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SAVE AND USE FARM MANURES.

This subject cannot be too often presented to the attention of farmers of Kansas. For their perusal we re-print an article which appeared in the *Country Gentleman*, recently, written by a New York farmer:

It is not to be denied that the introduction of commercial fertilizers has largely increased the cereal productions of this State, and so of all the old and partially exhausted lands of the older States. It is not, however, so readily acknowledged that the farmer has realized any considerable addition to the profits of his farm. Those who have made judicious use of such fertilizers on favorable soils have realized profits fairly encouraging, but there can be many cases pointed out where phosphates have produced no perceptible effects on the crop, and in some cases the crop grown did not pay the expense of fertilizers purchased and applied. Such cases are, of course, only where the crop has been in the main destroyed by bad seasons or insects. Yet the fact remains that large expenses have been incurred by our farmers for commercial fertilizers which have made no gains to any but the dealer and manufacturer. I will, however, say that on my farm, after a long experience in their use, I believe commercial fertilizers have paid a profit, but I have never ceased to regard farm manures as the chief reliance to maintain fertility of soil.

The question often arises in the mind of the farmer, can the farm be kept productive by any system of farming that will pay without the importation of fertility from other lands, or from the mineral deposits of plant food found in various places and in the bones of animals? In other words, can the farm be made self-supporting and yet allow the sale of grain and meats, and make farming a living business? There is doubtless a great difference in the natural fertility of land, and yet all lands the world over are composed of the common elements of sand, clay and limestone, which form the underlying crust of the earth, though when mixed in different proportions forming soils of greater or less durability, and when of deposit formation usually contain more of organic matter, and thus are more productive. But in the main all dry, arable lands are productive in their virgin state, and the question is, whether they can be kept so without importation of fertility in some way, allowing sales of surplus products to make the farm self-supporting. If this cannot be accomplished, we must soon look

for mineral deposits of plant food to supply the waste from cultivation, otherwise the soil will, at some period in the future, fail to produce food for the increased population of the earth. It seems to me possible that by pursuing a proper rotation of crops, rearing fattening stock, and so diversifying the products of the farm as to meet all the wants of man, with a judicious use of farm

our country is wastefulness of manures. It is safe to say that with the average farmer of our country, two-thirds, or more, of the fertilizing matter of the farm is wasted, or not used for the benefit of the soil. Stables are so constructed that all the liquid manures run through the floor and are lost; the excrements are thrown into the yard, under the eaves of the barn, where all the

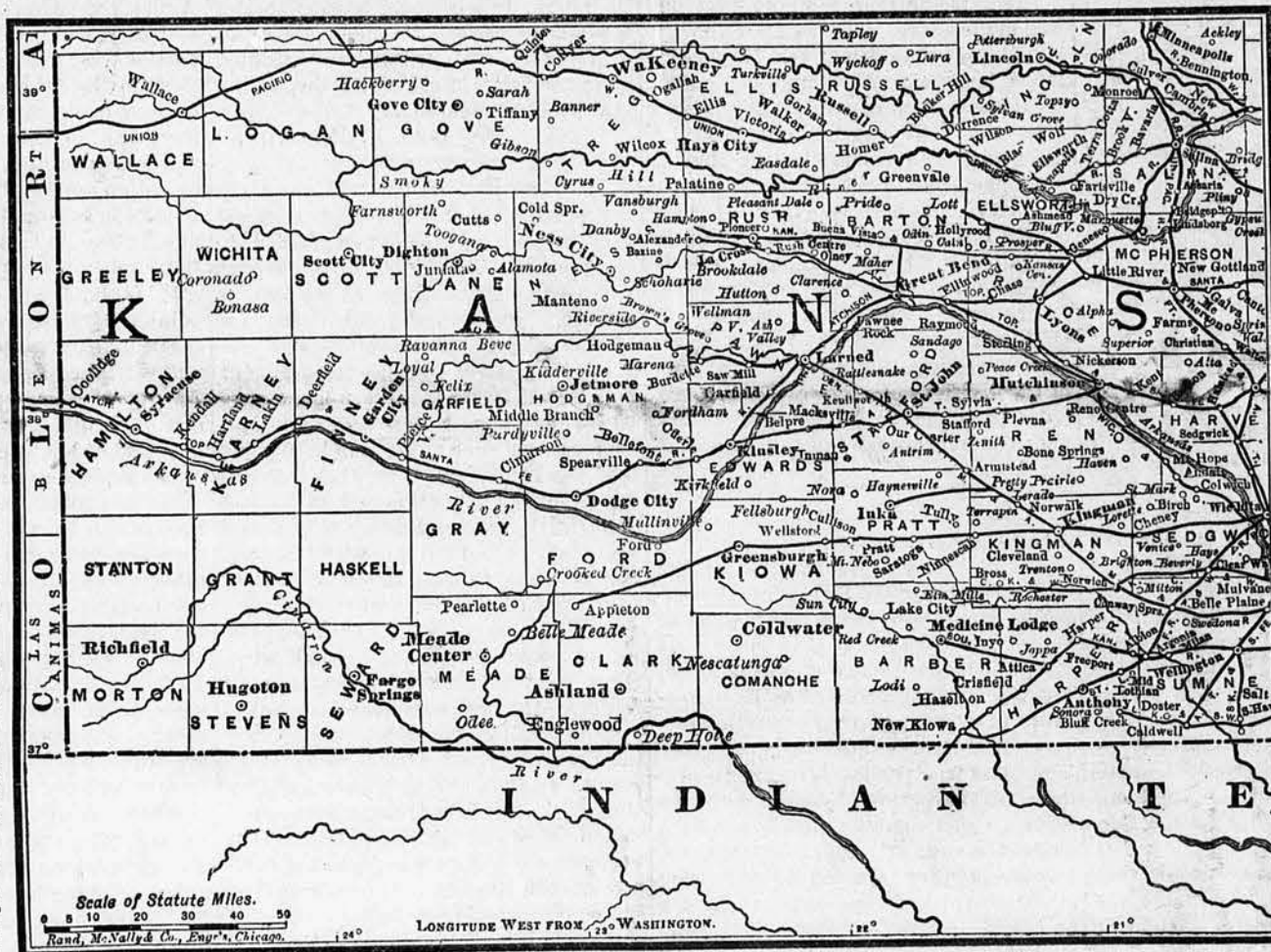
the stable is so filled as to be inconvenient, then draw out and spread on the field—when all this is done, one of the great wastes of manure will be avoided, and expense of handling greatly lessened.

For horse and cow stables, floors are needed for neatness, but they should be tight, with gutters to catch the liquids, or else a cellar below into which the manure and litter are thrown, and cattle or hogs be allowed to run over and tramp down to avoid burning, as will be the case where horse manure remains untrodden for a time. Whether cellars or sheds are used, no stable manures should go out uncovered till taken to the field and spread, and none should be left in heaps but be spread with manure-spreader, if possible. The grain-growing farmer will usually have a quantity of straw trodden down in the barnyard, which is commonly in too coarse a condition to draw out in winter or early spring. This should be hauled and forked over once or twice before being spread, but cannot be allowed to ferment and decay in the yard without much waste. For cows running to pasture in summer, but yarded at night, there should be a litter over the yard, and also a cistern to catch the drainage during the summer, which, put upon land, is of great value.

Farmers should learn to save all fertilizing matter around the farm with the same economy they exercise in saving their grain, hay and vegetables, and to put an equivalent value upon it as compared with commercial fertilizers. I do not dispute the teachings of science that the mineral elements of plant food are being exhausted by every bushel of grain or pound of meat and bone carried off the land, but I do at the same time believe that all good arable land may, by an economy in saving and using farm manures, aided by vegetable manures, be made self-sustaining when allowed to lie in grass and clover one year in four, and that mineral matter will not fail to meet the demands of the time.

Paper from seaweed is a growing industry in France. It is so transparent that it has been used in the place of glass for windows. Making paper from seaweed is said to be a flourishing art in Japan.

When planted in good soil, good thrifty fruits will nearly always overload themselves, and in order to secure the best, smoothest and largest fruit, considerable thinning must be done; this is especially the case with grapes and tree fruits.



MAP OF SOUTHWESTERN KANSAS.

Showing Eleven New Counties Erected by Act of the State Legislature, February 25, 1887.

manures, and the aid of clover to bring up nitrogen from below, or, if possible, appropriating it from the atmosphere, that the farm may maintain its fertility.

If this conception of self-sustaining fertility is unsound, it is because our lands are less enduring than lands of the old world. We need only look at the history of the East, and observe its present condition, to have evidence of the durability of its soil. China has a history going back to the days of Abraham, or beyond, and it has been the policy of the government to prohibit intercourse with other nations; hence the nation has ever been, in the main, supported from her own resources, and at the present time is supporting a population of more than five hundred and fifty millions, on an area less than that of the United States. We have no evidence that any of the historic lands of the East have ever had the aid of science that is given to agriculture here in modern times, and yet six thousand years of cultivation have not exhausted its fertility. The soil is now supporting a population as great, or greater, than at any former period of history.

The chief cause of exhaustion of soils in

soluble element is washed out, and allowed to run off into the highway or into a pool, where it soaks into the ground or is evaporated by the sun and air. The barnyard is extended to occupy a half acre, or more, of ground; the cattle running in the yard are sure to stand around the fences, where the droppings are left only to stimulate a growth of weeds. Straw is left in a stack or heap till it wastes away and is lost. The drainage of the yard, the most valuable part of the manure, is allowed to run to waste; the slops from the kitchen and the contents of the privy are not utilized; manures are allowed to lie in yard over the summer to ferment and decay, wasting one-half their value; and in many other ways valuable fertilizers are lost that might add much to the store of manure for the farm.

When farmers will throw away their old, leaky stable floors; take out the enriched earth below—worth as much as common superphosphate; fill up with good clay and pound down well; set the mangers one and a half feet above the clay floor; then litter well every day, keeping the manure level as it is trodden down, so that the liquids will all be absorbed; throw out no manure until

The Stock Interest.

DATES CLAIMED FOR STOCK SALES.

MAY 28.—White & Holcombe, Short-horns, Minneapolis, Kas.
JUNE 1.—Walter Latimer, Closing-out Short-horn Sale, Garnett, Kas.
JUNE 8.—E. P. Gamble, Short-horns, Kansas City, Mo.
JUNE 21.—W. S. White, Short-horns, Sabetha, Kas.
JUNE 30.—A. H. Lackey & Son, Short-horns, Peabody, Kas.

FOUL WATER AND SPLENIC FEVER.

The KANSAS FARMER has frequently called attention to the dangerous properties of foul water when drunk by animals, and especially in relation to Texas (splenic) fever. It has been urged in this paper that certain forms of disease often called Texas fever, in this State, and which are so nearly like it in all their symptoms as to justify the name, are in great degree caused by foul water. The summer is nearly upon us, and it will not be long until the grass will be hardening, dust will lie upon it, and foul water will be common. Every farmer ought to consider this subject as a matter of dollars and cents to him. A Texas farmer who had some Jersey stock—natives—and, writing to a friend on this subject of foul water, said to him: "My herd of Jerseys, you will admit, are a healthy lot, and all, save one, of the twenty-five head are native born—never having been out of the pasture in which you saw them; yet, the outside of that fence infected all that I turned out, a few years ago. This caused me to study the difference between the inside of that pasture, and the outside, and except that those inside were provided with feed for the sake of their milk, I have found no difference but the water. The outside cattle drank from ponds in which they stood and which they fouled; those inside drank pure water from a clean drinking trough; and they will not infect other cattle, but are as much subject to infection as northern cattle."

