pint of finely chopped cooked meat. Add one tablespoonful each of flour and salt; three of butter; one teaspoonful of pepper; one-half pint of water. Make a thickening of the flour, water and butter, and heat to a boil, then add the meat to which the seasoning has been added. Cook a few minutes, then remove from the fire. When cool, shape with the hands into cylinders or balls. Dip each one into beaten egg, then roll in fine bread crumbs, being careful to see that every part is coated. Fry in deep fat, arrange on a napkin and serve at once.

Calling Them Up.

Dear sisters of the Home Circle:—Will any or all of you send in descriptions of games or plays to amuse children and young people these long winter evenings? Chickasha was visited by the largest snow of the season last night. It was a regular Dakota blizzard. But I am glad to say we have very few of them here, and the cold spells do not last long. Who has nice plans for Easter services? Also for church socials. What has become of the "Home Circle's," anyway? Are you all away on a visit? Chickasha, I. T., January 28. OLIVE.

NEAT SHAVING PAD.

A Pleasing Present for a Man Who Is His Own Barber.

A shaving pad is always an acceptable present to a man who is his own tonsorial artist. A pretty and inexpensive one is made by taking two pieces of chamois nine inches long and four and a half inches in width. Pink both long sides and one short side on



both back and front pieces. Place leaves of white tissue paper inside, a trifle smaller than the covering. Punch holes clear through paper and chamois, and lace with ribbon. Tie first in a hard knot, then in long loops so as to hang. On one side of the cover place an appropriate design. The one here shown is of tan-colored chamois, embroidered in blue forget-me-nots, with shaving mug and brush done in outline with the same color. "Keep your mug clean" to be done the same way. Blue ribbons are used for lacing. Designs may be painted instead of embroidered.—Womankind.

For Mud Spots on Silk.

One's skirts cannot be held so high in these days that they escape the mud. The most painstaking and careful woman comes in from even the shortest walk with bedraggled folds and flounces. When the mud has dried it can be brushed off of woolen goods, but even the most vigorous brushing fails to clean silk. It should be sponged, after being dried and brushed, with alcohol, which will leave it fresh and clean.

Coughing.

For all the ailments of Throat and Lungs there is no cure so quick and permanent as Scott's Emulsion of Cod-liver Oil. It is palatable, easy on the most delicate stomach and effective.

Scott's Emulsion

stimulates the appetite, aids the digestion of other foods, cures Coughs and Colds, Sore Throat, Bronchitis, and gives vital strength besides. It has no equal as nourishment for Babies and Children who do not thrive, and overcomes

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WICHITA, KANSAS.

Object.—To provide a home for penitent fallen women, and to rescue them from lives of shame; to re-claim, educate and instruct them in industrial pursuits, and to restore them, when possible, to their homes and parents. BENEVOLENT FRIENDS, this Institution is respectfully and non-secularly each worker freely doing her part to "rescue the perishing, lift up the fallen and tell them of Jesus, the mighty to save." God is blessing the work and good is being done. Now we pray you to "help just a little" and enable us to do still greater good. The erring daughters must be reclaimed; they are more often sinned against than sinning. The Savior said, "Neither do I condemn thee; go in peace and sin no more." Address REV. LYDIA A. NEWBERRY, WICHITA, KAS.

The Young Folks.

AS WHEN IN DREAMS.

As when in dreams we sometimes hear,
A melody so faint and fine,
And musically sweet and clear,
It flavors all the atmosphere
With harmony divine—
So often in my waking dreams,
I hear a melody that seems
Like fairy voices whispering
To me the song I never sing.

Sometimes, when brooding o'er the years
My lavish youth has thrown away,
When all the glowing past appears
But as a mist that my tears
Have crumbled to decay,
I thrill to find the ache and pain
Of my remorse is still here again,
As, forward bent and listening,
I hear the song I never sing.

A murmuring of rhythmic words,
Adrift on tunes whose currents flow
Melodiously with the trill of birds,
And far-off lowing of the herds
In lands of long ago;
And every sound the truant loves
Comes to me like the coo of doves
When first in blooming fields of spring
I hear the song I never sing.

The echoes of old voices wound
In limpid streams of laughter where
The river Time runs bubbling crowned,
And giddy eddies ripple round
The lilies growing there;
When roses, bending o'er the brink,
Dain their own kisses as they drink,
And ivies climb and twine and cling
About the song I never sing.

An ocean-surge of sound that falls
As though a tide of heaven's art
Had tempered the gaudy halls
And crested o'er the golden walls
In showers upon my heart;
Thus, thus, with open arms and eyes
Uplifted toward the alien skies,
Forgoing every earthly thing,
I hear the song I never sing.
—James Whitcomb Riley.

KITTIE'S SOLILOQUY.

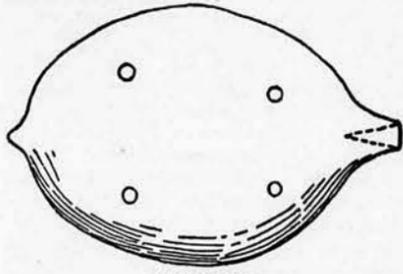
Jingle, jingle, tinkle, tinkle,
Oh! this awful bell.
If I knew who did invent it
I surely would resent it—
This horrid, horrid bell.
'Tis tied upon a ribbon,
The ribbon round my neck,
It tinkles and it jingles
At every nod and beck.
Can they expect a well-bred cat
To stay at such a house,
Where they tie a bell upon his neck,
To scare away each mouse? CREEDE.

FUN FOR THE CHILDREN.

Making a Pig and His Pen from a Lemon and Some Toothpicks.

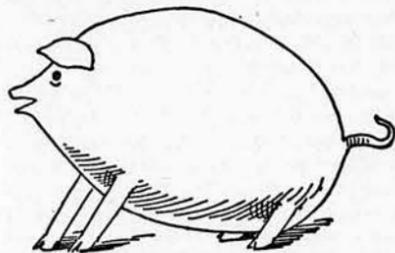
Yes, you can make your own pigs very easily, children, and they will be so nice and sweet and funny that nobody can object to your taking them right in the parlor with you.

The first requisite is a lemon. This will cost about three cents and you can get it at any grocery store. You must ask the man who sells it to you to permit you to select one from his basket. Take one with a long stem or peak at one end like this:



IN EMBRYO.

When you get home cut a small notch down in the stem, as shown by the dotted lines in the sketch above. This will be the pig's mouth and should be colored red. (Red ink will do). After his mouth has been properly cut Mr. Pig should be laid square on his back and four matches or small sticks of wood should be sharply thrust through the skin and well into the lemon at or near the places indicated by the rings and points in the sketch. The matches or sticks should stand out at an angle so Mr. Pig won't fall over, and if he is to be allowed to sit down put the hind legs deep in, something like this:



PIGGY WHEN FINISHED.

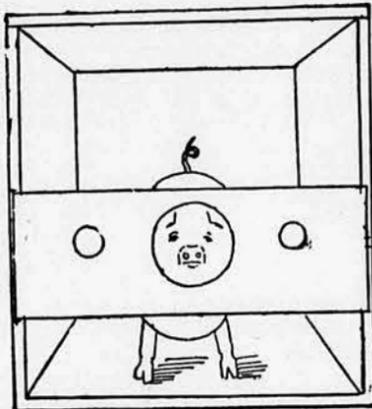
Pigs like to sit down, and they usually do after eating; so it is just as well to make the pig repose in this comfort-

able manner at the start. Now ask mamma for a couple of black pins to be put in above his nose for piggy's sharp little eyes and whittle out two ear-shaped pieces of thin wood, dye them with pink on the inside with paint or red ink, and press them in over the eyes so they will "lop" or hang a little. Now tie a small piece of grayish brown string about the head of a pin and drive it, head and all, in through poor piggy's skin where his tail belongs. You can then cut the string off to leave his pig-ship with a tail of an inch or so in length.

It is really of little importance where you keep this kind of a pig, and pigs themselves don't seem to be very particular where they are kept if they only have enough to eat. You can make a small pen of one of papa's cigar boxes, and I will show you how to hang the door and fasten it so Mr. Pig can't get out unless you open the gate for him.

The inside measurements of the box should be 8 by 8 by 4 inches, though some pigs like a large pen, and a great deal depends upon how often you let your pigs out. When you have made your pen take three pins and cut the heads off in such a way as to leave a point, with an old pair of shears or a file, and then bend them carefully into a long, slender "U" for staples. Now cut a piece from the cigar box cover quite as long as the pen is wide and about an inch wide itself, the grain of the wood running with the length.

This is for the gate. Make a notch in the center of one end for the latch. Now for hanging the gate, which is the nicest part of the whole job and must be done very carefully. The first thing to do is to hammer down the heads of two pins so they will pass through the staples. When they are just right drive one into the lower edge of the gate, close to the opposite end from the latch. If you don't put it very near the edge the gate will "bind"—it won't open freely. Now put the other pin in the upper edge, directly opposite the lower pin. Then lay the house on its back, the open side up, and place the gate in the position you want



AT HOME.

it. The gate should be about half an inch from the bottom of the pen so piggy can't get under it. Now very carefully drive two of your staples into the edge of the box just above and below the edges of the gate and over the pins. Don't drive them too far at first. Try your gate to see if it swings. A curved pin makes a good hasp. Cut the point off, so you will not prick your fingers when you go to let piggy out for a stroll in the garden. Your pig and his pen are done.—N. Y. Herald.

Uncle Eben's Sound Doctrine.

Be not disdainful of appearances. Such is the meaning of Uncle Eben's advice, quoted by the Washington Star: "De clo's don' mek de man," said Uncle Eben, "but jes' de same, tain't safe ter 'spise personal 'pearances. It am possible to serve terrapin in er tin bucket, but folks ain lookin' fur it, an' jedges ob terrapin am skase."

Knew the Boys.

First Little Girl—I don't think the teacher should give me a black mark just because I dropped my slate on the floor.

Second Little Girl—I s'pose she has to have a rule like that, 'cause if she didn't the boys would be droppin' 'em on purpose.—Good News.

School Shoes.

Parent (angrily)—Those "school shoes" I bought for my boy didn't last two weeks.

Dealer (surprised)—He must have been wearing them out of school.—

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder

ABSOLUTELY PURE

THE GARDEN BIRD.

His Sense for the Beautiful Is Remarkably Well Developed.

In New Guinea there is a bird which not only builds a house but has a garden, too. He is known by the name of garden bird.

When he is going to build, the garden bird first looks for a level spot of ground which has a shrub in the center. Then he covers the bottom of the stem of this shrub with a heap of moss. Next he brings small green twigs from other plants; these he sticks in the ground so that they lean against his shrub. On one side he leaves a place open for the door. The twigs keep on growing so that his little cavern is like a bower.

Last of all, in front of the door, the bird makes a lawn of moss. Upon this lawn he scatters purple berries and



THE GARDEN BIRD.

pink flowers, and these he always keeps fresh.

He is about as large as a thrush or black bird. His head, his back, his wings and tail are brown, and beneath he is greenish-red.—W. H. H. Campbell, in Our Little Ones.

ACCIDENTS TO BIRDS.

Misadventures Are Frequently Due to a Lack of Discretion.

A strange accident is recorded in the story of a fish-hawk, which sunk its talons so deep into a huge fish that it could not withdraw them, and, despite its struggle, was drawn beneath the water and drowned. Indeed the misadventures that befall birds are not infrequently due to lack of discretion in

the choice of food. On several occasions starved pelicans have been found with dead catfish in their pouches. On being caught, the fish had erected their sharp, spiny fins and pierced the pouches of their captors, which then could neither swallow nor eject the unwelcome prey.

A singular instance is recorded of a chipping sparrow, which, in swallowing a grasshopper, swallowed also the blade of grass on which the insect was resting, and the bird was found thus tied to the ground.

Birds that use long hairs or strings in the construction of their nests not infrequently become entangled in them, and are sometimes found hanging dead at their own thresholds. An unusual case of accidental hanging was once observed by the writer at Englewood, N. J. Passing beneath a chestnut tree one September morning he saw a small bird swinging to and fro overhead without any visible means of support. It proved to be a ruby-crowned kinglet suspended in midair by a single strand of a spider's silk which was entwined about the longer feathers of one wing. The strand, with others, supported the spider's cocoon, which evidently accounted for its surprising strength. The young spiders were just appearing from their silken cradle, and a wasp was capturing them as they appeared, doubtless to convey them as food to his own young.—Our Animal Friends.

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Electros must have metal base.
Objectable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.
All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders—
KANSAS FARMER CO., Topeka, Kas.