That same man was one of a company that owned about a hundred thousand acres of pasture land, and he says that as long as the company stock drank water out of a "shallow, muddy pond," it was "death" to his "home cattle" to be sent to the company pasture. Becoming satisfied that it was the foul water which was doing the mischief, they bored wells and put up windmills and tanks, gave the animals fresh water, and now, when the home cattle are sent to the big pasture they remain in good health.

It is believed by many people that filthy water receives and retains the germs of deadly diseases. Scientific men are of opinion that the ocean waters in the bay at Havana, Cuba, are to this day infected by yellow fever germs deposited there two hundred years ago in bilge water pumped by native Africans from a ship just in with a cargo of slaves.

Just what it is that causes splenic fever nobody pretends to know. Frost kills the germ, it is said; at any rate, after frost the disease does not reappear that year. But it sometimes does appear in after years in the same localities, and more especially if cattle are allowed to drink foul water. Attention has been called to the fact that African negroes can import a disease—yellow fever—which they themselves do not appear to have. The infection in case of splenic fever is just of that character. Animals which do not seem to have any disease, which, indeed, appear to be perfectly healthy, communicate this deadly fever to native animals in any part of the country. Is there an exhalation from the animals, similar to that which goes out from the African, that serves as a medium of communi-

cating the disease? Does the exhalation contain the fever germs, and do the germs drop upon the grass and into the water, attaching themselves as bacteria on sheep, producing "scab"?

It has long been recognized that low, moist lands are not good for stock of any kind. It is universally conceded that there is something about marshes and swamps that produce disease among animals and people, but a running stream of clear water in the mountains is a health-restorer. The difference between fresh and stagnant water does not need to be demonstrated. There is danger in using foul water.

Dr. Salmon, of the Department of Agriculture, in his report for 1883, suggests that certain facts concerning the purifying of lands, indicate that pastures, even though permanently infected, if left to themselves, may be made safe in the future for the most susceptible animals; in other words, that by proper treatment the worst infected lands in the South may be freed from this virus. And then he asks—"Is this true? Can the disease be not only checked in its advance, but eradicated from the lands over which it has spread itself?"

The Texas farmer, to whom reference was made above, answers Dr. Salmon's questions in the affirmative. He says infected lands can be permanently cured, for it has been done, and what has been done can be repeated and extended indefinitely. He gives his own experience: "My home pasture of sixty acres, before alluded to, has been free from infection for the last thirteen years, and the cattle bred upon it are all susceptible to the disease upon exposure. If sixty acres can be cured, why not six hundred, or that many thousands? I am almost equally certain, that almost, if not all, of the divisions of our company pasture, have been cured by the same means, viz.: the improvement of the water supply."

South-downs.

Kansas Farmer:

As well might we attempt having one general-purpose farm animal, combining horse, cow, sheep and hog, as to be for ever trying to find in any one class all the desirable qualities now had separately in the leading breeds. However, to the breeders of South-down sheep it must be gratifying to observe how those who persist in trying to produce an all-purpose sheep, seem to think no plan complete that does not include the use of South-down rams. Doubtless they are right, and they might go further than this, as did the man who declared cornmeal and sawdust the best feed known for fattening pigs, and when asked in what proportion it should be mixed said, "The more meal the better." So we might say to those seeking to improve their sheep, "The more South-down the better."

PHIL THURFTON.

Development of the Young Stock.

Kansas Farmer:

Nearly all breeds of animals are just what their respective breeders make of them, and are generally very quick to show the effect of either good or bad treatment. The only proper way is to begin right in the start, and keep it up as long as the animal is kept on the place.

The kind of food furnished to young animals during the earliest part of their existence has an important influence on their character and usefulness in after life, and the profit derived from their culture is governed to a great extent by the way they are fed and managed at this time. Since so much of their future usefulness depends upon their treatment when young, it would amply

pay the breeder to give them a little extra attention at this time and see that every want is supplied in the best possible manner.

The bad habit of overfeeding is an easy one to fall into, and is generally very disastrous in its effects, especially when the animal in question is very young. Overfeeding always serves to stunt the growth of the animal, which is accomplished by weakening the digestive organs, and in this condition the system soon becomes loaded with highly injurious matter, and oftentimes will not only stunt the growth of the animal, but will reduce the weight previously gained.

What should be most desirable for breeders to obtain with their stock is a large frame well supplied with strong muscles, and this can only be accomplished to the best advantage by feeding them with this object in view during their early life. Always guard against feeding strictly flesh-producing food, for excessive fat is quite burdensome to the young animals and is not what they should have by any means. The trouble generally is that the breeder is too anxious to have his young stock grow fast so as to be large in proportion to their age, but it would be much better for all concerned if the qualities of utility and real value were studied more carefully, and brought out to the best possible advantage.

GEO. F. MARSTON.

Hogs on Grass.

It is not often that any care is necessary in turning swine out to grass, as is often the case with other stock, to prevent evil effects from so sudden a change. More danger lies with the care of young pigs. Store hogs will not gorge themselves to cause impaction or purging. Neither is there much danger with young pigs, unless they find rank, coarse grass, such as is found in low wet land, and eat more than they can digest, causing impaction and in a short time death. We remember that a few years ago we had thirteen very fine pigs, nearly large enough to wean. It was yet early in the spring, when the grass supply was very short. They had the run of a wood lot part of the day when convenient to look after them, but all the grass they got about the farm buildings and in the wood lot was in very meager quantities. One afternoon they got out on the public highway, and as the stock law is enforced here there is usually good grass by the roadside. But, unfortunately for the pigs and their owner, the pigs came to some coarse, rank grass growing by the ditches, and ate their fill. The next morning was Sabbath, and farmers are often a little slow that morning, and don't feed the pigs as early as they do when they expect to plow all day. As those pigs were the brag stock of the farm they had our attention first in the morning. When you are slow about feeding, a little behind time, the pigs will be waiting for their feed. That morning we found three or four out of the nest ready for feed. Some of the others were lying about the buildings sick. After hunting about for awhile we found them all—four of them dead in their bed. By noon nine out of the thirteen were dead. Examination showed that the feed of coarse, rank grass had done the work.

Instances of this kind are not often reported; still pigs no doubt in many cases die from this cause, and the owner does not know the cause, attributing his loss to the swine plague in some one of its many forms. If we remember correctly we did not attend church that day; and we fear that our thoughts did not rise much above the prostrate forms of those pigs, so pleasing to the eye in

life, so full of bitter disappointment in death. Their plump round carcasses added life to the blazing fire of a splendid log heap.

We have never been able to understand why some farmers graze hogs all summer without grain, and then often feed into the cold winter months before they sell. Hogs that have been in dry lots and fed only on corn all winter need a rest from corn; but instead of dropping off all fattening foods we would change to something else not so heating, for a time at least. The strong argument they make in favor of the all-grass plan is that the hogs make such a fine growth of bone and muscle during the summer and when put on corn in the fall they fatten so fast, making such large, fine animals.

Another point is that the hogs need but little attention during the summer, when if they were fed corn each day, if only once, it would interfere more or less with the farm work in the grain crops. This plan has always seemed to us to have much loss of time connected with it; besides it increases the risk of loss from disease. The longer a farmer carries a lot of hogs, the greater the chances that there will be losses. Again, the swine now are bred for early maturity, and concentrated foods are a part of their daily ration, and the question may be asked, has not this way of feeding made it imperative that they should not be long without such food, without sustaining loss in growth? It has often appeared to us this way, when a lot of hogs would come into the feed lots in the fall no heavier than they went out in the spring.

It is held by some, although the point is hardly tenable, that a hog will eat as much grass when fed corn as he will when he has had only grass alone. At any rate none of the corn diet is needed to sustain the wastes of the animal system. All the animal assimilates of the grain consumed goes to make fat. The grass consumed, while it makes the bone and muscle of the animal, insures a greater gain from grain consumed. In other words, the corn fed will make a greater number of pounds of pork when fed with grass than it will when fed alone. We have heard men claim that swine would fatten on clover, but we have never fallen in with that kind of swine; and we are confident that they are unknown to the great majority of farmers and pig-owners.

While we do not advocate grazing swine without feeding, still there is money in taking hogs on clover pasture at the price per head per month often paid. We have pastured at 40 cents; but at this price the farmer sometimes gets left. For it is often in the bargain that if a hog dies the owner loses the hog and the farmer the pasture. As fatal as disease is sometimes, a few hours may sweep away a summer's pasture bill. Taking all risks in consideration we cannot believe a man is justified in pasturing swine three or four months, especially when there are so few instances in which the hogs have made any gain in weight.

Before turning the hogs out to pasture carefully ring them all. One ring properly set will be all that is necessary in the spring. We usually set the ring a little to one side of center of snout. The ring does not appear to hold so well in the center. We use a round ring, and if it does not close with joint outside, we turn it till the points are outside the skin. The ring should be set deep enough to hold till worn out, but not so deep as to fill up the space of the ring. The ring should turn easily after the wound is healed, but if the joint is inside the flesh, the nose will always be sore, and while sore the hog will not thrive.

A number of years ago we fed a lot of

hogs that had large, old-fashioned rings put in with an awl, and set around a stick. We noticed that one or two of the lot were not feeding well, and soon found that the rings were the cause. The rings had become filled with mud, which hardened, so they would not turn, causing the nose to get very sore. As soon as the rings were cut out the hogs began to thrive. If the rings fill with mud while the hogs are on pasture, so as to interfere with feeding, all that is necessary in most cases is to remove the dried mud and all will be right. We have seen men that appeared to take pleasure in inflicting as much torture on the hog as possible by mutilating the snout. As the knife has about gone out of use, they try to carry out vengeance by deeper setting of the rings, and more of them. Particularly is this so after the farmer has found a part of his pasture wrong side up. One of the most dreaded jobs on the farm used to be the snouting of the hogs, when it took two or three strong men to do it. Ringing is unpleasant, but far preferable to the knife.—*National Stockman.*

In the Dairy.

Progressive Dairying.

In these days of close farming and narrow margins of profits the dairyman should keep constantly before him the great necessity for being up with the times or he is liable to be left in the universal march of progress. Take it on the farm, for instance: the man who allows all his cows to come in together in February and March, and then runs them all summer on a permanent pasture, and without the aid of soiling crops, and dries them up in the fall, and winters them on hay alone, allowing them no shelter, may make a little money. In fact, we have known whole communities to make money with this practice. They set the milk in large open pans, had a flood of it when butter was cheapest, but they packed their product away in firkins and sold on a fall and winter market. That was good enough practice ten years ago, but the market itself has changed since then. Gradually consumers have been taught to prefer a fresher and sweeter article, and hence the demand for new-made butter and a consequent desertion of the packed article. The creameries of the country have responded to this demand, but the farm dairies are still holding back with the probable hopes that this revolution will turn back contrary to the principle that usually governs progressive revolutions.

In the dairy, too, we note the same change in practice that is of so marked effect in the herd and on the farm. First the small and numerous pans gave way to the large one holding the full mess of the herd's milk. Then came the deep cold-setting that greatly reduced the labor of the dairy and improved the quality of the butter product. After this, the revolution still going forward, produced the centrifugal separator, and it is fair to presume the end is not yet.