Ex-Gov. Geo. T. Anthony was appointed to the position of State Insurance Commissioner by Gov. Morrill on the 5th inst.

The cheapest and best way to break up monotony and to make life and home enjoyable is to provide plenty of good reading. Take the county paper; take a State political paper; take the KANSAS FARMER; take a good monthly magazine—take these, if no more.

Captain J. H. Churchill, of Dodge City, has just received from the United States Fish Commission 1,000 rainbow trout. These will be placed in Mr. Churchill's irrigation reservoirs and in those of others who are prepared to give this excellent table fish proper opportunities.

The "visible" supply of wheat in this country increased rapidly, from 54,114,000 bushels on July 7, 1894, to 89,671,000 bushels on December 22, since which time it has decreased nearly 1,000,000 bushels a week. It is still several millions of bushels larger than ever before at this time of year.

Exceedingly busy people who yet feel that they must read enough to keep informed of the progress of the great world in which we live, have found in the *Review of Reviews* a most convenient magazine by the use of which to gain a comprehensive view of events without extravagant use of time.

Every farmer who has succeeded in raising potatoes at a profit, and especially every one who has tried but failed to make the profit, will be interested in Senator Taylor's paper in this issue. The entire subject is treated in a practical way by a man who makes a success of potato-growing and is making a fortune at it. The crisp, terse language in which Senator Taylor presents his views makes his paper a relief to the reader and an impressive object-lesson in vigorous English.

In discussing the monetary situation, Henry Clews, of Wall street, says: "The business interests of the country have gone down to a gold basis. It is so with manufactured goods of every description. It is so with iron, steel, cotton, grain and securities also. The threat now is that the circulating money of the country is going to drop from a gold basis to a silver basis, which would be so if gold redemption of its notes were stopped by the Treasury, in which event the next turn would be for sagacious people to exchange their non-redeemable paper money into manufactured goods or raw material, such as iron, grain and cotton; also into securities or anything else that has dropped down to a low basis of value. The feeling would set in to buy everything that looks like a bargain, which would be the forerunner of buoyant and advancing markets in all lines of business in this country."

A SILVER BASIS.

The great statistical and financial journal of London, England, the *Statist*, in its issue of February 2 gave voice to some capitalistic views as to the effects to follow the adoption of the silver standard of money in the United States. These views are so pronounced and so important that a summary of them was cabled to this country and appeared in the morning papers here on the day of their publication in London.

The *Statist* regrets the prospect of the United States going to a silver basis and proceeds to show the consequences. It is remarkable that this great authority coincides with the views of the radical silver advocates in America as to the effect to be expected on industrial prosperity.

The *Statist* remarks that if gold is demonetized it is perfectly clear that there will be a great transfer of property from the capitalists and lending classes to the producing and borrowing classes. This would be of immense advantage to the West and South and would prove a serious loss to the Eastern States and to Europe. Of course, a great country like the United States adopting the silver standard would have a great influence with the whole world, and silver would undoubtedly rise, but it would be long before it reached 60 pence.

"The great reduction of debts all over the United States by a fall to silver would give the farming and producing classes generally a sense of freedom and prosperity which they have not had for many years, and would probably give a great stimulus to production. If silver did not rise much for awhile, American wheat, cotton, pork, etc., would compete with the produce of other countries at a very great advantage, and there would probably be a very rapid and great growth of exports and the beginning of an era of great prosperity.

"On the other hand, the lending and creditor classes would suffer, but their losses would not affect production to anything like the same extent as the gains of the debtors and producers would do. Further, there would be a very serious fall in securities, which would injure capitalists, both in the United States and in Europe.

"If Congress refuses legislation, then gold would go to a premium, but probably not high. The tendency would be to still benefit debtors, while production and exports would be stimulated, though not to a great extent.

"Thirdly, if the mints were opened for free coinage, which would tend to make the gold premium higher still, the premium would not be very high, and the reduction of the debt and the loss to capitalists would be small compared to the demonetization of gold."

Summing up this review of the financial possibilities the *Statist* represents the West and South as being perfectly right in the view that a change of the present system would benefit their sections of the Union. The effect of the change they advocate would be a tendency to transfer property by wholesale from the East and Europe to the West and South. In fact, it would be a form of repudiation, and it would lower the credit of the United States and prevent the free influx of European capital.

In future, probably, European capitalists will always insist upon the gold clause—they will require a clear contract that they will be repaid in gold.

"In the event of gold demonetization, matters will right themselves in the long run, but the run might be very long; and another point is that a great transfer of property would not act uniformly. Debts falling due soon after the change would be immensely reduced, whereas, debts falling due later, when silver has risen, would be less reduced, and if silver reached 60 pence there would be no reduction of debts whatever."

The *Statist* editor does not attempt to conceal the fact that the interests which to him seem most important are the "lending and the creditor," rather than the productive interests. He assumes, also, that Europe, England and the eastern United States are essentially lenders and creditors, rather than laborers and producers. In con-

sidering such divisions of interests it is manifestly proper to include as producers the owners of productive properties, i. e., shareholders in industrial enterprises and transportation companies. These are almost always debtors and their incomes depend on work and production and are cut down by usury.

It is well to examine the *Statist's* assumption that capitalists will be injured. It may be easily believed that this assumption is more nearly correct as applied to European than to American capitalists for the reason that the former are owners rather of interest-bearing obligations than of shares dependent for earnings upon industrial prosperity. In this connection the editor of this paper wrote some months ago to Henry Clews, of New York, for an estimate of the amount of American interest-bearing securities held abroad. His reply placed the amount at about \$500,000,000. In discussing the liquidation of foreign indebtedness, in a recent issue the Cincinnati *Price Current* estimated that we pay to Europe about \$100,000,000 annually for "interest" and "dividends." Now, the interest on the \$500,000,000 interest-bearing securities of Mr. Clews' estimate at 5 per cent.—probably a higher rate than they actually average—would be \$25,000,000, leaving \$75,000,000 of the *Price Current's* estimate to be earned by "shares." Placing the earnings of shares at 5 per cent., this \$75,000,000 would represent a capitalization of \$1,500,000,000, an amount three times as great as Clews' estimate of interest-bearing securities.

If, then, industries are to be benefited as indicated by the *Statist's* article quoted above, and interest-bearing securities are to be lessened to the extent suggested, or at the same rate that the industrial shares are increased in productiveness and value, it is clear that in the aggregate even European investors in America are to be benefited.

WORLD'S WHEAT IN SIGHT.

The imperfection of present facilities for obtaining estimates of grain statistics is aptly illustrated by the wide variance of the published statements of the leading experts as to the portion of the crop about which there is less uncertainty than any other. The Cincinnati *Price Current* quotes from three leading authorities, as follows:

The world's visible stocks of wheat for January 1 are stated by Dornbusch, as follows:

	Quarters.	Bushels.
1895.....	25,672,000	205,376,000
1894.....	24,370,000	194,960,000
1893.....	24,288,000	194,304,000
1892.....	21,850,000	174,800,000

The estimates of Beerbohm for January 1, are as follows:

	Quarters.	Bushels.
1895.....	25,880,000	203,040,000
1894.....	25,721,000	205,768,000
1893.....	24,405,000	195,960,000
1892.....	21,000,000	175,200,000
1891.....	15,750,000	126,000,000

The European supplies of wheat in second hands, with the quantity afloat, and stocks in sight in the United States and Canada, including flour, according to the Chicago *Trade Bulletin*, compare with a year ago as follows, for January 1, representing bushels:

	1895.	1894.
Principal European markets.....	45,500,000	68,900,000
Afloat for United Kingdom and continent.....	33,000,000	33,000,000
United States and Canada.....	149,475,000	190,165,000
Total bushels.....	227,975,000	232,065,000

LIVE STOCK SANITARY COMMISSION.

The Live Stock Sanitary Commission held a meeting at Topeka, last week, and Albert Dean, the government agent, was present and lent his assistance in getting out the quarantine regulations concerning Texas fever. The fever line and regulations are very much the same as last year, except that the southeast township of Cherokee county and two adjoining counties in Missouri are included in the infected district this year. Governor Morrill will issue the proclamation next week, which will give full details as to the new line and the regulations.

Every farmer who desires to improve financially and in his vocation from this time on is cordially invited to subscribe for the old reliable KANSAS FARMER, a medium which will help do it.

DISTRIBUTION OF REPORTS.

EDITOR KANSAS FARMER:—If the agricultural and horticultural reports of Kansas were sent to farmers who ask for them and would like to read them, instead of to lawyers, doctors, etc., who don't want them, we farmers would not receive the answer so often: "I am sorry to say the limited supply is exhausted." W. R. MACKLIN.
Haddam, Kas. (A farmer.)

The anxiety to secure copies of the valuable reports of our State Board of Agriculture is a healthy indication, and the fact that the demand for these publications is a growing one must be taken into consideration by our legislators.

Ordinarily the maximum edition of these reports is, say, 10,000. If we have 300,000 voters in the State, and the entire edition is kept within the State, there would be one voter in thirty, or one person in, say, each 150 of our population who could have any given document. If, however, the edition, like that of the last biennial, was but 3,500, one voter in eighty-five or ninety, or one person in perhaps 450 of our population could have a copy, provided not a single one was permitted to go elsewhere to tell the people about Kansas and its affairs. No doubt all thoughtful men will concede that a considerable share of whatever we print helpful to Kansas or setting forth its advantages should circulate far beyond the borders of Kansas.

All of this mildly suggests why many a worthy Kansan cannot have, under existing conditions, the publications of our agricultural department. The department is only too glad to furnish all that the law-making representatives of these farmers make possible.

It is not, perhaps, generally known that it is the practice of every official who issues publications to form and keep a list of such persons as are to receive copies as soon as they can be mailed after publication. Such a list was made by the first Secretary of Kansas State Board of Agriculture and has been handed down, with such modifications and additions as were demanded, to the present time. It is very desirable to be on this list and any farmer who has not secured the enrollment of his name thereon, and who takes an interest in these valuable publications, should write to the Secretary and ask to be placed on this list. If not at first successful, write again, and keep writing. Backed by such importunity the Secretary will have no difficulty in securing the funds to pay for printing enough reports to supply the list.

It is doubtless true that some, perhaps many, of those now on the list are not farmers. But they have taken interest enough in these reports to secure enrollment in the list and the Secretary cannot tell and does not know their avocations. But persistent application will eventually secure the reports for the farmer.

Our State Agricultural college is the one public institution in Kansas which is always modest in its asking at the hands of the Legislature. Indeed its conservatism is often mistaken for lack of appreciation of its opportunities. Its officers never ask for more than the most reasonable enlargements and extensions to enable it to do the work which is pressing to be done. Just now the growth of the institution creates a pressing demand for more farm land and for a building for the domestic science department. If Kansas legislators could fully acquaint themselves with the work as it is done and with the needs at Manhattan, the moderate requests made to meet the demands of growth would need no further urging.

The Treasury statement of January 31, shows total cash in the Treasury \$761,470,332.77, against which there are demand liabilities aggregating \$616,867,028.58, leaving a balance of \$144,603,304.19, of which \$44,705,967 is "gold reserve," leaving a net cash balance of nearly \$100,000,000. And yet we are told that there must be issued one hundred or more millions of interest-bearing bonds. Further, in reply to inquiry, the Secretary of the Treasury informed Congress last Monday that the revenues of the government for the calendar year 1895 will be some \$25,000,000 above the ordinary expenditures. Does "Uncle Sam" need to borrow money?

WORK IN PLAY AND PLAY IN WORK.

The system or stage of educational work known as kindergarten, is being introduced in the cities of Kansas, and those who know most of it anticipate that it will eventually be made a part of our system of public schools.

In Topeka the Kindergarten Association is doing a grand work for many of the little ones of Topeka, and is becoming more and more appreciated by the people, and especially by the mothers, who have visited the kindergartens or have secured the benefit of its training for their children. The association now has five kindergartens in successful operation, only one of which is entirely free, and in all of the others a greater or less number of children are admitted who are unable to pay the small tuition. One of these is in connection with Bethany college, in which a fee of \$1 per week is charged, which is supposed to make this kindergarten about self-supporting. In the others the tuition is the nominal one of 25 cents per week, which is collected from those families that are able to pay. It is hoped to increase the number of kindergartens at an early date. Besides the general care of the kindergartens, Mrs. Gregory, a lady of the highest qualifications, is conducting a training class of twenty pupils, and this training school is proposed by the Kindergarten Association to make a permanent feature in the future in Topeka.

A bill is now before the Legislature empowering school boards in cities and the annual meetings in school districts to adopt the kindergarten as a part of the public school system whenever they may desire to do so, providing, however, that it cannot be conducted in the same room with other schools, and also providing that only thoroughly qualified teachers shall be employed. The Topeka Kindergarten Association is supported by the voluntary contributions of its friends in Topeka. Some of the young men of the city recently gave a minstrel entertainment in the Grand opera house which has netted the association about \$350. As the association pays its superintendent a salary of \$1,000 a year, besides renting and furnishing rooms, and paying the kindergarten teachers in their schools for teaching the little ones, it will be seen that the undertaking has grown to be an important one.

Farmers' Institutes.

Institutes will be held at the places and dates as stated below and the Agricultural college will be represented at these institutes by the members of the faculty named:

Peabody, Marion county, February 14 and 15, Professors Popenoe and Walters.

Clay Center, Clay county, February 15 and 16, Prof. Lantz and President Fairchild.

Haven, Reno county, February 21 and 22, Dr. Mayo and Mr. Burtis.

Cherryvale, Montgomery county, February 21 and 22, Professors Popenoe and Geogeson.

Thoroughbred Corn.

EDITOR KANSAS FARMER:—It has become a fact well known to all enterprising farmers that a judicious change of seed corn every few years, puts many extra dollars into their pockets, by means of greatly increased yields. But when the seed is brought from distant localities it is found to be only the thoroughbred sort that outstrips the common, run-down corn grown in the new home. The experience with Kansas-grown corn in the Ohio and Mississippi valleys during the year 1883 fully demonstrated this. In the spring of that year I obtained some Kansas thoroughbred seed, which by reason of its fixed type and high character, and its great flexibility of constitution (causing it to be easily acclimated) made a splendid yield of a first-class quality of grain, while the Kansas common seed, with its inherent weak character and low organization, could not stand the shock of so great a change. Consequently, my neighbors, who planted it, did so to their sorrow, as it was almost a complete failure.

Not so with the thoroughbred seed. Its type and habits being so thoroughly fixed and uniform, and as the laws of

heredity and reproduction are so potent, it inherits its high character and productiveness wherever it may be transported. A thoroughbred corn—in other words, a good corn—cannot be judged by its size, weight or color, although those requirements are necessary to a handsome sample.

A good corn is one that will produce a healthy, prolific, typical stalk, and was, of course, produced by a such a stalk. It is not cheap, for its producer has given it patient, intelligent, expensive labor, and years of valuable time. He has kept it healthy, prolific, uniform and true to name, ever endeavoring to place it on a still higher plane of purity, vigor and perfection. Consequently it is as much superior to common sorts as are thoroughbred cattle to scrubs. Though its cost may be double, or even quadruple, that of common seed corn, its value is four-fold—yea, ten-fold.

J. C. SUFFERN.

Official Salaries.

EDITOR KANSAS FARMER:—As your valuable paper has the widest circulation of any paper in the State among the farmers (although not as wide as one as it deserves, for it ought to be in the family of at least every farmer in the State), I wish to send you a short article for publication.

Facts are stubborn things to deal with, still we must meet them. It must be apparent to every one that the farmers of the State of Kansas, owing to the depressed financial condition of the country and the partial, and in many instances total failure of the crops, will be no better off financially the 1st day of March, 1895, than they were on the 1st day of March, 1894, from the very fact that many of them will be compelled to contract debts for the sustenance of themselves and families and in many places pay very high for feed for their teams and seeding. And all kinds of labor, both on the farm and clerk hire, as well, have suffered. In fact, all, with the exception of the salaried State and county officers, have felt the loss of crops and other depressions of the times.

Now, we, here in Riley county, are getting up a petition to send our honorable Representative to present our Legislature on the very line that our Governor has recommended in his grand message—that is, to cut the salaries of our State and county officers from 10 to 30 per cent., and then they would still be getting more for their labor than any other class of men in the State.

These salaries were fixed in 1866 and 1867, when all kinds of farm produce and stock were bringing from 20 to 60 per cent. more than at the present time, and when clothing and everything they had to buy were nearly double present prices. Our motto should be, "Live and let live."

I think, from present appearances, that 95 per cent. of the voters who see the petitions will sign them. In fact, all our best financiers and business men say, "go ahead."

JOHN WARNER.
Manhattan, Kas.

Report of Test of Breeds.

EDITOR KANSAS FARMER:—Notice has come to me that a limited edition of the report upon the Columbian Dairy Test of Breeds is likely to be printed soon. The edition is so limited that those dairymen who desire to secure the report will do well to apply at once to their Representative in Congress, lest the supply be exhausted before it is fairly issued. GEO. T. FAIRCHILD.
Agricultural College, Manhattan.

Every farmer in Kansas, and especially the breeders and stock-raisers, should have the greatest live stock journal in the world, the *Breeder's Gazette*, of Chicago, price \$2 a year. We make a special offer of it and the KANSAS FARMER, both papers one year, for only \$2. Subscribe now through this office.

If our readers, who will renew their subscription to KANSAS FARMER soon, will turn to our issue of January 23 and examine our premium offer of *Ladies' Home Companion* and cook book in connection with KANSAS FARMER, they may find something to their advantage. Read the whole offer carefully and follow directions.

Weather Report for January, 1895.

Prepared by Chancellor F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

A month with average temperature, deficient rainfall, clear skies and low wind velocity. Fourteen Januaries in the last twenty-eight years have been colder and thirteen warmer. The 20th was by far the warmest January day on our record, with a mean temperature of 61°. This is the third successive month and the fourth consecutive January with rainfall below the average.

Mean temperature was 25.07°, which is 0.42° below the January average. The highest temperature was 66.5°, on the 20th; the lowest was 9°, on the 12th, giving a range of 75.5°. Mean temperature at 7 a. m., 19.05°; at 2 p. m., 31.60°; at 9 p. m., 24.84°.

Rainfall, including melted snow, was 0.84 inch, which is 0.87 inch below the January average. Rain or snow fell in measurable quantities on five days. The entire depth of snow was seven inches. There were two days on which rain or snow fell in quantity too small for measurement. There was one thunder shower.

Mean cloudiness was 37.00 per cent. of the sky, the month being 8.59 per cent. clearer than usual. Number of clear days (less than one-third cloudy), fifteen; half clear (one to two-thirds cloudy), ten; cloudy (more than two-thirds), six. There were four entirely clear days and two entirely cloudy. Mean cloudiness at 7 a. m., 48.50 per cent.; at 2 p. m., 45.20 per cent.; at 9 p. m., 21.89 per cent.

Wind was southwest twenty-three times; northwest, fifteen times; north, twelve times; south, twelve times; northeast, eleven times; east, nine times; west, five times; southeast, six times. The total run of the wind was 10,706 miles, which is 1,049 miles below the January average. This gives a mean daily velocity of 845 miles, and a mean hourly velocity of 14.4 miles. The highest velocity was 57 miles an hour, from 3:40 to 4 p. m. on the 11th.

Barometer.—Mean for the month, 28.157 inches; at 7 a. m., 29.169 inches; at 2 p. m., 29.141 inches; at 9 p. m., 29.162 inches; maximum, 29.870 inches, on the 8th; minimum, 28.568 inches, on the 20th; monthly range, 1.302 inches.

Relative Humidity.—Mean for the month, 71 per cent.; at 7 a. m., 85; at 2 p. m., 54.5; at 9 p. m., 73.3; greatest, 100, on several occasions; least, 22, on the 11th. There were two fogs.

Chicago Market Review.

EDITOR KANSAS FARMER:—Receipts of stock this week as follows: 36,874 cattle, 2,022 calves, 174,548 hogs, 63,841 sheep.

The market on cattle closes about 10 cents higher than last week on desirable grades. The light receipts should have caused at least 25 cents advance, and with the country in good financial condition would have caused an advance of 50 cents, with anything like average times. The only legitimate cause we can see for this condition is the threatening conditions in financial circles and until there is an improvement in these conditions we cannot reasonably look for any better tone to the cattle trade. We are inclined to think there is more scare than reality in the financial stringency and that it will wear off gradually, yet the market is in a demoralized condition and will show little or no improvement until finances present a more favorable appearance. The quality of the cattle coming is not good, and this, of course, helps along the depression. Should there be an improvement in the business outlook soon, then we expect a sharp turn in cattle values, as beef channels must be getting pretty well cleared out. The feeder market has been dull but prices have remained about steady, while thin stockers have hardly been movable at any price. We quote: Choice heaves, \$5.50 to \$5.75; good full-fed, 1,200 to 1,400-pound steers, \$4.25 to \$5; fair steers, 1,200 to 1,450 pounds, \$3.50 to \$4.50; extra choice and heavy, \$4; stockers, 600 to 800 pounds, \$2 to \$2.80; fair to good cows and heifers, \$2.25 to \$3.25; good to choice cows, \$3 to \$3.50; choice export heifers, \$3.50 to \$4; canners, \$1.40 to \$2 and very slow; feeding steers, 950 to 1,150 pounds, \$3.25 to \$3.75.

This has been a panicky week in the hog trade. The supply was somewhat heavier than last week, but is still moderate, compared with corresponding weeks of other years. Prices rallied a little on Monday and advanced 10 to 15 cents over last week's closing prices, and have since reacted and lost 15 to 25 cents more than the gain. The conditions that have brought about this state of the hog market are the same as those mentioned in our cattle review. The immediate future of the market depends largely upon the turn financial affairs take. The quality of hogs still continues very light, running about seventy-nine to the car, which is twelve more than they should average at this season of the year. We quote: Good to prime heavy, \$4.15 to \$4.30; assorted butcher weights, \$3.95 to \$4.15; good to choice mixed to packers, \$3.90 to

\$4.05; assorted light, \$3.90 to \$4; light mixed, \$3.70 to \$3.90.

We have had another good week in the sheep trade; prices were on a strong upturn Monday and Tuesday, broke slightly Wednesday, but reacted Thursday. The course of the market for several weeks has been encouraging and we think the outlook favorable. We quote: Prime heavy native wethers around \$3.90 to \$4.25; good to choice mixed ewes and wethers, \$3.75 to \$4; medium to good sheep, \$2.85 to \$3.65; culls, \$1.50 to \$2.75; choice lambs, \$4.75 to \$5; medium to good \$3.90 to \$4.65; common, \$3 to \$3.70.

Saturday grain markets were no exception to those for the week. There was depression and over-selling, some rally on short buying, and altogether an unsatisfactory situation for speculative trade. Wheat acted the first half hour exactly as on Friday. The May price started at 53½¢ and went off under local selling pressure to 52½¢ to 52¼¢. Here the comparison came to an end. Yesterday the market no sooner broke than buying was noticeable, followed by covering by shorts and a fair upturn in prices. For an hour following the break this morning there was hesitation next to stagnation, and after a slight rally to 52½¢ bid price dropped to 52¼¢ seller. Week's exports, both coasts, wheat and flour, 2,432,000 bushels, 400,000 short of the week previous. The trade declines to believe that there is much of a demand for wheat, milling or otherwise, until there is some call for the great volume of wheat here, that is, some of it.

Corn showed a loss in the May price of ¼¢ from the opening to 11 o'clock. The opening was 43½¢ and 43¼¢, and the early decline to 43¼¢ to 43½¢. When wheat took its second dip, an hour before the close, May corn dropped to 42½¢, with a rally to 43¼¢.

Traders in provisions have had so many reports on heavy packing operations that phenomenal stocks are expected. Provision stocks as published to-day are heavy, very heavy, compared with stocks a year ago, but not up to the popular estimate. Pork at 127,000 barrels is compared with 106,000 a month ago, 70,000 a year ago. Lard at 27,000 tierces is 4,000 less than a month ago, but five times the stocks of a year ago. Ribs increased over 4,000,000 pounds, instead of 8,000,000 or 10,000,000 as predicted. There was some support all day from this cause. May pork sold at \$9.90 and \$10.02½ and closed at \$10—15¢ over last night. Lard gained 7½¢ to \$6.60 May at the close. Ribs gained 10¢. Closing quotations: May wheat opened 53½¢, closed 53¼¢; May corn opened 43½¢, closed 43¼¢; May oats opened 28½¢, closed 28¼¢; May pork opened \$9.90, closed \$10; May lard opened \$5.55, closed \$5.60; May ribs opened \$5.17½, closed \$5.22½.

Chicago, February 2.

JEROME.

Kansas City Live Stock Market.