In the management of the herd, the line of progress marks out the necessity for changing the time of the cows' coming in from spring to fall, so that most of the cows will be fresh in winter instead of summer, for it is definitely settled that cows give more milk in the twelve months when so treated, and the greatest flow is during the season of highest prices for dairy products. This change also requires a different system of farming. Rich, permanent pastures must be plowed up, and the land planted in corn or other heavy-producing crop, which must be preserved for winter feeding either in a dry state or in the

silo. Ground feed must be purchased when low in price, and put away for winter use. Some hay is, of course, necessary to "balance the ration," though much of the old meadow can be utilized in growing heavier crops.

To the well-instructed there is nothing new in all this, but the "average" dairyman must have this state of the case set before him, in order that he may see how the world is moving and leaving him in the rear. It is never safe to make changes in farm management too sudden or too abrupt, but every man should have the spirit of progress kept awake in his mind and gradually work toward the necessary changes that are required to meet the demands of his business. For instance, all additions to the herd, either by raising heifers or by purchase, should be done with animals that come fresh in the fall, and then the fields can be devoted gradually to the crops that are necessary for their comfort. The machinery of the dairy as it wears out can be supplied by purchases of new devices that the practice of others has proven to be profitable. The market can also be met with small shipments at first of the new product, and gradually increased until in time the whole product of the dairy goes to market the day after it is made. Perhaps the dairyman thinks he is too old to hope to see the fruition of such changes, but he must remember that the whole thing can be accomplished in three years at farthest, and he probably has a son or two growing up that will perpetuate the dairy. One thing is certain, he cannot leave his dairy in too advanced a condition to make it profitable to those who may follow him in its management.—*American Dairyman.*

Dairy Notes.

A difference of four quarts of milk per day, at the low price of 2 cents per quart, makes, for 300 days, \$24, which is the interest on \$400 for a year. This does not represent the entire difference in value, as the progeny of superior milkers will be worth many times as much to raise as will the progeny of the inferior animal. No farmer is rich enough to keep poor cows.

Mr. C. E. Marvin, in response to a question at the Minnesota dairy convention, stated that he would churn summer and winter at 58 deg., and turn his churn at the rate of seventy-five revolutions per minute. If you should churn at 60 deg. or 62 deg., the first butter that came would be injured by the smaller cream globules which churned harder than the large globules. He believed that all thermometers used in dairying should be test thermometers so that there might be no mistake made.

If farmers wish to know how fraudulent butter is creeping upon them, they should read this statement from Boston: The receipts of oleomargarine from the month of November foot up 14,347 packages, against 7,827 packages for the same month in 1884. On the other hand, the receipts of butter have decreased some 4,000 tubs during the same month. Don't you think something had better be done to save the honest butter interest, or do you agree to surrender to a contemptible fraud?—*American Dairyman.*

Mr. John Brooks, of Princeton, Mass., informs the *New England Farmer* that his experience in making hornless cows of his pure Jersey calves has been highly satisfactory. Last spring he operated upon five heifers, when but a few weeks old, taking the incipient horns and a ring of surrounding skin out at a clean cut, with a pocket knife. It was a simple thing to do, caused little apparent pain and the sores quickly healed over, the hair soon covering the shrunken scar entirely from view.

BREEDERS' DIRECTORY.

Cards of three lines or less, will be inserted in the *Breeders' Directory* for \$10.00 per year, or \$5.00 for six months; each additional line, \$2.00 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

PROSPECT FARM.—H. W. McAfee, Topeka, Kas., breeder of Thoroughbred Clydesdale Horses and Short-horn Cattle. A number of choice bulls, also horses for sale now. Write or call.

M. D. COVELL, Wellington, Kas., fifteen years an importer and breeder of Stud Book Registered Percherons. Acclimated animals of all ages, both sexes, for sale.

CATTLE.

T. M. MARCY & SON, Wakarusa, Kas., have for sale Registered yearling Short-horn Bulls and Heifers. Breeding herd of 100 head. Carload lots a specialty. Come and see.

JERSEY CATTLE.—A. J. C. C. Jersey Cattle, of noted butter families. Family cow and young stock of either sex for sale. Send for catalogue. C. W. Talmadge, Council Grove, Kas.

W. M. BROWN, Lawrence, Kas., breeder of A. J. C. C. Jersey and Holstein-Friesian Cattle. Stock for sale. Bulls, \$50 to \$100; Heifers and Cows, \$50 to \$150. Send for catalogue.

H. H. DAVIDSON, Wellington, Kas., breeder of Polled Angus and Galloway Cattle. The largest herd in the State. Choice stock for sale at all times. Correspondence and orders solicited.

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OAKWOOD HERD OF SHORT-HORN CATTLE.—All recorded. Choice-bred animals for sale. Prices low. Terms easy. Imported Earl of Gloster 74522 heads herd. C. S. Eichholtz, Box 1208, Wichita, Kas.

F. McHARDY, breeder and importer of GALLOWAY Cattle, Emporia, Kas. Young stock for sale at reasonable prices. Liberal credit given if desired. Mention *KANSAS FARMER*.

WARREN, SEXTON & OFFORD, Maple Hill, Kas., importers of thoroughbred Red Polled Cattle. Bulls and heifers for sale. Railroad station, St. Marys.

D. H. FORBES, 198 Kansas avenue, Topeka, Kas., breeder of Short-horn Cattle. Six head of Bulls, from 7 months to 3 years old, for sale now on easy terms.

DR. W. H. H. CUNDIFF, Pleasant Hill, Mo., proprietor of **ATAHAM HERD** and breeder of fashionable Short-horns. Straight Rose of Sharon bull at head of herd. Fine show bulls and other stock for sale.

GUERNSEYS.—Elm Park Place, Lawrence Kas. L. Bullens, dealer in registered Guernsey Cattle. Young stock for sale. Telephone connection to farm.

J. S. GOODRICH, Goodrich, Kas., breeder of Thoroughbred and half-blood Bulls for sale. Sixty High-grade Cows with calf. Correspondence invited.

CATTLE AND SWINE.

H. S. FILLMORE, Lawrence, Kas., proprietor of Green Lawn Fruit and Stock Place, breeder of Jersey Cattle and Poland-China Swine. Stock for sale.

M. H. ALBERTY, Cherokee, Kas., breeder of Registered Holstein-Friesian Cattle and Poland-China Swine. Also Pekin Ducks, Wyandotte and Plymouth Rock fowls. Stock and eggs for sale.

C. H. HOLMES & CO., Grinnell, Iowa, breeders of Jersey Cattle and Duroc Jersey Swine. Prices to suit the times. Send for catalogue.

PLATTE VIEW HERD.—Of Thoroughbred Short-horn Cattle, Chester White and Berkshire Hogs. Address E. M. Finney & Co., Box 790, Fremont, Neb.

ROME PARK STOCK FARM.—T. A. Hubbard, Wellington, Kas., breeder of high-grade Short-horn Cattle. By car lot or single. Also breeder of Poland-China and Large English Berkshire Swine. Inspection invited. Write.

SWINE.

ELM GROVE HERD OF REGISTERED POLAND-CHINA Swine and Jayhawk strain of Plymouth Rock Fowls. Z. D. Smith, proprietor, Greenleaf, Washington Co., Kas. Pigs and Sows bred, for sale. Satisfaction guaranteed. Eggs \$1.25 for 13; \$2.25 for 26.

WALNUT GROVE HERD OF POLAND-CHINAS. V. B. Howey, proprietor, box 103, Topeka, Kas. My hogs are strictly thoroughbred, of the finest strains in America. All breeders recorded in Ohio Poland-China Record. Chief Commander No. 6775 at head of herd. Pigs for sale, from 2 to 10 months, from \$10 to \$25.

W. H. BIDDLE, Augusta, Kas., breeder of Pure-bred Poland-China Swine, from most noted strains. Also pure-bred Bronze Turkeys. Have a choice lot of early birds at \$4 to \$5 per pair. Pigs at reasonable rates.

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J. M. MCKEE, Wellington, Kas., breeder of Poland-China Hogs—A. P. C. R. Five kinds of Poultry. Choice pigs and fine fowls for sale. Prices low. Write.

ROBERT COOK, Iola, Kas., thirty years a breeder of Poland-China Swine of the very best and most profitable strains. Breeders registered in O. P. C. R.

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BAHNTGE BROS., Winfield, Kas., breeders of Large English Berkshire Swine of prize-winning strains. None but the best. Prices as low as the lowest. Correspondence solicited.

F. M. LAIL, Marshall, Mo., breeder of the finest strains of **POLAND-CHINA HOGS AND PLYMOUTH ROCK CHICKENS.**

Eggs in season, \$1 for 13. Catalogue free.

SWINE.

F. W. ARNOLD & CO., Osborne, Kas., breeders of pure-bred Poland-China Swine. Breeders all recorded in Ohio Record. Young stock for sale. Also Wyandotte and Langshan Fowls and Pekin Ducks. Eggs, \$1 per 13.

OUR ILLUSTRATED JOURNAL.—A full and complete history of the Poland-China Hog, sent free on application. Stock of all ages and conditions for sale. Address J. & C. STRAWN, Newark, Ohio.

SHEEP.

MERINO SHEEP.

Berkshire Hogs, Short-horn Cattle, and thirty varieties of high-class Poultry. All breeding stock recorded. Eggs for sale in season. Write for wants and get prices. **HARRY McCULLOUGH**, Fayette, Mo.

IMPROVED REGISTERED MERINO SHEEP. Poland-China Hogs, Light Brahmas, Plymouth Rocks and Bronze Turkeys—all of prize-winning strains, bred and for sale by R. T. McCulley & Bro., Lee's Summit Jackson county, Mo.

SHROPSHIRE-DOWNS.—Ed. Jones, Wakefield, Clay Co., Kas., breeder and importer of Shropshire Downs. A number of rams and ewes for sale, at lowest prices, according to quality.

H. V. PUGSLEY, Plattsburg, Mo., breeder of Merino Sheep. Ewes averaged nearly 17 lbs.; stockrams, 34 lbs. to 38 1/2 lbs. Extra rams and ewes for sale. Also Holstein Cattle.

POULTRY.

HIGH-BRED LIGHT BRAHMA CHICKENS.—In season. Also eggs, \$2.00 per 13. J. A. McMahan, Box 229, Clearwater, Sedgwick Co., Kas.

KANSAS PLYMOUTH ROCK, BROWN LEGHORN and Pekin Duck eggs, \$1.50 per setting. Plymouth Rock Cockerels (J. E. White strain) \$2 each. Trained Scotch Collie Dogs cheap. F. A. Kinsey, Troy, Kas.

E. E. FLORA, Wellington, Kas.—Eggs, \$1 per 13. \$2 per 30, for pure-bred Partridge Cochins, Plymouth Rocks, Light Brahmas, and Pekin Ducks.



SEA SHELL FOR POULTRY!

100 pounds \$3.50, in seamless sack. **HUGHES & TATMAN, NORTH TOPEKA.**

TOPEKA WYANDOTTE YARDS.—A. Gandy, 206 Kansas avenue, Topeka, breeder of Golden, White and Laced Wyandottes. No Golden or White Wyandotte eggs this season. Laced Wyandotte Pen No. 1, cockerel Topeka scores 92 points by L. K. Felch; the pullets Kansas Beauties score from 90 to 92; eggs, \$4 for 13, or \$7 for 26. Pen No. 2, \$2.50 for 13 or 26 for \$4. Rose-comb Brown Leghorn eggs, \$2 for 13, or \$3.50 for 26. All the Leghorn chicks for sale cheap.