Special report to the KANSAS FARMER, by Robert C. White & Co., 106 Live Stock Exchange, Kansas City stock yards, for week ending February 2:

"During the past week the market has been very unsatisfactory, both to buyers and sellers. The Eastern beef markets continue dull, making local dressed beef men light operators. Choice heavy export and shipping steers about steady with last week, closing steady to a shade stronger. Dressed beef grades slow and neglected, closing 10 to 15 cents lower. Rough and common Southwesterns dull. Rangers steady to a shade higher. Some very choice cottonseed meal-fed cattle sold 5 to 10 cents higher. Good straight cows and heifers selling a little higher; common cows about steady. The demand from the country for such cows has not been so good this week and prices a little easier. Good feeders are in demand at strong prices. Common, inferior stockers 10 to 20 cents lower. Butcher and feeding bulls slow.

"Receipts of hogs have been moderate, but prices continue to go down, breaking 15 cents on Tuesday and about the same on Wednesday. There was a slight reaction Thursday. Friday there was a break of about 5 cents at the opening of the market, but it grew stronger and closed about steady.

"The sheep market during the week was fairly good, with mutton and lambs a little higher, but toward the close of the week the market weakened and closed barely steady."

Mr. Chas. Bennett, Optician, 713 Kansas Ave., Topeka:

DEAR SIR:—I am under great obligations to you for the care and patience with which you examined my eyes, as well as skill with which you fitted them. My glasses are absolutely perfect. In using them I find it difficult to realize that I ever suffered from defective vision.

Respectfully,
CHAS. H. MORTON,
123 Topeka Ave., Topeka, Kas.

The Kansas Weekly *Capital* publishes more Kansas news than any other weekly paper. A free sample copy will be sent on application to THE TOPEKA CAPITAL CO., Topeka, Kas. Or send \$1.50 to this office for KANSAS FARMER one year and also *Capital* twice a week.

Horticulture.

How to Graft the Grape.

EDITOR KANSAS FARMER:—As I have received many letters in times past, asking for my method for grafting the grape, and as I have promised many inquirers that my method would appear in the KANSAS FARMER in due time for all practical purposes for the spring of 1895, I will now endeavor to keep my promise.

Grafting the grape is usually attended with many failures, if not well understood. The time in the season selected for the work has much to do with the success or failure of grafting the grape. The best time, in my opinion, is just before the starting of the sap. If you are not prepared to do the work at this time, wait until the sap ceases to flow, which will be as soon as the vine has fairly started in growth. Never graft when the vine or stalk to be grafted will bleed. The cutting, or scion, should be kept in good condition, in damp sand or moss in a cellar or buried in the earth in a cool, shady place. Do not take out too many at once, as it will be getting pretty warm at this time. A well-established three-year-old vine is the best size, although I have grafted six and eight-year-old vines with fair success.

The ground is cleared away from around the stock down to a point between the lower joints to a smooth place. Then the stock is cut off at this point, and the lower part grafted just the same as you would graft the limb of a tree. The thick outside bark should be rubbed off, in order that the operator may see when the inner bark or sap can be well matched together, on one side at least. Stocks of this size should be grafted with what is known as the wedge graft. If the stock is too large to split, it may be sawed down with a fine saw, then use a wedge to open the stock wide enough to receive the wedge of the scion, which should be long and should fit perfectly. Now withdraw the wedge, which you have used to spread the stock, and the scion will be held in place. Now, with grocer's wrapping twine wrap tight and secure. Then, with common grafting wax, melted, apply all over where the scion and stock are joined together. For the purpose of melting the wax, I have a vessel just the same as is used for melting glue or rice-stewers. The wax should be boiling hot in order that all cracks and wounded parts shall be covered. The reader of this article will say at once, "this is too hot." But never mind—try it. For heating the wax, I use a coal oil stove. Remember, the wax is to be melted by placing the vessel which contains it in another vessel which contains boiling water. The scion should be eight or ten inches long and only one bud above ground. The earth should be packed firmly around the lower part, but the top should remain loose. Grafted in this way, the scion or graft will never pull out by the swelling and shrinking of the earth. I have many times found, upon examination, that the graft had been pulled out and an inch above the stock. I have never found by any method that the grape could be successfully grafted above ground. Now, I am aware that many who claim to be experts in grafting the grape will tell you to never use wax. But never mind—try it.

The reader will understand that the above method is intended for outdoor work for the purpose of placing new and improved varieties on worthless vines. The best stocks for grafting are those that are phylloxera-resisting and will throw out numerous feeders, such as Concord, Elvira, Taylor and Champion. In 1894, I paid \$5 for twenty-six cuttings of Early Ohio. They were grafted on three-year-old Concord vines, set in vineyard rows. They all grew but one, and they filled the trellis the same season and bore three bunches of grapes. In 1893, I grafted twenty-six Black Defiance, and every graft grew. In 1892 I grafted 150 Woodruff Red and 141 grew. Have grafted many others with like results. Yet I wish to be understood that I make no pretenses to perfection. It

must be taken for its worth, and many others may, and no doubt do, have methods just as worthy of trial as the above. A. L. ENTSMINGER. Silver Lake, Kas.

Seedling Peaches in Oklahoma.

EDITOR KANSAS FARMER:—After reading an article in *Home, Field and Forum*, September, 1894, by A. Rambler, I feel inclined to say something more about seedling fruit, and I may seem to intrude on ground considered as sacred to the nurserymen.

Mr. Rambler holds that budded peach trees are as hardy and live as long as seedlings under the same treatment. My observation and experience for many years does not justify me in that conclusion. I have made seedling peaches and plums a specialty much of my life, while in the nursery business. A few comparisons, even many illustrations, such as Mr. R. gives, is not proof, or not conclusive, as different aspects and different varieties give different results. In those orchards referred to by Mr. R. there may not be one carefully-selected seedling having any known desirable or fixed habits. I have discarded many varieties because the bloom or wood was tender, or would not reproduce the same from seed. A neighbor of mine has a small orchard of seedlings grown from labelled seed that I brought from Kansas five years ago. After canning and drying all his family could, they sold \$125 worth of peaches last season, notwithstanding they are in the bottom, where hard frost occurred. Another neighbor, on higher land, has a seedling orchard. Part of them from Texas seed did not bear, while those from Northern seed planted alternately had fruit, some of them very full.

O, what a field God has given us for investigation, pleasure and profit on this line. I believe that we can and do greatly improve the pulp of the peach by high cultivation and successively budding it on free-growing young wood, but that almost in the same proportion we weaken its vitality and destroy its ability to reproduce itself. We sacrifice vigor of constitution, lessen the winter linings of the fruit buds, soften the hard texture of the wood for a finer quality of fruit. Take, for instance, the Amsden peach, of which I had the pleasure of budding the entire stock of buds—only a handful of twigs, cut from the original tree in Mr. Amsden's field, near Carthage, Mo., the second year it bore. It was an accidental seedling, probably from hardy seedling stock, as it is known to withstand more frost than any of our fine peaches obtained from a cross of two cultivated varieties, and I am sure it is now larger and better than when I first saw it, a quarter of a century ago. But I do not think it will now endure the frost that its ancestor did, when it presented to the pomology that one little red-cheeked peach that attracted Mr. Amsden's attention as he was about to destroy the tree.

It is well known by careful observers that the seed, nature's only mode of reproduction in the peach, is very defective and often entirely sterile in budded peaches, showing a marked contrast with seedlings, especially those not far removed from the original. The same defects can be traced through the poorly-developed seed to the poorly-developed bloom, and to the soft, imperfect and often winter-killed wood of the budded trees. The pollen in the flower is so weak that it don't fertilize its own bloom, and if fertile at all it must depend upon pollen brought by insects or the wind from seedling peaches. Hence the complaint with so many that the seed saved from budded peaches fail to grow, or if they do grow they make a poor peach. True to nature, they resemble that seedling with vigorous and abundant pollen that happened to grow in their vicinity.

I do not plant seedling peaches, but if we eat peaches every year we must plant an assortment of select, hardy, late-blooming seedlings that reproduce the same. I would also plant an assortment of budded trees. Some seasons we will get a crop of both, I hope. I alternate them, thus giving them the same aspect and soil, etc. I have failed to get a crop of any budded peach here

and only from the hardiest seedlings, which have born every year since they were large enough and some of them good enough to tempt the appetite of the President (of the Oklahoma Territorial Horticultural Society). L.

Chestnuts.

EDITOR KANSAS FARMER:—Can any readers of the KANSAS FARMER give reliable information in regard to chestnut culture in this State? I see the Paragon and Ridgely are highly recommended in Eastern agricultural journals, but am informed by an agent for a local nursery that the chestnut is not well adapted to Kansas soil and climatic conditions. Trustworthy information from practical experience would be gladly received. F. C. SUTHERLAND. Parker, Kas.

[The nursery agent ought to have a medal. His statement agrees with the experience of most of those who have tried chestnuts. However, statements of experiences with this desirable tree are in order.—EDITOR]

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In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm. Address all communications Topeka, Kas.

Meeting of the National Dairy Union.

The annual meeting of this association for the protection of dairymen and the assurance of pure and unadulterated dairy products, was held in Washington, D. C., January 10-12. There was an attendance of about seventy-five delegates from at least half of the States and Territories, those especially engaged in dairy enterprises. Acting President James Hewes, of Baltimore, presided.

During the session many Congressmen were present, and several addressed the meeting, including C. L. Hatch, Chairman of the Agricultural Committee, Representatives Grout, of Vermont, Grow and Sibley, of Pennsylvania, Hopkins, of Illinois, Hainer, of Nebraska, and Livingston, of Georgia, who expressed sympathy with the objects of the convention and indicated their views of the best means of obtaining them.

Dr. Trimble, Secretary of the National Grange, expressed the interest which his organization had always felt in the prosperity of the dairy and the purity of its products. Assistant Secretary C. W. Dabney assured the meeting that the Secretary of Agriculture was desirous of doing all in his power to promote the welfare of the dairy industry. He characterized it as a foundation interest in rural economy and the greatest in the agriculture of the United States.

The report of the Secretary, D. W. Willson, of Elgin, Ill., detailed the progress of the Union's operations. The Treasurer, C. S. Martin, of New York, reported the expenditure of \$1,600 during the year, and a balance of \$200 on hand. Acting President Hewes delivered an address replete with information and suggestions.

State Dairy Commissioner W. R. Boardman, of Iowa, delivered an address giving a history of anti-oleo legislation in that State, showing the effectiveness and practical value of its results. Mr. Geo. M. Whittaker, of Massachusetts, detailed the results of similar efforts in Massachusetts in driving the oleomargarine forces behind their intrenchments, until at the present time the sale of imitation butter is liable to incur a penalty under five different enactments.

Mr. J. H. North, of New York, described at length the deceptive devices and fraudulent methods by which oleomargarine is being exported in the guise of genuine butter. He exposed the deception, dishonesty and fraud practiced in obtaining double value for animal fat doctored and disguised to represent an entirely different article of superior money value. The tenor of remarks of all the speakers was in favor of the sale of all sorts of products on their merits and their opposition was to deception and counterfeiting by color, form of package, use of butter technology, as the marks "dairy," "creamery," "Jersey" or other names of breeds, and every ingenious means of giving a false impression of a lactine product of the cow.

Congressman Hainer and several Western delegates exhibited the iniquity of "filled cheese," showing its fraudulence and injuriousness to honest trade on a par with the worst development of imitation butter. Letters were read from dealers in dairy products, which proved that this adulterated and non-descript article is received and paid for as full milk cheese, being put up in the semblance of the finest factory product. Its use disgusts the consumers of cheese, who, while not experts, are aware at once of its unsatisfactory character, and the effect is a diminishing consumption injurious to the present and future status of this branch of dairy industry.

On Saturday an address was delivered by Dr. Wiley, Chemist of the Department of Agriculture, on the determination of chemical analysis of frauds or adulteration and other points of practical interest.

The election of officers of the Union for the ensuing year resulted as fol-

lows: President, ex-Gov. Hoard, of Wisconsin; Vice Presidents, J. E. Keith, Illinois; L. W. Beard, Iowa; W. A. Carpenter, Nebraska; Wm. Cook, Colorado; A. W. Bertram, Minnesota; R. W. Farriss, Indiana; John S. Miller, District of Columbia; W. D. Edson, Pennsylvania; Geo. A. Boyse, New York; S. R. Medairy, Maryland; G. M. Whittaker, Massachusetts; H. C. Adams, Wisconsin; G. A. Bowen, Connecticut; T. M. Brent, Michigan; E. W. Steele, California; B. F. Hudson, Missouri; A. J. Wedderburn, Virginia; Col. Livingston, Georgia; T. M. Deal, Vermont; N. H. Waterbury, New Hampshire; A. R. Duncan, Ohio, and J. A. Willett, New Jersey. Secretary, D. W. Willson, Elgin, Ill., and Treasurer, C. S. Martin, New York.

Chicago was selected as the place of the next annual meeting, after the claims of St. Louis, Madison, Wis. and some Eastern cities were considered. The date of meeting was made the third Tuesday of January. Before adjournment it was voted to establish a literary bureau in interest of purity and honesty in the manufacture and sale of dairy products, and to create a public opinion in favor of enacting and enforcing laws against the imitation and counterfeiting of honest dairy products. - J. R. Dodge Washington, D. C., in National Stockman.

Dairy Notes.

There are 150 creameries in Kansas, with an annual product of butter valued at \$5,000,000.

Secretary Thompson, of the Washington State Dairymen's Association, says that during the past year over \$1,000,000 worth of oleomargarine was sold in his State for butter.

At the recent meeting of the Minnesota Butter and Cheese-makers Association there were forty-two entries of butter, and not a single one of them was made with English salt.

The Ryder cheese factory, house, barn and contents, at Gowanda, N. Y., burned recently. There was \$600 worth of full cream cheese in the factory. Loss \$3,000. Insurance as yet unknown.

Countess Hugo, the fine Jersey cow owned by D. L. Heinsheimer, Glenwood, Iowa, died last week of milk fever. This cow was awarded a premium at the World's Fair, and at that time the owner refused an offer of \$7,000 for her.

Since 1888 the number of milch cows in Kansas has decreased over 200,000, according to the reports of the State Board of Agriculture. The low price of beef and the incroads made by oleomargarine are said to be responsible for this decline.

Mr. White, of Atchison, presented petitions to the House last week, representing nearly 1,500 farmers, praying for the passage of a law to prevent the sale of imitation butter and cheese and adulterated milk and for the appointment of a State Dairy Commissioner. Hon. L. P. King, in the Senate, has an equal number of petitions ready to offer.

The oleo bill prepared by Mr. A. E. Jones, on behalf of the Dairy Association, has been presented in the Senate by Hon. Milton Brown, of Garden City. The bill went before the Agricultural committee in the Senate, was ordered printed and placed on the calendar. The same bill was presented in the House by Representative Sutton, of Russell, and is very likely to receive a favorable report from the committee in the latter body.

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Gossip About Stock.

Read Leonard Heisel's stock sale advertisement in this paper.

Stockmen who are interested in cottonseed meal as feed for stock, should correspond with W. S. Nicholson, care Western Storage building, Kansas City, Mo., who will furnish any information desired concerning this new feed which is now attracting so much attention.

J. M. Young, of Liberty, Kas., reports sales of several fine Duroc-Jersey and Improved Chester White swine, which were ordered from and shipped to the State of Iowa. Mr. Young formerly resided in Madrid, Neb., where he was very successful in accumulating his herd of thoroughbred swine of the two varieties he handles, and Montgomery county, Kansas, can count herself nearer the head of the column by reason of Mr. Young's enterprise.

H. S. Day, of Dwight, Morris county, Kansas, writes to KANSAS FARMER as follows: "Please continue my advertisement 'till forbid.' I would as soon think of farming without plowing as to try to sell pigs without advertising in KANSAS FARMER. I am having a good trade and have closed out nearly all the 1894 crop of pigs. I have bred twenty-five sows, mostly aged, for spring and summer business, and am expecting some nice pigs. I have added two new boars, Charley Curtis and Gov. Morrill, to the herd for new blood, and hope they will be as distinguished in their line as the illustrious gentlemen whose names they bear."

DR. ORR'S BOOK.—Readers of the KANSAS FARMER will be pleased to know that arrangements have been made whereby they can obtain this concise and well nigh invaluable "Farmer's Ready Reference or Handbook of Diseases of Horses and Cattle" in combination with this paper at a slight saving in cost.

The separate prices of these are: Dr. Orr's Book.....\$1.50 KANSAS FARMER, one year..... 1.00 Total.....\$2.50

Two dollars sent either to the Kansas Farmer Co., Topeka, or to Dr. S. C. Orr, Manhattan, will secure both, making a saving of 50 cents.

All our readers interested in stock hog-raising should endeavor to raise a little better grade and more profitable hog, and one of the essential things to do in order to accomplish this is to secure better blood and more of the early-maturing inherited tendency in the individual to take on fat and mature much earlier than does the shiftless scrub. Breeders that make a specialty of raising the latter hog have succeeded in producing just what every general farmer should have. It's the dollar in the shortest possible time nowadays. This being the case, resolve to start right and attend the Winterscheidt and Vansell reduction sale, Wednesday, February 14, at Horton, Brown county. About seventy-five head, consisting of tried brood sows, young sows and gilts, including a few good boars, will go to the highest bidder. This draft comes from three herds, whose several herd boars are the equal of any in all the West. The professional swine-breeder will find the general make-up and individuality of the sale offerings first-class. The day following, the Evans-Worley reduction sale takes place at Fairview, in northwest Brown county, and it would indeed be strange if the prospective buyer could not find just what he wanted in all five of these noted herds.

Next week—Thursday—will be St. Valentine's day, also the day on which the Evans-Worley combination sale of Poland-China swine will take place at Fairview, Brown county, Kansas. Our field man reports both herds in the best of condition and the prospects bright for a successful sale. Eighty-five head have been catalogued and most of them safe in pig by the prize-winning boars, Swi Tecumseh 11929 S., Billy Wilkes 9307, Master Wilkes 21625, Anxiety 2025 A., sired by Tecumseh Butler 17949 A., he by Butler's Darkness 13055 A. and he by King Butler 620 S. Another good one is Combination U. S. 13408, that, as his name implies, is a combination of Black U. S. and a grandson of Guy Wilkes 2d 17777 on the side of his dam. The young boars included in the offerings are just what every hog-raiser should have and up to the highest class demands of the Poland-China standard. The sale will be held under cover under the direction of Col. Jas. W. Sparks, the very successful Missouri auctioneer. Good hotel accommodations have been provided for the visitor, and Fairview, being situated on the Rock Island railroad, it is but a half-hour's run from Horton, where those that attend the Winterscheidt-Vansell sale the day before may attend the sale at Fairview and have the opportunity of selecting animals from five of the best herds in all the West.

Every farmer and stock hog-raiser ought to study how best to make his business more remunerative, if for no other reason than that of raising the standard of the

possibilities of swine husbandry. It is safe to say that no class of live stock raised on the farm is more profitable, taking one year with another, than is a good, thrifty, early-maturing herd of swine, and it being true, too, that the general farmer is not so situated that he can attend to all the necessary details in breeding the kind most desired, then, he must of necessity depend on the professional breeder who devotes his time, labor and money in producing the profitable kind. Kansas soil, its products, climate and location make it possible to be the second State in the Union with chances for a strong first place in the production of swine products. Enough success has already been achieved, both in the show yard and great market centers, to warrant the greater effort that ought to be made to attain this position for the State and better financial condition of the husbandman. A few men scattered over the State's great corn-producing area have already demonstrated that the Kansas hog can most surely be made more profitable, and no one has been more successful than has Mr. John A. Dowell, of Robinson, Brown county, who has already announced his coming reduction sale in former issues of the KANSAS FARMER, and we take pleasure in giving our readers some details concerning the one hundred head of Poland-Chinas that will be offered at public sale, on Thursday, February 23, 1895. The major portion of the females have been bred to the great Onward Wilkes 8981 S., sired by the \$750 boar, George Wilkes. A goodly number were bred to a very highly-bred sire, Black U. S. Wilkes, that came to Mr. Dowell's herd from the well-known Missouri breeder, Mr. M. E. Moore, of Cameron. This boar was bred by Lambing & Son, of West Liberty, Iowa. He was got by the noted Guy Wilkes 2d and out of Black U. S. Blaine. Another chief lieutenant came from H. J. Cooper, of Davenport, Iowa, and was sired by General Wilkes and out of Agness. About eighty head have been bred to the aforementioned boars, whose breeding cannot be excelled in the United States. About forty of the females are over 1 year of age and the remainder belong to spring and summer farrows of 1894. The visitor will find the general make-up to be of extra fine breeding, size and finish. Among them is Missouri Star 6th 18610 S., Queen of Rosedale 18611 S., Lady Gip 18612 S., Equal 18609 S. These sows were purchased of the well-known Missouri breeders, W. J. Miller & Sons, of Windsor, and came bred to Stem Miller and Windsor King. One that is sure to attract special attention is Black Daisy 26082 S., now in her two-year-old form, and out of Missouri Star 6th. Two others, Kate Miller 26083 S. and Sally 26084 S., followed by Dowell's Choice 26085 S., make a trio that every breeder would like to have. Having been sired by the Missouri boars, Stem Miller or Windsor King, insures their choice breeding. Another one, Kansas Star by King I. X. L. 14749 O., 5551 S., and bred by Levi Arnold, of Plainsville, Mich., with a nice string of young sows sired by Black Tom 11174 S., that was bred by Mr. Arnold. A few of the two-year-old sows were sired by Black Boy 11173 S., that was bred by Jacob Heiserman, of Postoria, O. The prospective Poland buyer will find a nice lot of youngsters, of both sexes, 3 to 4 months old. Onward Wilkes 8981 S., having been used strongly in the herd and proven successful, will be included in the offerings on sale day. Individually he is of the best, and sons and daughters, both in the East and here on the farm, are testimony of his great worth as a sire. Mr. Dowell refers the past record of Onward to Cantrall & Garrett, of Waynesville, Ill., and to Boyd & Berry, of Rushville, Ind. Space forbids that more extended description that the offerings merit that are now coming on at the Rosedale stock farm. The sale will be held under cover, hence no postponement will occur on account of the weather. The usual sale's lunch will be spread at 11 o'clock a. m., in order for the sale to be opened promptly at 12 by the well-known auctioneer, Col. F. M. Woods.

Six Thousand Square Miles of Wealth.

The vast fertile valleys of the two Indian reservations in northeastern Utah, soon to be open to settlers comprise about 3,500,000 acres of the finest agricultural and grazing lands. The direct line to Utah and Uncompahgre reservations is by the Union Pacific system via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

"Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery including the famous Olden fruit farm of 3,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address, J. E. LOCKWOOD, Kansas City, Mo.

When the Kicks Come In

Is not the title of a new song, nor does it refer to the backward action of that much-maligned animal, the mule. It is a phrase used by the inhabitants of Oklahoma to designate the approaching opening of the fruitful acres of the Kickapoo Indian reservation. If you wish to find out all about the Kickapoo lands, as well as those belonging to the Wichita and Comanche tribes—where cotton, wheat and fruits will pay handsomely—ask G. T. Nicholson, G. P. A., Santa Fe Route, Topeka, Kas., for a free copy of Oklahoma folder.

LIVE STOCK AUCTIONEERS.

J. M. HOSMER, Live Stock Auctioneer, Maryville, Mo. Fine stock a specialty. I respectfully solicit your business and guarantee satisfaction. Terms reasonable. Secure dates early.

F. M. WOODS, Live Stock Auctioneer, Lincoln, Neb. Refer to the best breeders in the West, for whom I do business. Prices reasonable and correspondence solicited.

JAS. W. SPARKS, Live Stock Auctioneer, Marshall, Mo. Sales made everywhere. Reference to the best breeders in the West, for whom I have made sales. Catalogues compiled and printed. Terms reasonable.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer. Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

S. A. SAWYER, FINE STOCK AUCTIONEER—Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Compile catalogues. Retained by the City Stock Yards, Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

WILL YOU distribute Circulars and samples for us? No canvassing, salary and expense to travel. Send stamp. ADVERTISING BUREAU, 447 6th Ave., NEW YORK CITY.

FOWLS AND EGGS 17-STANDARD BREEDS—17 All eggs sold from birds scoring 90 points and upwards. Our large Catalogue mailed on receipt of 4 cents. Circulars Free. F. S. STAHL, Quincy, Illinois.

WE HAVE NO AGENTS but sell direct to the consumer at wholesale prices. Ship anywhere for examination before sale. Everything warranted. 100 styles of Carriages, 50 styles of Harness, Saddles, Fly Nets, etc. Send 4c. in stamps, postage on 112 page catalogue. Elkhart Carriage and Harness Mfg Co., Elkhart, Ind. Mention Kansas Farmer when writing us.

TOPEKA SEED HOUSE. Established in 1876 By S. H. DOWNS, 306 Kansas Avenue. All kinds of Garden, Field and Flower Seeds, Flowering Bulbs, Plants, Fruit Trees and Grape Vines. Also supply GARDEN TOOLS. Address S. H. DOWNS, Topeka, Kansas. Send for Catalogue.