IT WILL PAY YOU.—To send for our beautiful Illustrated Circular, full of valuable information. Sent free to all. Address C. A. Emery, Lock box 289, Carthage, Mo.

MRS. A. B. DILLE, Edgerton, Kas., breeder of Wyandottes, P. Rocks, Langshans, Pekin Ducks and Mammoth Bronze Turkeys. Wyandotte and Langshan eggs, \$1.50 per 13; P. Rock and Pekin Duck eggs, \$1 per 13.

COLLEGE HILL POULTRY YARDS.—Pure-bred Brown Leghorn and Houdan Fowls for sale. Also eggs for sale. Send for prices. W. J. Griffing, College Hill, Manhattan, Kas.

THE RELIABLE POULTRY YARDS.—A. D. Jencks, 211 Polk street, North Topeka, Kas., proprietor and breeder of choice Plymouth Rocks. Eggs booked now and shipped promptly at \$2 per 13. Satisfaction guaranteed. (Mention *KANSAS FARMER*.)

MRS. MINNIE YOUNG, Warrensburg, Mo., breeder of pure-bred Bronze Turkeys, Wyandottes, White and Brown Leghorns, Light Brahmas, Pekin and Rouen Ducks. Eggs in season. Write for wants. No circular.

TOPEKA POULTRY YARDS.—Wm. A. Eaton, Topeka, Kas., breeder of Plymouth Rocks, Light Brahmas, Partridge and Black Cochins. Can furnish W. & B. Leghorns and W. F. B. Spanish. Eggs \$2.25 per 13.

SUNFLOWER POULTRY YARDS.—T. S. Hawley, Topeka, Kansas, breeder of PURE-BRED POULTRY. Leading varieties.

MARMATON VALLEY POULTRY YARDS. Mrs. Allie E. Milburn, (Lock box 1401), Fort Scott, Kas., breeder and shipper of thoroughbred Lt. Brahmas, P. Rocks, Wyandottes, B. Leghorns, B. Javas, B. Cochins, Mam. B. Turkeys, and P. Ducks. Fowls for sale at all times. Send for circular. Correspondence solicited and cheerfully acknowledged.

EUREKA POULTRY YARDS.—L. E. Pixley, Eureka, Kas., breeder of Wyandottes, B. B. R. Games, P. Rocks, B. and W. Leghorns, Buff Cochins and Pekin Ducks. Eggs and birds in season. Write for what you want.

N. R. NYE, Leavenworth, Kas., breeder of the leading varieties of Land and Water Fowls. **DARK BRAHMAS** a specialty. Send for Circular.

SHAWNEE POULTRY YARDS.—Jno. G. Hewitt, Prop'r, Topeka, Kas., breeder of choice varieties of Poultry. Wyandottes and P. Cochins a specialty. Eggs and chicks for sale.

MISCELLANEOUS.

S. A. SAWYER, Fine Stock Auctioneer, Manhattan. S. Riley Co., Kas. Have Coats' English, Short-horn, Hereford, N. A. Galloway, American Aberdeen-Angus, Holstein-Friesian and A. J. C. C. H. R. Herd Books. Compiles catalogues.

HAZARD STOCK FARM

—OF—
NEWTON, - - KANSAS,

Breeder of A. J. C. C. H. R.

Jersey Cattle.

The herd is headed by the Stoke Pogis Victor Hugo Duke bull, St. Valentine's Day 15278, and the Coomassie bull, Happy Gold Coast 14713. Sons and daughters by above bulls out of highly-bred cows, for sale for next ten days. Address **S. B. ROHRER**, Manager.

Always Some Moisture.

President Chamberlain, of the Iowa Agricultural College, wrote that in spite of the extreme dry weather prevailing during the entire 100 days in which it was expected that the corn crop would be made, the corn yield of the College farm will be about fifty bushels per acre. It is certainly a most extraordinary thing that so much corn should be made during a time when there was practically no rainfall. It is an incontestible proof of one fact, viz.: that good land, well cultivated, will make a good crop without any rain to amount to anything. Speaking on this subject, the *Homestead* says:

The wonder to everybody is how the soil obtained moisture enough in this very dry season to produce half a crop of corn. First, the soil, where the corn stood the drouth well, was in fine condition on the surface. In this condition it sucked up water from below and retained it just as a sponge sucks up water from a bowl. Second, the atmosphere was very hot, and the soil, being a poor conductor of heat, was comparatively cool an inch or two beneath the surface, and as all the spaces between the particles of soil were filled with air, the soil condensed the moisture in this air on the same principle that a pitcher of ice water condenses the air around it on the surface, and we say the pitcher "sweats." Again, on the same principle, more or less dew formed on the surface, which was greedily absorbed by the dry soil. We have no full idea of the amount of water that condenses in a twenty-acre field in the shape of dew. But of all these sources the main one is the water coming up from below. If the subsoil is impervious to water and does not allow the water to issue from the great reservoir that lies a few feet under the soil, the crops must perish in a drouth of half the severity of the past summer. We remember when a boy seeing a heavy sod of timothy on a rich bottom soil, three feet deep and resting on a hard-pan clay, killed so dead in a forty days' drouth that not a stalk was living at the end of the drouth in a square rod. It was then underdrained, and although thirty years have elapsed there has been no trouble since from excess or deficiency of moisture. And herein lies the great benefit of tile draining. It makes a wet soil dry, and a dry soil moist. We don't argue this to the skeptical or doubting. We assert it, as a matter proven and tested on the old farm in boyhood, and proved since in every county and State where the farmers have had the sagacity to tile the land properly. Given a good soil, resting on a porous subsoil or an underdrained soil, and there is no use lying awake nights worrying over dry weather or wet weather either. The hot sun and the hot winds that suck up the surface moisture only draw more up from the lower depths. Given a soil of this kind, kept mulched on top with dry dirt by frequent stirrings, and it will produce a corn crop, rain or no rain.

The Pension Matter.

Kansas Farmer:

Your correspondent from Wellington gets (I think) unreasonably huffy at what he chooses to call my "gush" in regard to the pension bill. I was not aware that the mere expression of thanks was open to such a term as that. He also thinks it is in accord with a certain resolution once passed at Chicago by a set of copperheads. I beg leave to inform him that that is not the estimation in which I am generally held by my friends and neighbors, and also that it is not always those that talk the loudest that are the best patriots. It is a different class of people from those that passed the resolution referred to that are beginning to wake up about the enormous sum it costs to pay our pension roll (more than it costs to support the standing armies of some of the larger European nations, and yet you wonder how they can stand it). We know there were a great many soldiers who enlisted, as young men will, for fun, as they thought at the time, although I do not wish to be understood as saying that all did, by any means; but it is by far the largest number of that class who are now receiving pensions, together with bounty jumpers and others than those who enlisted from pure patriotism. I am personally acquainted with one case where a back pension of \$1,200 was paid to a person for sickness contracted in the army, of whom his own comrades say he was too big a coward to stay on the battlefield, but had to be

put on hospital duty, and whom I have heard tell of how he was exposed since the war working on the levees in the South, which of itself was enough to make a man sick, just in the same way that he claims, and from the same kind of exposure as that which caused the sickness contracted in the army. This is only one instance in many coming to my knowledge, but they all belong to the G. A. R., and it winks at it, to say the least. As for the slur cast against the President, he is doing fully as well as any one that has been in since Grant, if he does belong to a different party from myself.

I see the crop correspondent from Clay county reports 90 per cent. of the corn will be put in with listers. In my part of the county, the northeast, there will not be more than 20 per cent. He also reports grapes, raspberries and blackberries as killed to the ground. He surely has not a good kind, for mine are all right. S. W. MILES.

Clay Center, Kas.

As to Zodiacal Signs.

Kansas Farmer:

Tally one on the side against looking for zodiacal signs before doing any kind of work. So far as "R. L. D." of Solomon City, and P. A. Mathews, of Sterling, are concerned—in *FARMER* of May 12—please say that in 1873 I wanted a 4-year-old colt castrated. The operator wished to consult the almanac before doing the job. I said if he was that kind of man he could not do my job. I saw another man that would do it right off. Then we looked for signs. It was in the heart! The beast did well and is a valuable horse now. I was cautioned never to take such responsibility again, but I did. I first engaged the surgeon to operate on all the male stock I had. I then engaged a threshing machine and my neighbors to help me thresh, three days later. As a recreation after dinner, I got all hands to examine my stock and tell what ailed them. All were pronounced favorable. Then I called up the surgeon with the almanac, and wanted the credulous to explain. Does Mr. Mathews think they did it? The sign was sure death, and purposely chosen, too.

I have been a paying subscriber ever since the *FARMER* was issued as a weekly; have not asked favors very often, and if you can afford to print this it will please me.

J. M. WINTER.

Irving, Marshall Co.

Plank Drags.

A good plank drag is the most valuable implement on the farm, cost considered. It does work that the roller or the harrow could not do. The further soil is removed from a virgin state, the greater is the need for thorough pulverization. This is particularly true of clayey soils. The plank drag fines and compacts the surface of a light soil so as to enable it to retain moisture. It is very useful in preparing the land for fine seeds. I find that it does perfectly work that was formerly done by hand-raking. The right time to use a plank drag is as soon after plowing as the soil is dry enough to crumble, and before the clods are dried. In case of a heavy rain after plowing, do not disturb the soil until it is dry enough to pulverize; then run over it with a cultivator or cutting harrow; let it stand for an hour or so, then a plank drag will leave it as fine as meal. A one-horse drag made of four two-inch planks will be heavy enough. If made of one-inch boards weights must be added. For two horses I use four boards one foot wide, two inches thick and ten feet long. When the driver rides, this is heavy enough. When used to cover grass, turnip or flax seeds, it is heavy enough of itself. For four horses, for use on wheat and corn land, five two-inch planks, sixteen feet long and one foot wide will be about right. With one team at each end of this, four acres an hour can be put into the best possible condition for the wheat drill or corn planter. These drags are made in two ways: by spiking the planks to pieces of 4x4 inch scantling, or by bolting the planks together. The planks are lapped, as this gives cutting edges to grind up the clods. When not in use, turn the drag edgewise against a tree or on the north side of a fence where it will be shaded. It is best to have two clevises placed equidistant from the center and about as far apart as half the length of the drag. A chain attached to these, long enough to place the horses some three feet from the drag, will

make it run steadier than if the team were hitched to the center.—Waldo F. Brown, in *Rural New Yorker*.

About Soiling.

The Pennsylvania State Agricultural Report for 1886 contains an article on soiling, from which the following suggestions are taken: Notwithstanding the many and great benefits which have been from time to time urged in favor of soiling, it is an undisputed fact that the practice is not making much headway among practical farmers; and the saving of fencing and the increased number of animals which may be successfully maintained to the acre are indisputable items; they are admitted even by the most violent opponent to the practice, and are probably not much over-exaggerated by its friends. Why, then, is this mode of feeding not more generally practiced?