SEED CORN

25 TRIED AND TRUE SORTS. An old customer, Mr. E. D. Sappington, Nelson, Mo., says: "My yield has been increased at least one-third by raising your Champion White Pearl Corn." This corn does extra well in Kansas. Professor Shelton, of Kansas Experiment Station, says: "Sorts like Champion, Learning, Pride of North, etc., yield well, good quality, ripen early. For these reasons are good for Kansas." My new CHAMPION YELLOW DENT CORN also does exceedingly well in Kansas. PRICES LOW, QUICK SHIPMENT. Many fine sorts of Corn, Wheat, Oats, Potatoes, Artichokes, etc. My new Catalogue and sample of Champion White Pearl Corn will be mailed free, if you will answer quickly and send me addresses of three friends whom you have known to send off for seeds. Write to-day. Address J. C. SUFFERN, Seed Grower, Voorhies, Ill.

APPLE TREES Commercial sorts. Grape Vines and a general nursery stock. Price lists free. Kelsey Nursery Co., St. Joseph, Mo.

TESTED SEEDS

Plant Tested Garden, Flower and Farm Seeds and be sure of a good crop. Our stock is complete and the quality is unsurpassed. Send for our Free Illustrated Catalogue of Seeds, Plants, Bulbs, Tools, Etc. W. W. BARNARD & CO., Chicago, (Successors to Hiram Sibley & Co.) 186 E. Kinzie St.

OUR LINCOLN OATS



has again proven to be the best Oats which is now grown. From 7 bu. of seed in 1892 there were 817 bu. and 21 lbs. harvested or 116 bu. from 1 bu. of seed sown. Last year (1894) it yielded everywhere from 20 to 45 bu. more per acre than any other kind of Oats, although it was a very unfavorable year. We quote here but a few of the many hundreds who wrote us the past year: Mr. C. FINK, Franklin Co., Ia.—We sowed 3 acres of your Lincoln Oats separate, and it yielded 60 bu., 68 bu. and 65 bu., while other oats only yielded 30 to 40 bu. Mr. L. ALBERS, Will Co., Ill.—From 1 bag (2 1/2 bu.) of your Lincoln Oats, sown on one acre, I threshed 70 bu., machine measure, but it weighed out 88 bu. Mr. J. BOSSEN, Clinton Co., Ia.—Threshed 20 bu. more per acre from your Lincoln Oats than from all other kinds. Mr. E. F. EISNER, Washington Co., Wis.—Your Lincoln Oats is the best oats which is now grown. I threshed 22 bu. more per acre than from other kinds sown side by side. So write many hundreds of our brother farmers who had crops like these the past unfavorable year. Our Lincoln Oats will do as well with you, and if you can average 25 bu. more per acre than from other kinds of oats, it soon pays well to sow nothing but our Lincoln Oats. Our prices this year are reasonable: 1 bu., \$1.10; 2 1/2 bu., \$2.50; 5 bu., \$4.75; 10 bu., \$9.00; 20 bu., \$17.00. Write for our new catalogue. We send it free to all farmers. FARMER SEED CO., Seed Growers, Faribault, Minn.

THE STRAY LIST.

- FOR WEEK ENDING JAN. 23, 1895. Labette county—J. F. Thompson, clerk. MULE—Taken up by A. D. Sanders, in Hackberry tp., December 13, 1894, one mule, fourteen hands high, brown, no marks; valued at \$20. Bourbon county—G. H. Requa, clerk. HORSE, MARE AND COLT—Taken up by A. C. Fulton, Scott tp., January 11, 1895, one dapple iron-gray horse, sixteen hands high, about 6 years old; valued at \$20. One dark brown mare, fifteen hands high, 7 or 8 years old, white hind feet; valued at \$20. One sucking colt, nearly same color as above-described mare; valued at \$3. FOR WEEK ENDING JAN. 30, 1895. Geary county—P. V. Trovinger, clerk. COW AND HEIFER—Taken up by D. R. Grlgk, in Smoky Hill tp., October 19, 1894, one red dehorned cow, about 2 years old, valued at \$14; one red dehorned heifer, 1 year old, valued at \$10. Greenwood county—J. F. Hoffman, clerk. STEER—Taken up by G. W. Holman, in Janesville tp., P. O. Hamilton, January 7, 1895, one black yearling steer, some white, very small crop off right ear; valued at \$12. Morris county—June Baxter, Jr., clerk. HORSE—Taken up by Sam Anderson, in Valley tp., P. O. Dunlap, one bay horse, 10 years old, tip of right ear off, white spot in forehead; valued at \$8. Labette county—J. F. Thompson, clerk. TWO MARES—Taken up by W. P. Fagan, in Richland tp., September 11, 1894, one roan mare, 6 years old, fourteen hands high, valued at \$25; one bald-faced bay mare, 5 years old, fifteen and one-half hands high, valued at \$25. Montgomery county—John W. Glass, clerk. HORSE AND TWO MARES—Taken up by P. M. Lee, in Cherokee tp., December 17, 1894, one light brown horse, 6 years old, three white feet, star in forehead; one brown mare, 8 or 9 years old; one bay mare, 3 years old. FOR WEEK ENDING FEBRUARY 6, 1895. Cherokee county—P. M. Humphrey, clerk. MULE—Taken up by Bernard Kennedy, near Scammon, in Mineral tp., December 25, 1894, one sorrel male mule, black mane and tail, four feet six inches high, 3 years old, had on halter; valued at \$15. Rice county—Robert Findlay, clerk. TWO STEERS—Taken up by John H. Bowman, in Pioneer tp., January 2, 1895, two steers, weight about 800 pounds each. One red, crop off right ear; one red, under-bit in left ear, white face, indistinct brand; valued at \$24.

Marry This Girl--Somebody!

MR. EDITOR:—I stained a blue silk dress with lemon juice. What will restore the color? I am making lots of money selling the Climax Dish-Washer. Have not made less than \$10 any day I worked. Every family wants a dish-washer, and pay \$5 quickly when they see the dishes washed and dried perfectly in one minute. I generally sell at every house. It is easy selling what every family wants to buy. I sell as many washers as my brother, and he is an old salesman. I will clear \$3,000 this year. By addressing J. H. Nolen, 60 West Third avenue, Columbus, O., any one can get particulars about the dish-washer, and can do as well as I am doing. Talk about hard times; you can soon pay off a mortgage, when making \$10 a day, if you will only work; and why don't people try, when they have such good opportunities? MAGGIE R.

KANSAS FARMER sewing machine—the best—\$20.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER.

RUBBING MANE.—I have a horse that rubs his mane off as fast as it grows out. What can I do?

Answer.—Take of castor oil, 12 ounces; sulphur, 4 ounces; carbolic acid, 4 drachms; mix well together and rub a little of it into the roots of the mane twice a week.

SORE ON COW.—My neighbor has a cow, 7 years old, that has had a sore on the front corner of her left eye for nearly a year.

Osawkie, Kas.

Answer.—From your description of the sore, and the length of time it has been there, it seems to be of a malignant nature, and, if curable at all, will most likely require an operation, and then probably a careful burning with caustic; but the eye is too delicate an organ to be tampered with by a novice.

BITTER MILK—WORMS.—(1) I have a cow due to calve March 1 that gives bitter milk and is failing in quantity. I began to feed her bran and in a few days her milk was clotted and her teats seemed sore.

Answer.—(1) Let your cow go dry and do not give her too much heating food or she will be troubled with garget when she comes in. (2) Inject into your mare's rectum, twice a week, a mixture of 4 ounces of raw linseed oil and 1 ounce of turpentine.

Horse Owners! Try



GOMBAULT'S Caustic Balsam. The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Feb. 4.—Cattle—Receipts since Saturday, 4,878; calves, 89; shipped Saturday, 1,371; calves, 215. The market opened steady and was active.

Table with columns for DRESSED BEEF STEERS, listing various grades and prices.

Table with columns for TEXAS AND INDIAN STEERS, listing various grades and prices.

Table with columns for COWS AND HEIFERS, listing various grades and prices.

Table with columns for STOCKERS AND FEEDERS, listing various grades and prices.

Hogs—Receipts since Saturday, 3,671; shipped Saturday, 193. The market opened steady and closed 50 lower.

Table with columns for Hogs, listing various grades and prices.

Sheep—Receipts since Saturday, 1,071; shipped Saturday, 498. The market opened good and 10c higher, active.

Table with columns for Sheep, listing various grades and prices.

Horses—Receipts since Saturday, 45; shipped Saturday, 44. The market was quiet. There is a good supply of horses on sale.

Table with columns for Chicago Live Stock, listing various grades and prices.

Chicago Grain and Provisions. Feb. 4. Opened High'st Low'st Closing

Table with columns for Chicago Grain and Provisions, listing various grades and prices.

St. Louis Grain. St. LOUIS, Feb. 4.—Receipts wheat, 1,950 bu.; last year, 25,100 bu.; corn, 30,800 bu.;

Table with columns for St. Louis Grain, listing various grades and prices.

Kansas City Produce. KANSAS CITY, Feb. 4.—Eggs—Receipts light; the market is active and the feeling steady;

Table with columns for Kansas City Produce, listing various grades and prices.

64c; roosters, 15c; dressed chickens, 67c. Turkeys, firm; old gobblers, 4 1/2c; young, 5c; mixed, 5 1/2c; hens, 6c; dressed turkeys, 6 1/2c.

Butter—Receipts lighter; choice grades are firm; extra fancy separator, 20 1/2c; fancy, 18 1/2c; fair, 17c; dairy, fancy, 15c; fair, 12 1/2c; fancy roll, 12 1/2c; fair roll, 10 1/2c; packing, steady, 6 1/2c; old, 5c.

Fruit—Apples, scarce; the market is quiet and firm; standard packed ranged from \$3.00 to \$3.50 per bbl.; others, \$2.50 to \$3.00; fancy stand, \$3.50 to \$4.00; Jettings, \$2.00 to \$2.50 per bbl.

Vegetables—Potatoes, receipts light; market quiet and barely steady; ordinary kinds, common, 45c to 55c per bu.; sweet potatoes, red, 15c to 20c; yellow, 25c to 30c; Utah and Colorado, choice, 55c to 60c per bu.

VETERINARY SURGEON.

DR. U. B. MCCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail.

TWO-CENT COLUMN.

"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion.

WANTED—Millet, cane, Kafir and Jerusalem corn. Send samples. Kansas City Grain and Seed Co.

IRRIGATION PUMPS—For prices of irrigation pumps used by the editor of KANSAS FARMER write to Prescott & Co., Topeka, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lary backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

FARM LOANS—I have arrangements to negotiate loans with funds of a life company at a low rate of interest on long time. Correspondence solicited at 110 West Sixth Ave., Topeka, Kas. Milo Norton, Agent.

WANTED—Car-load of 1894 alfalfa, German millet, cane and Evergreen broomcorn seed. Address Geo. A. Arnold, Box 146, Kearney, Neb.

FOR ALFALFA SEED, DIRECT FROM THE grower, address E. G. Jones, Syracuse, Kas.

DETECTIVES—We want a reliable man in every locality to act as private detective under instructions. Experience not necessary. Send for particulars. American Detective Agency, Indianapolis, Ind.

CLOSING OUT—Entire stock of Hamburgs, incubators, brooders, bone-mill, clover-cutter, etc., on account of death of wife. J. P. Lucas, Topeka, Kas.

CHOICE BARRED AND WHITE PLYMOUTH Rock cockerels; also White Holland turkeys. Mrs. E. P. Mason, Belle Plaine, Kas.

STOCKS OF MERCHANDISE!—A large list of them, from \$300 to \$50,000 each. Ranches, farms, city property for sale or exchange. John G. Howard, Topeka, Kas.

SEND FOR PRICE LIST OF SURPLUS NURSERY stock, including apricots, quinces, dewberries, rhubarb, lilacs, privets, Japan scarlet quinces, African tamarix, trumpet vines, wisterias, roses, lris, honeysuckles and Savon junipers. I also have a general stock of fruit trees, small fruits, etc. B. P. Hannan, Arlington, Reno Co., Kas.

FOR SALE—Five hundred bushels cane seed. Wm. Hamacher, Lane, Kas.

FOR SALE—Registered yearling Holstein and Jersey bulls. Prices reasonable. William Brown, Lawrence, Kas.

INFORMATION ABOUT SOUTH FLORIDA FURNISHED free. J. H. Tatum & Co., Bartow, Fla.

FOR SALE—Pure-bred English Buff Cochin cockerels, \$1 each, if taken before March 1, as I do not wish to move them. Address Peter Gray, Bendena, Kas.

600 BUSHEL FRESH CANE SEED FOR SALE—Own raising. Sample. R. B. Cornish, Owego, Kas.

3,000 BUSHEL SEED SWEET POTATOES! For sale. Ten best kinds. Also plants in their season, at bed-rock prices. Inquire of N. H. Fixley, Wamego, Kas.

RUST-PROOF SEED OATS—Well cleaned, sure to crop and heavy yielder where others fail. Straw bright and strong, grain plump and matures early. Two bushels upwards. 50 cents per bushel, f. o. b. Send postoffice or express money order. H. Booth, Peabody, Kas.

STRAWBERRY, RASPBERRY, BLACKBERRY and rhubarb plants for sale. J. C. Banta, Lawrence, Kas.

MOUSE-COLORED JACK FOR SALE—Fourteen hands three inches high. Good breeder. Must be sold to dissolve partnership. For particulars address John Bollin or D. Spencer, Kickapoo, Kas.

MISSOURI FARMS FOR SALE—Stock, grain, fruit. Good homes near St. Louis, cheap. Write for list. Bennett & Hatten, Sullivan, Mo.

ANY ONE—Wishing finely-bred jacks and trotting stallions on easy terms, should address John Wiswell, Columbus, Kas., for descriptive circular.

FOR SALE—Large, nicely-marked young Light Brahma roosters, \$1.50. Cockerels, 75 cents each. Eggs \$2.50 per hundred. Mrs. N. VanBuskirk, Blue Mound, Kas.

SUB-IRRIGATION PIPE—Do not be disappointed for not ordering 100 feet of 3/4-inch galvanized sheet-iron pipe. Cost, \$1.25. Address Alex Richter, Hollywood, Kas.

CHOICE EARLY OHIO SEED POTATOES—Fifty cents per bushel in sacks or barrels. Early Amber sorghum cane seed, 85 cents per bushel, in sacks. Millet seed, 85 cents per bushel, in sacks. Carloads less. Address Topeka Produce Co., 304 Kansas Ave., Topeka, Kas.

RED CLOVER SEED—For sale by W. A. Johnson, Pauline, Shawnee Co., Kas.

TWO-CENT COLUMN—CONTINUED.

50 LIGHT BRAHMA COCKERELS—Folch strain, that I will sell for \$1 each if taken soon. J. E. George, Burlingame, Osage Co., Kas.

WANTED—Yellow and white millo maize seed by F. Barteldes & Co., Lawrence, Kas.

WANTED—Sale bills, horse bills, catalogues and other printing. A specialty at the Mail Job printing rooms, 900 North Kansas Ave., North Topeka.

SHORT-HORN BULLS FOR SALE—Sired by a son of Imp. Thistletop. Address M. Waltire, Fountain, Kas. Station Carbondale.

FOR SALE—We have farms for sale in almost every county in eastern Kansas and southwest Missouri; it will pay you to investigate our "cash rent plan" of selling farms; we can give you better terms than anybody; farms improved; possession soon; write at once; farms going fast. J. H. Brady, Topeka, Kas.

WANTED—Active salesmen to handle our Kansas home-grown nursery stock. Salary or commission. Good men can make good money. L. H. Coorse, Lawrence, Kas.

WHEN YOU GO TO TOPEKA STOP AT THE St. Nicholas Hotel, first door north of post-office. Re-opened and newly furnished throughout. Good meals, 15 cents; nicely furnished rooms, 25 and 50 cents. A. T. Pigg, proprietor.

SWEET POTATOES—Sent out to be sprouted on shares. No experience required. Directions for sprouting free. T. J. Skinner, Columbus, Kas.

CHEAP FOR SIXTY DAYS—Great big Light Brahmas and beautiful Black Langshans. Wm. Plummer, Osage City, Kas.

SWEET POTATOES—Sent out to be sprouted on shares. No experience required. Directions for sprouting free. T. J. Skinner, Columbus, Kas.

NO. 1 EASTERN KANSAS ALFALFA SEED.—C. S. Cross, Emporia, Kas.

BUFF COCHIN AND LIGHT BRAHMA COCKERELS and pullets for sale at \$1 each where more than one is taken. Mrs. E. E. Bernard & Son, Dunlap, Kas.

FOR SALE—One thousand shocks of corn and some other feed. Will furnish timbered feed lot with plenty of water. Apply at farm, ten miles northwest, or address J. Z. Howe, Burlingame, Kas.

FOR SALE—One hundred bushels Lincoln seed oats. Produced thirty-five bushels to one bushel seed with but one shower last year. Price, \$1 per bushel, sacks included, f. o. b. J. J. Achenbach, Washington, Kas.

ONE HUNDRED AND FIFTY BUSHEL RED Kafir corn for sale. Address Frank Sternberg, Ellsworth, Kas.

MY INITIALS ARE A. W. My last name is Themanston; I reside at Wathens, Kas. I am a breeder of Poland-China swine. Send for one. For further particulars see card in Breeder's Directory elsewhere in this paper.

FOR EXCHANGE—A quarter section of land in Stanton county, Kansas, clear title, for thoroughbred or high-grade Jersey cattle. Address, stating particularly what you have to offer, E. G. Jones, Syracuse, Kas.

BEE-KEEPERS—Write for sample copy of the Kansas Bee Journal, Miller & Dunham, publishers and dealers in bee-keepers' supplies, Topeka, Kas.

MAMMOTH BRONZE TURKEYS—Large and fine. Toms, \$2; hens, \$1.50. J. R. Killough, Richmond, Kas.

WANTED—Buyers for Large English Berkshires. One hundred pure-bred pigs, farrowed in March and April, are offered for sale at from \$10 to \$15 each. Farm two miles west of city. Riverside Stock Farm, North Topeka, Kas.

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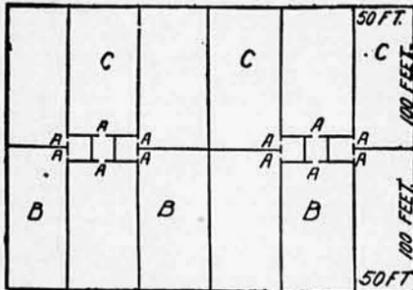
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The plan suggested in the illustration is one of the changeable yards with separate buildings, each building being divided into three apartments. The dimensions may be as preferred, but with yards 50x100 feet, the space taken up will be about an acre and a half. The house would necessarily be 16x50 feet, or about 16 feet square for each apartment. The openings from the houses to the yards are shown at A A A, etc. The two middle yards will be occupied by the fowls of the middle apartment, and the yards on the right and left by the fowls in the apartments on those sides. The yards marked B may be occupied by the fowls, while grass or any kind of green food is growing in the yards marked C. When the green food is ready the fowls are turned into those yards, and the other yards are then plowed and seeded down. By this method green food is always growing,



GROUND PLAN OF HOUSES AND YARDS.

and the droppings turned under. As it is not necessary for the green food to reach a height of but a few inches the changes will be frequent. A novelty in the arrangement is that the fowls are not opposite to each other in the different yards, and hence quarreling or fighting through the fence is thus avoided, a space of 50 feet separating the flocks. Any form of house may be used, and sixteen hens and a male may be kept in each apartment, thus allowing about one hundred fowls to the entire space. This plan gives 16 feet in the poultry house to each fowl, while the changeable yards not only supply green food, but give fresh ground and clean yards, as well as ample room and a greater variety of food.—Farm and Fireside.

POULTRY DUST BATH.

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Nearly if not quite all species of fowls use the dust bath. They choose a spot of fine, dry soil and scrape little holes, where they pulverize the dirt until it is reduced to a fine dust. In this they roll and shake their feathers and allow the dust to penetrate to the skin. It appears that in some way this is deleterious to the parasites which infest the plumage or the skin. It has been said by some naturalists that as all insects breathe—not through the mouth as warm-blooded animals do, but through little openings in the skin situated in rows along the side of the body—the particles of dust close these openings, so that parasites die of suffocation as quickly as a quadruped would if held under water. This has been denied by some scientists, who say that these holes are defended by a very delicate but effective apparatus that makes it impossible for any foreign matter to enter, no matter how minute it may be. Be this as it may, I know that wild birds take dust baths whenever the weather and the state of soil permit. Nature is a good guide, and whether the dust bath is for the prevention and absorption of effete matter which has become too odorous, or whether it acts as an insecticide, it is certainly advantageous to fowls or they would not use the dust bath. I say that the careful poultry keeper will provide dust boxes for birds, filled with fine dust, coal ashes, thoroughly dried and mixed with insect powder. It makes but little difference which of these varieties of soil you use; the principal part is to have it clean. That is, not a highly manured soil, but a comparatively unfertile one is preferable. The next qualification is that it must be perfectly dry,

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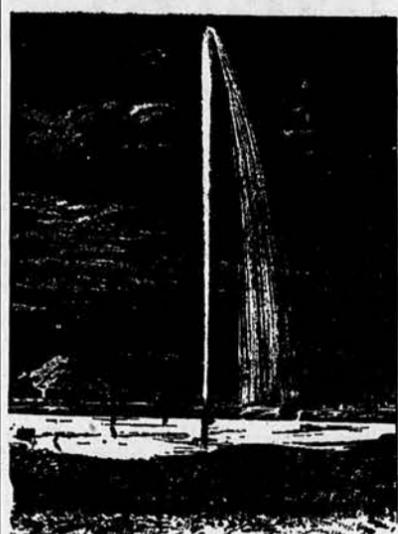
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JOHN A. DOWELL'S HERD REGISTERED POLAND-CHINA SWINE. Robinson, Brown Co., Kas. 130 head, all ages, headed by Onward 8081 S., sired by George Wilkes. He is assisted by Tecumseh Wilkes, sired by General Wilkes 21927. The females belong to the best strains. Come or write.

W. S. ATTEBURY, Rossville, Kansas. BREEDER OF Chester Whites Exclusively. Young stock at all times. Satisfaction guaranteed.

BROWN COUNTY HERD, PEDIGREED POLAND-CHINAS. ELI ZIMMERMAN, Hiawatha, Kas. 46 brood sows in herd, headed by Black U. S. Nemo (Vol. 9), Model Wilkes (Vol. 9), Sunset Chip (Vol. 9) and Billy Bundy (Vol. 9). Female lines: All Right, Short Stop, King I.X.L. Wilkes, Free Trade, Wana-maker. Aged sows, bred gilts and fall pigs for sale.

PRAIRIE COTTAGE FARM Home of the Chester White Hogs. C. J. HUGGINS, Louisville and Wamego, Kansas. Have for sale brood sows, two boars, also a nice lot of spring pigs of both sexes, the get of my herd boars, Ben Buster 6189 and Jerry Simpson 6161. Correspondence and inspection invited. Prices reasonable.

PLEASANT VIEW STOCK FARM. J. A. WORLEY, Sabetha, Brown Co., Kas. REGISTERED POLAND-CHINA SWINE Short-horn Cattle and Light Brahmas. 100 P. ands, headed by Anxiety 20251 A., Combination U. S. (Vol. 9), American's Equal 12279 S. and a son of Bolivar 24707. Eggs in set on \$1.50 per setting of 15. Inspection and correspondence invited.

CLOVER LAWN HERD POLAND-CHINAS. Young sows and boars and spring pigs for sale. Prices reasonable. Stock first-class. W. N. D. BIRD, Emporia, Kas.

MAINS' HERD OF POLAND-CHINAS. JAS. MAINS, Oskaloosa, Kas. (Jefferson County.) A grand lot of sows bred to Monroe's Model, Excel, McWilkes Jr. and Storm Cloud 2d. Also all other classes and ages of stock for sale. I guarantee safe arrival and stock as represented or money refunded. Breeding stock recorded in Ohio P. C. R.

E. E. AXLINE, OAK GROVE, MO., (Jackson Co.) Poland-Chinas. Breeder and shipper pure bred registered stock. Dugan 10213 S. and Western Wilkes (Vol. 9) head the herd. Write or come.

SWINE. BERT WISE, breeder of Poland-China Hogs, Holstein Cattle and Barred Plymouth Rock Chickens of choicest strains. Butler's Darkness No. 6846 S. and Ideal U. S. Nemo at head of swine herd. Only choice stock shipped on order. Sows bred and a few extra good young boars for sale. Three are out of my Orient sows. Write your wants. Satisfaction guaranteed. BERT WISE, Reserve, Brown Co., Kas.

Evergreen Herd Poland-Chinas. J. F. & P. C. Winterscheidt, Horton, Brown Co., Kas. 150 in herd. Boars in service: Admiral Chip 7919 S., George Wilkes Jr. 11893 S., Corbett 11859 S. and Winterscheidt's Victor (Vol. 9). 45 sows bred for coming pig crop. 10 young boars and 40 gilts ready to go. Write or come.