The difficulties and hindrances, aside from the slowness of our practical farmers to receive and act upon anything new, are as follows: First—The difficulty of keeping up a regular supply of green food for a large number of animals. It is easy to plan on paper to keep up this supply, but the failure of a single crop (a contingency never provided for in paper calculations) may throw the whole system wrong. We could instance one farmer who depended largely on rye for a soiling feed, who, by using oil seed, failed to get a crop, and his late seeding prevented a repetition during the fall or early winter. Numerous writers have given the kinds of crops needed for a complete rotation so as to cover the whole season, and the contingency of one or more possible failures might readily be guarded against by an increased area, the surplus of which, in case of a universal good crop, could be dried for winter consumption; hence we cannot attribute the failure to adopt the system to this one difficulty. Second—The system requires an increased amount of labor at a time when other crops need attention; the preparation and seeding down of the crops absolutely necessary to carry one hundred head of stock through the season is very great, and to one not acquainted with the work seems discouraging, but this difficulty would certainly be gotten over if the result was found to pay. The constant effort of the farmer is (or should be) to make use of all labor for which his crops would pay, and he who cannot get more than the amount of wages paid to a man out of the work of that man can scarcely be styled a good farmer. If soiling will pay for the extra amount of labor needed, that item would not stand in the way of the adoption of the system by even the majority of our farmers. The work of hauling the green food from the field to the animals is also a very important item, which must be added in all comparisons with the older and more general systems of pasturing; but this, too, would not be withheld by the intelligent farmer, if his experience demonstrated that he could get more out of it than he paid for his extra help.

Against this item of increased labor of hauling the crops, we may charge the increase of the animal's flesh which would otherwise have been exhausted in walking after the food; and to this may be added the extra value of the manure saved in the yard, which some of the more enthusiastic adherents of the system claim will fully repay all the extra items of expense. It has been claimed by a number that in all cases yet fairly tried the health of the stock suffered by confinement incident to the plan. Of this we know practically but little, but it would seem evident to all that enough exercise for health could readily be allowed, and the system be so expanded as to combine enough of the old plan to insure all that is needed. One of the greatest drawbacks which has come to the notice of the writer is that all green crops do not attain their maximum feeding value until they have gained a certain degree of maturity. In our experience with dairy cows we have found green corn or rye of no value in adding to the butter yield until they were in blossom. We have found that, while the cows would eat them up moderately clean, we could obtain no increase in the amount of butter until both the rye and sowed or drilled corn were out in tassel or blossom. This experience we find to have been one which has met many who have experimented with soiling on a small scale or as an adjunct to shorten pastures. No doubt the same objection will apply to all other green crops, and, if so, is a serious drawback to soiling for the butter dairy.

How to Build a Silo.

I have read several articles lately in the *Southern Cultivator*, advocating the building of silos with plank. Except for a simple trial of ensilage, I desire to discourage planters from erecting such temporary buildings, as the contact of the ensilage rots the plank in one or two years. I have, therefore, found concrete or beton to be cheaper in the end. If the ground is dry, a building of lime concrete, without any cement, will be found good enough. All the labor can be done by farm hands, and the only outlay of money is for lime. When the mortar is mixed, one part lime to seven parts sand, and all the rock possible worked into the building, it will be found that the cost of the lime is only a trifle—say about two and a half barrels to 250 cubic feet space enclosed for holding ensilage, or two and a half barrels of lime to each cow to be provided with food from this silo, which should be built with reference to convenience in feeding cattle during the winter. If the place selected be a few rods from the barn, a cheap tramway leading to the stable will carry a car on which can be put for one run enough ensilage to feed forty cows. This is a much more expeditious way of feeding than carrying in baskets, even when the silo adjoins the barn.

To build the silo, decide upon the size required, excavate the ground level, don't go below the top of the earth at lowest side, so the drainage will be good. Set out posts in line on inside of silo on all four sides. If you build twelve feet high have your posts fourteen feet long with smooth sides toward plank. Then set outside posts opposite the inside posts about sixteen inches in the clear between posts at bottom; narrow to twelve inches in clear at top. Put in such plank as are convenient and pour in from buckets or hods the mortar. If lime is good, to one barrel of lime, slaked in the usual way, add seven barrels of clean sand, and the mortar will be rich enough. After pouring mortar add rock of any size that will go in between inside and outside plank. The more rock worked in the cheaper the building. If plank are plentiful need not move them up, but add other plank until the building is complete; and when thoroughly "set" or hardened, take off plank and the lumber will not be seriously damaged. The floor ought to be made of Portland cement by a competent mason. Don't use American cements. I find where cheap cement is desired that good lime and Portland cement, mixed half and half, is best. Where it is necessary at all to use cement, use the Portland always.

To feed twenty cows, in middle Georgia, from November 1 to April 1, liberally, requires about 48,000 cubic feet of space, say 240 cubic feet to the cow. Long, narrow silos are better than square buildings, because in taking out from one end there will be less food spoiled by exposure to the air.—Benj. W. Hunt, in *Southern Cultivator*.

Homeopathy for Horses.

An article has been going the rounds of the papers which states with some particularity that a horse being severely diseased and having been given up by two celebrated "old school" veterinary doctors, was speedily cured by being put into the hands of a homeopathic veterinary, and this cited as being something of a wonder. We are at a loss to know where these wise men could have lived for the last twenty years, that such a fact could be news to them. It is now twenty odd years since Humphreys' Veterinary Specifics have been in use, and tens of thousands of stables are using them exclusively with just such success as is heralded in that paragraph, and the fact is well settled that horses, cattle, dogs and hogs are as readily cured by the "Veterinary Specifics" as babies and children by the doctor's "Family Specifics." Not only are liverymen, horse railroad, express and coach companies using them, but cavalry officers of the United States army have endorsed and recommended them, and the man who made the miraculous cure described above has used them for many years with the marked success above related.

A naturalist writes: "We put in our canary bird's cage every day a little mirror, as large as the palm of our hand, taking care that neither sun nor lights shall dazzle him, and he will look at himself for hours together, with as much happiness as any young gentleman you ever saw. When we want him to stop singing we have only to give him the mirror."

Miscellaneous Paragraphs.

The number of horses exported from the port of New York during the past four years, and their value, was as follows: In 1883, 510 head; value, \$161,750. In 1884, 488 head; value, \$181,635. In 1885, 375 head; value, \$143,481. In 1886, 388 head; value, \$159,358.

If you have a spare piece of ground, sow oats and peas together as food for the cows. It makes excellent green material, grows quickly and can be cut at any time when high enough. Do not turn stock upon it to graze, but cut and carry it to the barnyard for them.

Prof. Morrow, head agricultural man at the Illinois (late Industrial) University, says that more exercise than the average well-bred pigs receive, less feeding when young, and breeding more generally from mature animals, will tend to increase the vitality of our hogs.

When a job of hard, rough grinding has to be done, a big, coarse stone is needed; but if this be not available, the job may be well done by sprinkling sharp, clean sand upon the stone while grinding. Emery works well, too, and, if anything, it is a little better than sand.

So much a year: Missions, \$5,000,000; public education, \$85,000,000; sugar and molasses, \$150,000,000; boots and shoes, \$196,000,000; cotton goods, \$210,000,000; lumber, \$233,000,000; woolen goods, \$237,000,000; iron and steel, \$290,000,000; meat, \$300,000,000; tobacco, \$350,000,000; bread, \$505,000,000; liquors, \$900,000,000.

Mr. Charles Francis Adams says of the inter-State commerce law: "I wish most sincerely they would either let us alone—a condition of affairs of which I do not greatly approve, but one under which the great laws of trade, and especially that known as the survival of the fittest—is sure to assert itself—or, if they will not let us alone, that they would pass some act, and enforce it rigidly."

The Farm describes a machine for measuring land: It is made in the form of a wheel without any rim, to which is fitted a pair of handles, so that the machine may be wheeled over the ground which it is desired to measure. The spokes, ten in number, are cut off at such a length that the distance between their ends is one foot. This will make ten feet at a single revolution of the wheel. One of the spokes should be painted red, while the rest are to be painted white. This will facilitate greatly in counting.

A Virginian who has had some difficulty in keeping cabbages over winter says that by the following method of packing he has been successful: "We take the heads only, and, placing barrels in the corner of an unused stable, put in a good quantity of dry leaves, then bury a head and stuff leaves around it; another head, or two, if small, more leaves, and so on. Three barrels hold all we need. We pile and pack thoroughly in and around these barrels all the leaves we have patience to carry, and lay old boards over them."

Look upon our present plan of public education as a stairway. How broad at the bottom, and yet the lower step is crowded; how narrow at the top, and yet how few stand on a stair. They have stepped off on the broad highway of life—first the farmer boys, then the mechanic boys, then the merchant boys, and the teacher finds himself nearing the top of the stair with the young physicians, teachers, lawyers and preachers—only a little 5 per cent. of what he started with. How different would it be if we could give the boys some practical teachings on the subjects which constitute the chief interests of their daily life.—Prof. Hall.

The Commissioner of Agriculture for South Carolina, in answer to the question—"Suppose you had an audience of the farmers of the South and had to give them in ten lines, or less, the most important suggestion or advice, resulting from your experience and observation, what would you say?" said: "Educate yourselves and your children; acquire business habits that will enable you to market your own produce; practice economy; avoid debt as you would sin; be industrious and 'diligent in business'; diversify your crops; give greater attention to the smaller industries; be farmers, not planters; give your personal atten-

tion to your business; work out your industrial freedom as you did your political, by perfect organization and persistent individual effort; and if you would keep up with the progressive spirit of the age, subscribe for and read the best agricultural journals of the country."

Observations on the weather, when carried on sufficiently long to eliminate temporary variations, appear to conclusively establish the fact that no essential features of climate so far as an increase or decrease in the yearly amount of rain or the temperature is concerned, have taken place in historic times. It is, however, perfectly possible, by the planting and cultivation of the land, to preserve the rain that does fall, in the ground, for the demands of vegetation, instead of its being idly evaporated into the air by the absence of forest and vegetable growth, thereby permitting the strong winds and hot sun to have direct access to the earth.

Gossip About Stock.

The Peabody Gazette says that the shipments of butter and eggs from Peabody amount to \$50,000 a year.

A public sale of Holstein-Friesian and Jersey cattle is advertised this week to take place at Lawrence, Kas., June 17.

The Short-horn sale of the late Harvey Sodowsky, at Iadianola, Ill., was a splendid one, twenty-nine head averaging \$193.50.

The recent Hereford sale of A. A. Crane, Crane, Osco, Ill., of thirty-two head, sold at an average of \$174; and sixty-three Herefords sold by Fowler & VanNatta, at Fowler, Ind., averaged \$135.

An important closing-out public sale of sixty Short horns will be held at Lincoln, Neb., on May 31, 1887, by J. W. Fitzgerald, who is well known to many Kansas breeders. Read the advertisement in another place.

The FARMER is in receipt of the catalogue of the public sale of Short horns to be held at the fair grounds, Minneapolis, May 27, by White & Holcombe. The offering is one of the very best ever offered in that part of the State, and should be well patronized by every farmer and stock-raiser who wants improved and more profitable stock.

Geo. & J. Geary, Brookfield, Mo., who have an excellent reputation throughout America as breeders and importers of thoroughbred Aberdeen-Angus cattle, advertise in this week's KANSAS FARMER a public sale of this valuable breed of polled cattle to take place in Kansas City, June 9, at 1 p. m. Be sure to write them for a catalogue and then attend the sale.

Osborne county has made an important and commendable movement in the direction of organizing the Osborne County Stock Sale Company, which proposes to buy and sell stock, stimulate a necessary industry, the stock interest, also to encourage the improvement of the stock of the county. It is a laudable and profitable enterprise, which should be fostered in every county in Kansas in the interests of the farmers. The KANSAS FARMER congratulates Osborne county for this institution.

Early Dawn Hereford Herd.

This well-known establishment, the Early Dawn Hereford Herd, of Shockey & Gibb, Lawrence, Kas., was, as readers of this paper will remember, consolidated some time ago with Fowler's herd of imported Herefords at Maple Hill, Kas., and the new "combine" now located at Fowler's ranch. The manager, E. S. Shockey, writes: "The old Early Dawn Herd of Shockey & Gibb is now nicely located at the home of the new Early Dawn Herd, and all doing well. We have still got a few choice thoroughbred bulls that we will sell at great bargains. We will also devote special attention to the founding of new herds. We sold to-day two thoroughbred bulls to J. Q. Cowe, of Osage county. One is a 2-year-old, imported by us as a calf, sired by Hotspur by Lord Wilton. The other is a calf sired by our Anxiety bull, Beau Monde, dam Atalanta by the John Price Hotspur. Mr. Cowe has in these two bulls a combination of blood and individual merit that is not easily duplicated, and for the purpose of carrying out our plans we are selling at a price that defies being duplicated."

Ceylon is the only English colony that contributes anything to the imperial navy.

KANSAS MUTUAL LIFE ASSOCIATION

Pays a Topeka Widow a Life Insurance Benefit of \$1,500.

Received, this 3d day of May, 1887, of the Kansas Mutual Life Association, fifteen hundred dollars (\$1,500), in full of all claims, whatsoever, under the within policy, in consideration of which payment I hereby surrender all my right, title and interest under the same, forever release said Association from all liability to my heirs or legal representatives hereunder, and warrant and forever defend said payment against all claimants, whatsoever.

MRS. MAHALA J. SCHNEIDER, Beneficiary.

Signed in presence of:
E. F. A. CLARK,
A. A. PASLEY.

In accordance with above receipt, I wish to express my heartfelt gratitude for the prompt and honorable manner in which my claim on account of death of my husband has been settled by said Kansas Mutual Life Association, of Hiawatha, Kas., same having been paid within twenty days of date of death, and in full as per amount stipulated in policy. I can most cheerfully say to the insuring public, you can rely upon the management of said Kansas Mutual for fair and square dealing, also prompt payment of all just claims in full.

MRS. MAHALA J. SCHNEIDER.

Dated at Topeka, Kas., this 3d day of May, 1887.

By a Japanese process seaweed is made into paper so transparent that it may be substituted for window glass. When colored it makes an excellent imitation of stained glass.

English Spavin Liniment removes all hard, soft, or calloused lumps and blemishes from horses, blood spavin, curbs, splints, sweeney, stiles, sprains, sore and swollen throat, coughs etc. Save \$50 by use of one bottle. Every bottle warranted by Swift & Holliday, druggists, Topeka, Kas.

Ashes spread over the strawberries at the rate of one hundred bushels per acre will increase the quantity, improve the quality and intensify the color. They may be sown broadcast at any time, but the earlier the better.

If you have chapped hands or rough skin, use Stewart's Healing Cream. Only 15 cents a bottle. Gentlemen who suffer from a tender face after shaving are delighted with it. We only ask a trial. Stewart Healing Powder Co., St. Louis.

It has been demonstrated by experiment that one acre of land upon which is grown soiling crops for dairy cows will produce sufficient food to enable the cows to double the yield of milk and butter as compared with the ordinary mode of pasturing. If this be possible with all farmers the extra yield should afford a profit.

Complimentary Notice.

The large new office and warehouse of W. H. Fay & Co., manufacturers of Fay's Manila Roofing and Carpeting, Camden, N. J., was entirely destroyed by fire last night. With commendable energy they have gone to work and secured temporary quarters and are to-day ready for orders. Fortunately these gentlemen have a very large stock at their factory, which is in another portion of the city, and they assure us that their patrons and agents throughout the land will receive their goods as promptly as though no fire had occurred.—Philadelphia, May 14.

New Sectional Map of Kansas.

Showing Eleven New Counties Erected by Act of the State Legislature, February 25, 1887.

On the last working day of its winter session, the Kansas Legislature constructed out of the territory formerly comprised in Hamilton, Finney, Hodgeman and Ford counties, ten new counties, as follows: Stanton, Hamilton, Grant, Kearney, Finney, Haskell, Gray, Ford, Hodgeman and Garfield. The name of St. John county was also changed to Logan, in honor of the dead soldier.

Rand, McNally & Co., of Chicago, with their usual enterprise, have issued a new Indexed Sectional Map covering these additions, and including also all new county seats and other changes. The map is one of the most reliable in existence, the counties being distinguished by colors, which, while clear and decided, are so transparent that they do not in any way obscure the engraving. The map is 56 x 32 inches, on a scale of 23 miles to one inch. It accurately locates all cities, towns, postoffices, railroad stations, counties, townships, latest railroad extensions, rivers, etc., in the State, with population of each town.

For burns, Dr. Mosley declares that balsam of copaiba is an application very preferable to bicarbonate of soda or other remedies which have been advocated.

To render glue waterproof, soak it in water till it is soft, then melt it in linseed oil, assisted with a gentle heat. This glue is not acted upon by water or damp.

Itch, Prairie Mange, and Scratches of every kind cured in thirty minutes by Woolford's Sanitary Lotion. Use no other. This never fails. Sold by Swift & Holliday, druggists, Topeka, Kas.

So far no one has been able to state what hog cholera is, and, of course, no sure remedy is known. The symptoms vary in different sections, and nearly all diseases to which the hog is subjected are now classed as cholera. The only way to avoid it is to keep the quarters clean and feed variable food.



ROYAL
FULL WEIGHT
ROYAL POWDER
ABSOLUTELY PURE

BAKING POWDER
Absolutely Pure.

This powder never varies. A marvel of purity, strength and wholesomeness. More economical than the ordinary kinds, and cannot be sold in competition with the multitude of low-test, short-weight alum or phosphate powders. Sold only in cans. ROYAL BAKING POWDER CO., 106 Wall street, New York.

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Double Daily Line of Free Reclining Chair Cars to OMAHA.

Elegant Parlor Cars to KANSAS CITY, and Reclining Chair Cars Free on all trains.

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THE IRON MOUNTAIN ROUTE

Is the only route to the Great Hot Springs of Arkansas, and the most direct route to all points in Texas.

Only one change of cars St. Louis to San Francisco.

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Information cheerfully furnished by Company's agents. H. C. TOWNSEND, Gen'l Pass. & Ticket Agt. W. H. NEWMAN, Gen'l Traffic Man., St. Louis, Mo.



ESTABLISHED 1866.
FAY'S MANILLA ROOFING.

CHEAP WATER PROOF. Applied by our new STRONG WATER PROOF Patent method in 1/4 the time and 1/4 the labor of any other way. Does not rust nor rot. It is an Economical and DURABLE SUBSTITUTE for PLASTER on walls. Ornamental CARPETS and RUGS of same material, cheaper and better than Oil Cloth. Catalogue and Samples Free. W. H. FAY & CO. CAMDEN, N. J. ST. LOUIS. MINNEAPOLIS. OMAHA.

The Home Circle.

The Night Mist.

All the night long the gray, embracing mist
Has held in tender arms the tired world;
The sleepy river its soft lips have kissed,
And over hills and meadows it has curled.

Its white, cool finger it has gently placed
On weary stretches of deep, drifting sand;
The noisy city and the far-off waste
Have felt the benediction of its hand.

The drowsy world rolls on toward the day;
The fresh, sweet wind of morning softly
blows;
The willing mist no longer now may stay;
With first expectancy of dawn it goes!

—Margaret Deland, in *Harper's Magazine*.

My midnight lamp is weary as my soul,
And, being immortal, has gone out.
And now alone yon moony lamp of heaven,
Which God lit, and not man, illuminates
These volumes others wrote in weariness
As I have read them. —Mrs. Browning.

Woeful shepherds, weep no more
For Lycidas, your sorrow is not dead,
Sunk, though he be, beneath the wat'ry floor;
So sinks the day star in the ocean bed,
And yet anon repairs his drooping head,
And tricks his beams, and with new-spangled
ore
Flames in the forehead of the morning sky. —Milton.

Rise! for the day is passing,
And you lie dreaming on;
The others have buckled their armor
And forth to the fight have gone.
A place in the ranks awaits you,
Each man has some part to play;
The Past and the Future are looking
In the face of the stern To-day.

—Adelaide A. Proctor.

A Practical Illustration.

Within the last few months there have appeared from time to time in a journal devoted to women's work and home interests, some articles upon the merits of teaching boys to do so-called girls' work. One mother would strongly recommend the plan because of its usefulness in the home circle; another would write as earnestly of the wrong done to the boy in thus "unmanning" him.

Prejudiced in favor of making boys useful as well as ornamental, I still felt the futility of the womanly endeavors to persuade tired, but already biased mothers, that their boys would only become more manly while learning useful lessons or chivalrously performing some of the sister's work. The controversy, in its unsatisfactory result, reminds me of the childish contradictions where one child will make an assertion, the second child will earnestly remark, "It aint so!" The first, with much heat, will respond, "Tis, too!" and at last each will believe just as he did in the beginning of the dispute. In order that one or the other of the disputants should be won to a different understanding, it was necessary that some practical proof or illustration be brought to bear on the subject of contention.

Not long since, while visiting away from home, it became my privilege as well as duty to assist a busy housekeeper by acting the part of chambermaid. While doing duty, I found myself at the door of two young gentleman roomers. I speak with forethought when I say "at the door," because it was some time before I overcame my surprise sufficiently to enter and begin my work. I did begin the work, but did not finish it. I suppose the large flat stones pressing some entomological or some other "specimens" were legitimate room furnishings, under the circumstances; but they were certainly an opposing force to a perfect arrangement of the room. Towels and shoe-brushes, hats and soiled wearing apparel were holding an unnatural communion with each other; papers of the old torn newspaper type, papers of the manuscript kind, and envelopes suggestive of some delicate and delightful correspondence, were huddled together upon the study table or crowding each other onto the window-sill or to the bed—even between the sheets. What if these letters had possessed the sight of the fair writers, and what if by some subtle science they could have told their story! Hiding beneath the papers and books I found the relics of a by-gone feast—part of a cocoanut shell and the dried half of a cookie. I made a monument of the two and topped it with a piece of conglomerate. The last might have been a geological specimen, but more probably a piece from somebody's boot-heel collected in muddy weather.

If the two young men who are the unhappy occupants of the above-described room, or any other young men, should read

and recognize a familiar disarrangement, let them read on and see the conclusion of the matter.

I came home and said to my young sons, "Boys, I want you to take the sitting-room into your care this summer; I want you to see that it is kept in order." Of course, I expect to "keep at them" and make a daily suggestion that "now is the time to straighten books and papers and hang up any chance stray hat." I say to myself, "What if my boys should go to — to attend school, and should keep such a room? Would some one wonder what sort of a bringing-up they had had? Would some one else place the censure upon the boys who ought to have learned from observation if from no other teacher?" On the other hand, how nice it would be for some chambermaid to remark: "Ah! It's such a rest to come into this room! Such a contrast to the rooms of most boys! What a recommend I can give them to Miss So-and-so!"

It's worth while to take the matter in hand, and bring about that very necessary part of my boy's education. The time is slowly but surely coming when a young man's prospects will be brightened or spoiled by his habits of neatness. The time will soon pass when only the girls will blush when they are surprised in a disorderly room or in an untidy toilet. As the time has come that a woman can vote or perform a surgical operation, and a man is expected to bring his morals and manners to the same light that shines upon his sister's actions, so surely is the time coming when all that constitutes a right code of habits in every-day duties for the girls, shall add so much responsibility to the boys.