TOWER HILL HERD PEDIGREED POLAND-CHINAS. B. R. ADAMSON, Prop., Ft. Scott, Kas. 25 highly-bred brood sows of best strains, headed by Black Dandy 8809 S., Black Stop 10550 S. and Joker Wilkes 12652 S. About 100 selected individuals sold this season. 25 youngsters coming on now for choice. Write or come and visit my herd.

P. A. PEARSON, Kinsley, Kansas, Breeder of Poland-China Swine All ages for sale. Herd headed by Dandy Jim Jr. and Royalty Medium, a son of Free Trade.

STANDARD POLAND-CHINA HERD. CHAS. A. CANNON, Proprietor, HARRISONVILLE, CASS COUNTY, MISSOURI. Breeder and shipper of registered Poland-China swine of the best strains. Herd headed by Chow Chow 9938 S., assisted by a Black U. S. son of Imitation 27185 O., also a son of Tecumseh Jr. 10207 O. 220 head in herd. Young boars and gilts yet on farm. Write or come and visit me.

J. R. KILLOUGH & SONS, Richmond, Kansas, Breeders of Poland-China Swine The very best strains. Nothing but first-class stock will be shipped to any. Come and see us or write.

BLACK U. S. AND WILKES 300 head, registered or eligible. Boars in service, Modest Duke 12653 S., Wilkes Tecumseh 11760 A., White Face 12081 O. and Osgood Dandy Wilkes 12708 S. 60 young boars; 80 gilts. J. R. CAMPBELL & SON, Avilla, Jasper Co., Mo.

R. S. COOK, Wichita, Kas., Breeder of Poland-Chinas. Won seven prizes at World's Fair—more than any single breeder west of Ohio.

HOLSTEIN-FRIESIANS Carome 2d's Jacob Prince of Twisk 404 heads herd, backed with butter record of over 35 lbs. in 7 days. Young bulls for sale. Red pigs in pairs, heavy bone, good color, dams often farrowing 14 pigs. Males DUROC JERSEY REDS ready for service. Poland-China males ready for use. Pigs of all ages in pairs not related. Young gilts, either breed, bred if desired. Pigs shipped at my risk. Pedigrees furnished. M. H. ALBERTY, Cherokee, Crawford Co., Kas. Mention FARMER, AND POLAND-CHINAS.

ELM BEACH STOCK FARM IRWIN & DUNCAN, Wichita, - Kansas, Sedgwick Co. Breed and have for sale Bates and Bates-topped Short-horns -Waterloo, Kirklevington and other fashionable families. Also breed and have for sale the best thoroughbred Poland-Chinas that can be obtained. Write or come and see.

SUNNY SLOPE FARM, Emporia, Kas. 200 head of Poland-Chinas, headed by LONGFELLOW 29885 O., who has the best Columbian record of any boar west of the Mississippi. 50 head of Poland-China gilts sired by Longfellow, bred to the following noted boars: J. H. Sanders, Jr., by J. L. Sanders 27219 O., dam Graceful F. 63408 O.; Hadley, Jr., sired by Hadley 27305 O., dam Samboline 8th 59052 O.; Sir Charles Corwin, by Latest Fashion 27305 O., dam Josie Wilkes 1st 69198 O. Combining the blood of Black U. S., Wilkes and Tecumseh, combining the leading and show combination and fashionable blood now sought for by breeders. 100 Berkshires, headed by the well-known boar, MAJOR LEE 31199. We have twenty-five gilts, bred from him, to General Lee, of Great breeding, and also to Royal Peerless the Gentry. 200 head of fashionably bred Herefords. Why not come to the fountain-head for a brood sow? Call on or address H. L. LEIBFRIED, Manager.

DOGS. HIGHLAND KENNELS, TOPEKA, KAS.—Great Danes and Fox Terriers. The first prize and sweepstakes winner, Great Dane King William, in stud. Dogs boarded and treated for all diseases; also, remedies by mail. Correspondence solicited.

COTTON SEED MEAL! Best and cheapest feed for fattening stock and quick results. DIRECT FROM MILLS. Pure meal, lowest prices, prompt shipment, car lots. W. S. NICHOLSON, DEALER IN GRAIN & FEED, Room 2, Western Storage Building, Eleventh and Santa Fe streets, Kansas City, Mo.

Farmers, Spay Your Sows For fall fattening. Also your Nannies, Ewes and Gilt Dogs, with Howsley's Spaying Mixture. Easily used, quick, absolutely certain and safe. Price, \$1 per bottle; \$2 half bottle. One bottle spays one hundred head. Write for testimonials and particulars. THE HOWSLEY SPAYING CO., Kansas City, Mo., or New Orleans, La.

SEEDS. ALFALFA SEED A SPECIALTY. Cane and Millet Seeds, Kafir Corn and Jerusalem Corn. Seed Wheat and Oats. All crops of 1894. Write for "How to Sow Alfalfa," and prices on seeds. GARDEN CITY, KANSAS.

KANSAS CITY GRAIN AND SEED CO. offer large stocks Seed Corn, Cane Seed, Kafir Corn, Millet, Spring Barley, Flax Seed, Seed Oats, Linseed Meal and Cake. Our Iowa Yellow Eureka, Iowa White Eureka, Illinois Imp. Golden Beauty, Iowa Early Dent, Ninety-day Corn, Imp. Ch. White Pearl, St. Charles White, selected, tipped, sacked, 10 oz., 3 bu. burlap sacks, even weight, \$3 per sack. Special prices car lots. Finest seed corn offered; sold, full of oil and vitality; send 15c each for sample ears, postage prepaid, deducted from first order. Address Kansas City Grain and Seed Co., Kansas City, Mo., Buyers and Sellers of Grain and Seeds. References: This paper; Midland National Bank, Kansas City.

KANSAS SEED HOUSE. EVERYTHING IN THE SEED LINE.

Our Specialties: Seed Corn, Tree Seeds, Onion Seeds and Sets, Alfalfa, Sacaline, Lathyrus Silvestris, Sandvetches, Spurry, Kafir and Jerusalem Corn, and other new forage plants for dry and arid countries. NEW CATALOGUE MAILED FREE ON APPLICATION. F. BARTELDES & CO., Lawrence, Kas.

Combination Public Sale of Registered Poland-China Swine, Wednesday, February 13, 1895, Horton, (Brown Co.) Kas.,

When we, the undersigned, will offer at Sprague's livery barn, in the city of Horton, at 1 p. m. sharp, a draft of about seventy-five head, selected from our three several herds aggregating over 300 head of pedigree animals. Among the offerings will be eighteen tried brood sows, from 1 to 4 years old, most of them bred to the grandest individual and highest-priced boar in Kansas, Admiral Chip 7919; also forty-seven gilts and five summer boars. Two of the boars were sired by Admiral Chip; the one, Model Chip, is of April, 1894, farrow, and the other of June, 1894, farrow, and both are sure models. The sows and gilts are Tecumseh, Monarch, Comet Chip, Admiral Chip, Corwin, Success and others, and are bred to the following boars: Admiral Chip 7919, George Wilkes Jr. 11893, Corbett 11859, Abbottsford 12551, Admiral King 13293, Winterscheidt's Victor 13294 and U. S. Wise 13138. The last named boar is a son of the famous 275 sow, Lizer's Nemo. Terms: Seven months' time will be given on bankable notes bearing 8 per cent. interest from date; 2 per cent. off for cash. Parties from a distance please bring bank reference. Bids sent to COL. JAS. W. SPARKS, MARSHALL, MO., will be placed at lowest figures. Free hotel accommodations at Christ. Miller's for those that purchase. No postponement. Sale under cover. Send for catalogue to

WINTERSCHIEDT BROS., Horton, or M. C. VANSELL, Muscotah, Kas. N. B.—I will also offer for sale at same time and place two fine Percheron stallions, both recorded in the French and American stud books. Both are cold getters and the sires of many fine colts in northeast Kansas. Terms: One year's time on approved security at 6 per cent.; 4 per cent. off for cash. Pedigrees furnished at time of sale. Will also offer one Hambletonian gelding coming 4 years old and two low-down, blocky geldings coming 5 years old. COL. JAS. W. SPARKS, Auctioneer. HENRY SCHUETZ, Horton, Kas.

CLEARANCE SALE OF One Hundred Head of Pedigreed Poland-Chinas, on Rosedale Stock Farm, Robinson, Brown County, Kas., Thursday, February 28, 1895,

When I will offer at public auction 100 head, consisting of all ages, a major portion of which are sows bred to the great Onward Wilkes 5981 S., he by George Wilkes, the 4750 sire; and the highly-bred boar, Black U. S. Wilkes, he by Guy Wilkes 2d and out of Black U. S. Blaine; also the fine young boar by General Wilkes and out of Agnes. About 80 sows and gilts that have been bred to these boars, about forty of which are 1 year old and over, and the balance of spring and summer 1894 farrow. Among the sows are Missouri Star 6th 18610 S., Queen of Rosedale 18611 S., Lady Gip 18612 S., Equal 18609 S., Black Daisy 20082 S., Kate Miller 20083 S., Sally 20084 S., Dowell's Choice 20085 S., and other good ones. Onward Wilkes 5981 S. will be in the sale. For further particulars write for catalogue. Sale will be under cover. The usual sale's-day lunch at 11 o'clock a. m.

JOHN A. DOWELL, COL. F. M. WOODS, Auctioneer. Robinson, Brown Co., Kas.

WILKES AND FREE TRADE Poland-Chinas for sale AT PUBLIC AUCTION! Nevada, Mo., Wednesday, February 27, 1895.

Sixty head of pure-bred boars and gilts, of spring, summer and fall farrow. Being short of pasture room I am obliged to reduce my breeding stock so two of my best herd boars, Gen. Wilkes 105 3 S. and George Free Trade 20653 A., and ten grand brood sows, go in this sale. All sows old enough to breed have been or will be bred for spring litters. Everything offered goes, positively, without reserve. Sale will take place at farm, two miles west of depot. Free transportation from depot to farm. Terms: Sums of \$20 or over, eight months' credit on bankable note at 8 per cent. interest, or 2 per cent. off for cash. Less than \$20, cash. Dinner at 12 o'clock. Sale begins at half past 12. Send for catalogue. L. N. KENNEDY, Nevada, Mo.

GRAND PUBLIC SALE OF STOCK at my farm, three and one-half miles northwest of Carbondale, Friday, February 15, at 10 a. m. I will sell at public auction, 40 head of imported horses and high-grade mares and colts. The horses are:

Clydesdales, Belgians and German Coaches These animals are all first-class and were prize-winners at the Kansas State fair. Horse breeders who desire to purchase good stock will surely get bargains at this sale. All stock is recorded and pedigrees will be furnished. These are no old, worn-out horses, but all are first-class and in prime condition. Carbondale is fifteen miles south of Topeka on the main line of the Santa Fe. Trains from the east arrive at 8 a. m. and 11:12 a. m. and about midnight; trains from the west arrive at 1:17 p. m., 8 p. m. and at 2:50 a. m. None of the stallions will be sold until after 2 o'clock, to enable purchasers who come from a distance on train to be present. Terms of Sale: Two months without interest, with approved security. If not paid when due, interest at 10 per cent. from date of sale. Bidders from a distance are requested to furnish bank references. J. W. SPARKS, Auctioneer. LEONARD HEISEL, Prop. Don't forget the date--Friday, February 15, 1895.

Farm for Sale--160 Acres! FIRST-CLASS FARM AT A BARGAIN. All good buildings. House with six rooms, with large cellar. Two barns, one of them entirely new and cost \$1,200. Good bearing orchard of 150 apple trees and other fruit. Out buildings all in first-class condition. Two good, never-falling wells. One new windmill. Good fences of hedge, stone and wire on all sides of the farm, and also cross fences. Good shelter for stock on creek bottom. I will sell this farm at less than cost. Write me for further particulars, or, better still, come and see the farm, which is near Carbondale and within a half mile of school house. LEONARD HEISEL, Box 11, Carbondale, Kas. Kansas Redeemed! As a result business is "picking up" wonderfully and prices are looking better in all lines. In Farm Property there will be no exception. Prices that now range are exceeding low—they are bound to advance, and lucky is he who gets a farm in this section of Kansas between this and spring. I have hundreds of way down bargains. First come, first served. You can better yourself now and have money left for other use. Write me now or come and see. Care will be taken to suit purchasers. Address WALTER LATIMER, Garnett, Kansas. THOS. B. SHILLINGLAW, Real Estate and Rental Agency, 117 East 14th St., Topeka, Kas. Established in 1884. Calls and correspondence invited. Send for our latest premium and clubbing list.