PEGGY PARMALEE.

Two or Three Suggestive Points.

The voters of our county are soon to decide for or against railroad bonds. I own three well improved farms on the line of the proposed road, besides a wife's interest in nine hundred acres more, and of course favor it, but have no right to help with my vote. Two of my renters, who pay no taxes, will cast their ballots against bonds. Will some one opposed to "woman's rights" please tell me if there is any justice in such a law?

We hired one of our boys, aged 9 years, to hoe the potato patch, for the moderate sum of 5 cents. An older brother, who never hurts himself at work, came along, told him he was doing the job too cheap, and added: "If you will loan me the money I will collect 15 cents for it." Had not this young agitator better take hold of the "labor question" instead of the plow?

A FARMER'S WIFE.

Moral Value of Preventive Medicine.

It is not, however, with the view of the prevention of physical suffering alone that I desire to commend to you the sphere of preventive medicine. My main thesis introduces us to a far higher and broader region of thought—viz., to a consideration of the moral value of preventive medicine. In presenting this subject I shall endeavor to show that hygiene is the basis of morals, and this from the two following points of view: 1. That whatever promotes the physical well-being of the individual and of the community, promotes also their moral well-being. 2. That the tendency of disease is to undermine morality.

The hygienic value of moral living (a proposition the exact converse of that just stated) has long been recognized. Even its curative influence has not been overlooked. In that charming story, "Little Lord Fauntleroy," the author is true to the universal experience in depicting the improvement in health of the unfeeling old earl which follows upon the springing up in his heart of a true affection for his young grandson and heir. In this new unfolding of sympathetic interests, he gradually forgets the twinges of gout which have heretofore made life a burden; and, thus neglected, the disease languishes—or rather, the new tide of life which courses through his weakened veins gradually sweeps away the ashes which have accumulated around his miserable joints—and he again mounts his horse and rides forth into the life-renewing air and sunshine, tempted to the effort by the winning companionship of the loving and tender-hearted young philanthropist. The returns of moral well-doing in the guise of physical well-being have, indeed, ever been held up

as an incentive to morality, from that remote time when length of days was promised as the reward of filial piety, to those modern exhortations to honesty and virtue embodied in the mercenary maxims of the shrewd Ben Franklin. But the idea that hygienic living is the real basis of moral living has scarcely been hinted at, except by the few leaders in this department of thought among whom alone a science of morals is definitely recognized.—*Popular Science Monthly*.

Notes and Recipes.

Try a sun bath for rheumatism.
An ounce of alum will purify a whole hogshhead of foul water.

Try hot flannel over the seat of neuralgic pain and renew frequently.

Try walking with your hands behind you if you are becoming bent forward.

A good remedy for a burn or scald is said to be potatoes grated and applied as a poultice.

If salt is sprinkled around the edges of a carpet when on the floor, it will keep away moths.

A spoonful of oxgall to a gallon of water will set the colors of almost any goods soaked in it previous to washing.

To keep cake from sticking to the pan, without using paper, after greasing the pan, sift a little flour in, then turn it over and shake out all that you can.

In cooking cabbage, put a small piece of a red pepper into the pot. It will not only improve the taste of the vegetable, but prevents any harmful result in the eating thereof.

Silver becoming black may be avoided by keeping that which is not often used in cotton flannel bags, with small bags about the size of a thimble filled with bits of gum-camphor packed in around the articles.

For mildew, pour a quart of boiling water on an ounce of chloride of lime. When it is dissolved add three quarts of cold water. Into this put the garment, and let it soak twelve hours. If not very bad the spots will come out in less time.

A carpet can be mended by cutting a piece like the carpet a little larger than the hole. Put paste around the edge of the patch, then slip it under the carpet and rub it well with a warm iron until dry. If the figure is matched it makes a very neat job as well as a quick one.

Pieces of toilet soap that have become too small for convenient handling may be utilized by making a small flannel bag, leaving the top open, and into this putting the pieces of soap as they accumulate. When it is full sew over the top and you have a nice accessory for your bath-tub.

In heating canned tomatoes for the table season with nothing but salt, unless you are sure all who are to eat them like sugar in them; in that case you can put in a little or add the sugar at the table. On no consideration put in butter or pepper, their flavor is much fresher without it.

Fried eggs, unless to be eaten with ham or bacon, should be fried in butter; if you have the hot cover to put over them while frying, you will require very little butter. Never turn an egg over if you care in the least for looks. I use a sheet-iron kettle cover, and heat it by laying on top of the stove, where it is clean as well as hot.

Heedless Children.

Though many children are put down as heedless, there are very few real heedless children. There is always some good and sufficient reason for the apparent heedlessness of most of the little ones, and if the parents of these children would take the trouble to examine into the cause they would be very soon convinced that the little ones were not to blame. But most parents will not do this; they have firmly settled it to their own satisfaction that a child is heedless, and no amount of argument will convince them to the contrary. Through thoughtlessness or wilful heedlessness, which should be applied more properly to such parents than to the child, they brand the boy with a fault which it is very likely he never had. This is certainly wrong. It is unjust to themselves and the child. It is a sad thing, nevertheless it is true, that when such parents sit in judgment on their own child, they are the most cruel of all judges, for they persist in convicting without a particle of evidence but their own biased opin-

ion. The child very soon learns that his own denials do not help him, and quietly submits to the decree, notwithstanding his little heart is sore from the injustice that has been done him.

"Willie is such a heedless boy," you may hear some of them say. "I have called him twice and he never pretends to hear me; I don't know what to do with him." "But," remarks some one, "perhaps he doesn't hear you." "Oh, he hears me fast enough, for yesterday he was twice as far away and he answered my first call." Such a person never stops to reason or think for a moment that the child may be deaf on one side, or that a catarrhal affection may affect his hearing some days more than others. These parents are fond of quoting the old adage: "There are none so deaf as those who won't hear," although the companion—"There are none so blind as those who won't see," would be more applicable to themselves.

I remember one child branded with this one fault, who was otherwise an intelligent, bright little fellow, with whom you could not think of associating the charge of heedlessness, yet his parents being the accusers, it was hard to form an opinion. At the solicitation of a friend of the family, the mother brought him to a well-known aurist for examination, and was horrified to learn that the hearing of one ear had been totally destroyed by a catarrhal trouble which had been wholly overlooked by both parents. This child had been reprimanded often, even in the presence of strangers, for a fault which he did not possess, and of which he had no knowledge whatever.

Be careful, then, how you charge a child with heedlessness; be convinced, not by your own "infallible" opinion, but by competent medical authority, that his hearing is sound ere you accuse him of this failing. It may seem a little thing to us, but the remembrance of an act of injustice toward a child will linger long in the little one's memory, and is very often never obliterated.—*Ex.*

New Hints on House-Cleaning.

From several years of observation of the different methods employed by women in their annual house-cleaning, we are convinced that most of them make themselves a great deal of unnecessary hard work when putting their "houses in order." The usual way is to go at it as if the fate of the nation depended on having it done at a certain time. "Moving" is always dreaded by the men folks, and house-cleaning, as a general thing, is about as bad. We know one woman who has completely revolutionized the old system. She begins with the closets. She empties one at a time, cleans it and its contents, returns them to it, and goes on to the next, never hurrying the work, and consequently never making herself sick by overdoing, as so many women do every spring. When the closets are in "apple-pie order," she begins with the rooms, taking those upstairs first, one at a time, and working her way down to the cellar. There is no bustle, no confusion, no "picked-up" meals, and, consequently, no outbreaks of wrath on the part of the men folks, who would not know that house-cleaning was going on if they were not asked to help move heavy furniture out of one room into another now and then, and carry out the carpets, or bring them in after they had been beaten and aired. When the house is cleaned in this leisurely fashion, it is easy to get the men to help put up shades and curtains, because they do not get "out of sorts" from the general topsy-turvy condition of things. When the work is completed, the woman of the house is not "all used up." She may be tired—without doubt she is—but she soon "rests up," and is "all right again," while in many cases the woman who cleans house in the old fashion pays for her over-zealous ambition by sickness brought on by not "going slow" and working according to her strength.—*American Agriculturist*.

In August last, a lady read about Shallenberger's Pills in the *Arkansas Methodist*, wrote to Dr. Shallenberger, Rochester, Pa., for a bottle, and this is what she says of the medicine:

CHAMPAGNE, ARK., October 25, 1886.

"Thanks to Dr. Shallenberger for the Pills; they are just what he says they are. My daughter had been suffering with chills and fever for twelve months, in spite of all the medicine I could procure, but she has not had a chill since taking the Pills, now nearly three months." MRS. JOHN TODD.

The Young Folks.

Little Sailors.

Now, Harry, pull the chairs up,
And, Fanny, get the shawl,
And we'll play we're sailors,
And that we're in a squall.
Don't be in such a hurry,
I'll fix it if you wait;
I want to get the hassocks
To make the "Golden Gate."

Now this chair is the ship's stern
And that one is the bow,
But there, you must be careful
And not lean so hard, you know.
Now sailors pull that sail up
And tuck the corners in.
Well—if you want it tighter
Ask mamma for a pin.

Now, couldn't you sing something
About the ocean blue?
Well, never mind: "By-Baby"
Or anything will do!
See here! You careless sailors,
You mind what you're about;
You know that water'll drown you
If you should tumble out!

There, now you've gone and done it;
I knew just how 't would be.
I told you to be careful,
And now you're hurt, you see.
Well, never mind; we won't play
We are sailors any more,
But get the blocks and build up
A playhouse on the floor.—*The Nursery.*

THE MILL AND THE CABIN.

What follows is taken from a very interesting "bit of autobiography" by Wm. D. Howells, which appears in the current number of *Youth's Companion*. This is only about one-fourth part of the entire sketch:

Our log cabin stood only a stone's cast from the gray, old, weather-tinted grist-mill, whose voice was music for us by night and by day, so that on Sundays, when the water was shut off from the great tub-wheels in its basement, it was as if the world had gone deaf and dumb. A soft sibilance ordinarily prevailed over the dull, hoarse murmur of the machinery; but late at night, when the water gathered that mysterious force which the darkness gives it, the voice of the mill had something weird in it, like a human moan.

It was in all ways a place which I did not care to explore alone. It was very well, with a company of boys, to tumble and wrestle in the vast bins full of golden wheat, or to climb the slippery stairs to the cooling-floor in the loft, whither the little pockets of the elevators carried the meal warm from the burrs, and the blades of the wheel up there, worn smooth by years of use, spread it out in an ever-widening circle, and caressed it with a thousand repetitions of their revolution. But the heavy rush of the water upon the wheels in the dim, humid basement, the angry whirl of the burrs under the hoppers, the high windows, powdered and darkened with the floating meal, the vague corners festooned with flour-laden cobwebs, the jelling and shaking of the bolting-cloths, had all a potentiality of terror in them that was not a pleasure to the boy's sensitive nerves. Ghosts, against all reason and experience, were but too probably waiting their chance to waylay unwary steps there, whenever two feet ventured alone into the mill, and Indians, of course, made it their ambush.

With the saw-mill it was another matter. That was always an affair of the broad day. It began work, and quitted work like a Christian, and did not keep the grist-mill's unnatural hours. Yet it had its fine moments, when the upright saw lunged through the heavy oak log and gave out the sweet smell of the bruised, woody fibers, or then when the circular saw walled through the length of the lath we were making for the new house, and freed itself with a sharp cry, and purred softly till the wood touched it again, and it broke again into its long lament.

The warm sawdust in the pits below was almost as friendly to bare feet as the warm meal; and it was splendid to rush down the ways on the cars that brought up the logs, or carried away the lumber. How we should have lived through all these complicated mechanical perils I cannot very well imagine now; but there is a special providence that watches over boys, and appoints the greater number of them to grow up in spite of their environment.

Nothing was ever drowned in those swift and sullen waters, except our spool-pig, as they call the invalid titman of the herd in that region; though once one of the grist-miller's children came near giving a touch

of tragedy to their waters. He fell into the race just above the saw-mill gate, and was eddying round into the rush upon its wheel, when I caught him by his long yellow hair and pulled him out. His mother came rushing from her door, at the outcry we had all set up, and perceiving him safe, immediately fell upon him in merited chastisement. No notice, then or thereafter, was taken of his preserver, by either of his parents; but I was not the less a hero in my own eyes.

I cannot remember now whether it was in the early spring after our first winter in the log cabin, or in the early part of the second winter, which found us still there, that it was justly thought fit I should leave these vain delights, and go to earn some money in a printing office in X—. I was, though so young, a good compositor, swift and clean, and when the foreman of the printing office appeared one day at our cabin, and asked if I could come to take the place of a delinquent hand, there was no question with any one but myself that I must go. For me, a terrible homesickness fell instantly upon me—a homesickness that already, in the mere prospect of absence, pierced my heart, and filled my throat, and blinded me with tears.

The foreman wanted me to go back with him in his buggy, but a day's grace was granted me, and then my older brother took me to X—, where he was to meet my father at the railroad station on his return from Cincinnati. It had been snowing, in the soft, southern Ohio fashion, but the clouds had broken away, and the evening fell in a clear sky, apple-green along the horizon, as we drove on. This color of the sky must always be associated for me with the despair that then filled my soul, and which I was constantly swallowing down with great gulps. We joked, and got some miserable laughter out of the efforts of the horse to free himself from the snow that balled in his hoofs, but I suffered all the time an anguish of homesickness that now seems incredible. All the time, I had every fact of the cabin life before me; what each of the children was doing, especially the younger ones, and what, above all, my mother was doing, and how at every moment she was looking; I saw the wretched little phantasm of myself moving about there.

The editor to whom my brother delivered me over could not conceive of me as tragedy; he received me as if I were the merest commonplace, and delivered me in turn to the good man with whom I was to board. There were half a dozen school-girls boarding there, too, and their gayety, when they came in, added to my desolation.

The man said supper was about ready, and he reckoned I would get something to eat if I looked out for myself. Upon reflection, I answered that I thought I did not want any supper, and that I must go to find my brother, whom I had to tell something. I found him at the station, and told him I was going home with him. He tried to reason with me, or rather with my frenzy of homesickness; and I agreed to leave the question open till my father came; but in my own mind it was closed.

My father suggested, however, something that had not occurred to either of us; we should both stay. This seemed possible for me; but not at that boarding-house, not within the sound of the laughter of those girls! We went to the hotel, where we had beefsteak and ham and eggs and hot biscuit every morning for breakfast, and where we paid two dollars apiece for the week we stayed. At the end of this time the editor had found another hand, and we went home, where I was welcomed as from a year's absence.

Again I was called to suffer this trial, the chief trial of my boyhood, but it came in a milder form, and was lightened to me not only by the experience of survival from it, but by various circumstances. This time I went to D—, where one of my uncles was still living, and he somehow learned the misery I was in, and bade me come and stay with him, while I remained in D—. I was very fond of him, and of the gentle creature, his wife, who stood to me for all that was at once naturally and conventionally refined, a type of gracious loveliness and wordly splendor.

They had an only child, to whom her cousin's presence in the house was a constant joy. Over them all hung the shadow of fragile health, and I look back at them through the halo of their early death; but the remembrance cannot make them kinder

than they really were. With all that, I was homesick still. I fell asleep with the radiant image of our log cabin before my eyes, and I woke with my heart like lead in my breast.

I did not see how I could get through the day, and I began it with miserable tears. I had found that by drinking a great deal of water at my meals, I could keep down the sobs for the time being, and I practiced this device to the surprise and alarm of my relatives, who were troubled at the spectacle of my unnatural thirst.

Sometimes I left the table, and ran out for a burst of tears behind the house; every night after dark, I cried there alone. But I could not wholly hide my suffering, and I suppose that after a while the sight of it became intolerable. At any rate, a blessed evening came when, returning from work, I found my brother waiting for me at my uncle's house; and the next morning we set out for home in the keen, silent dark before the November dawn.

We were both mounted on the italic-footed mare, I behind my brother, with my arms round him to keep on better, and so we rode out of the sleeping town, and into the lifting shadow of the woods. They might have swarmed with ghosts, or Indians; I should not have cared; I was going home.

By-and-by, as we rode on, the birds began to call one another from their dreams; the quails whistled from the stubble fields, and the crows clamored from the tops of the deadening.* The squirrels raced along the fence-rails, and in the woods, they stopped half way up the boles to bark at us; the jays strutted down the shelving branches to offer us a passing insult and defiance.

Presently, at a little clearing, we came to a log cabin; the blue smoke curled from its chimney, and through the closed door came the soft, low hum of a spinning-wheel. The red and yellow leaves, heavy with the cold dew, dripped round us; and I was profoundly at peace. The homesick will understand how it was that I was as if saved from death.

At last we crossed the tall-race from the island, and turned up, not at the old log cabin, but at the front door of the new house. The family had flitted during my absence, and now they all burst out upon me in exultant welcome, and my mother caught me to her heart. Doubtless she knew that it would have been better for me to have conquered myself; but my defeat was dearer to her than my triumph could have been. She made me her honored guest; I had the best place at the table, the tenderest bit of steak, the richest cup of her golden coffee; and all that day I was "company."

It was a great day, which I must have spent chiefly in admiring the new house. It was so very new, yet, as not to be plastered; they had not been able to wait for that; but it was beautifully lathed in all its partitions, and the closely-fitted floors were a marvel of carpentering. I roamed through all the rooms, and up and down the stairs, and admired the familiar outside of the house as freshly as if it were as novel as the interior, where open wood fires blazed upon the hearths, and threw a pleasant light of home upon the latticed walls.

I must have gone through the old log cabin to see how it looked without us, but I have no recollection of ever entering its door

again, so soon had it ceased to be part of my life. We remained in the new house, as we continued to call it, for two or three months, and then the changes of business which had been taking place without the knowledge of us children called us away from that roof, too, and we left the Mills and the pleasant country that had grown so dear, to take up our abode in city streets again. We went to live in the ordinary brick house of our civilization, but we had grown so accustomed, with the quick and facile adaptation of children, to living in a house which was merely lathed, that we distinguished this last dwelling from the new house as a "plastered house."

Some of our playmates of the neighborhood walked part of the way to X— with us boys, on the snowy morning when we turned our backs on the new house to take the train in that town. A shadow of the gloom in which our spirits were steeped passed over me again, but chiefly I remember our difficulties in getting our young Newfoundland dog away with us; and our subsequent embarrassments with this animal on the train, where he sat up and barked out of the window at the passing objects, and finally became seasick, blot all other memories of that time from my mind.

*Girdling the trees and letting them die standing.

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Commercial reports on the last week's business do not mention the inter-State commerce law at all. The country is still safe.

Heavy rains are reported in different portions of the State, and particularly in the western counties within the last few days. The effect on chinch bugs was destructive.

A Chicago beef-canning establishment made a contract, a few days ago with the French government to supply the army and navy of France with about 10,000,000 pounds of canned beef.

Capital Grange.

Every member of Capital Grange is expected to meet at Old Fellows' hall, Topeka, on Saturday, May 28, at 10 a. m. Bring all your friends also; well filled baskets of good cheer. Spread the news.

A theater was closed and its license revoked in Rochester, N. Y., Monday, because the management was preparing for an exhibition by Sullivan, the drunken, debauched prize fighter. If that kind of treatment was meted out to every house that deals in such stuff it would be well.

A statistician, claiming to be well informed, says that the wool clip of the United States in 1887 will be 32,000,000 pounds less than that of 1884. He gives a list of all the States and Territories and the amounts of wool they produced in '84 and an estimate of the present year's crop. He puts Kansas down for an increase of two million pounds.

Mr. Mortimer, lecturer for the Patrons of Husbandry, says: All that is threatening in our country to-day is centered in our cities, and in many instances this bad element is already ruling the country. Farmers cannot too soon organize and educate themselves to meet the issues. We cannot shirk the responsibility. It is an "irrepressible conflict."

Kansas agricultural reports are in demand. Newspapers in other States comment on them as if they were from a golden country. And no wonder. Kansas is developing so fast as to afford a fresh surprise every time a new report appears. The last information of this character sent out by Major Sims, to which we called attention last week, was a brief summary of some of our statistics of growth, and we observe that they are copied and commented upon by a good many of our exchanges. Kansas is a good place to come to.

CHINCH BUGS AND THEIR DESTRUCTION.

The presence of this destructive pest again this year in some portions of Kansas and in other States as well moves us all to think another time, and if possible with more earnestness than ever before about means of getting rid of it, or at least in some way and to some extent diminish the extent of its depredations. The **KANSAS FARMER** renews some of its former suggestions and will here add some others.

In the first place, every farmer ought to have his farm arranged in fields of convenient size to change location of different crops from year to year, and he ought not to raise two crops of the same kind of grain on the same ground without at least one year intervening. There ought not to be any accumulation of trash at the sides or ends of the fields, and there ought to be a strip of land around every grain field, planted to corn or oats and set apart specially for the use of the bugs, and there should be a unseeded strip between that and the field. At the proper time, by use of emulsions or fire, most of the insects could be destroyed.

As things are now done on most of the farms, there are many recruiting stations for the bugs, kept over from year to year. There are divers accumulations of old cornstalks, hay, straw, weeds, sods, and a thousand and one bunches of odds and ends, scattered about, all good breeding places for insects. Farms ought to be kept scrupulously clean and free from all manner of trash. Corn ground ought to work so clean that not a weed would be left to grow, the stalks should be cut up low, shocked, husked and hauled out of the field or stacked in one place before snow falls. The fodder should be fed to stock in barns or well inclosed yards where they could be made into manure, and not scattered about over large areas of ground. If there is no way prearranged to save them, they ought to be raked and carried into great piles and put into manure by rotting, or else burned. Keep the farm clean, make all the manure possible, keep the ground in best possible condition of fertility and tith, and change crops every year.

And now as to emulsions, kerosene oil, milk and water have been used to advantage as destroyers of insects, and several arsenical preparations have been used. The most certainly fatal preparation is made from London purple. It is a deadly poison, and persons using it must be careful. If they have any sores or cuts or bruises, it is very important that the poison be kept away from them, and it ought not to be allowed to dry on the skin anywhere. London purple is not expensive, and a small quantity of it will do for a large quantity of water. Experiments have shown that one-half to three-fourths of a pound is enough for a barrel of forty gallons of water. A tank, holding ten or twelve barrels of water, might easily be made and placed on a wagon. For ten barrels of water five or six pounds of the poison would be sufficient. It is better to use a little wheat or rye flour in the mixture, because the flour imparts an adhesive property to the mixture, causing it to remain longer on the objects upon which it is thrown. The quantity of flour to be used is about three quarts to one-half pound of the poison and forty gallons of water. It is best prepared by washing it through a very fine sieve attached to a large funnel. The purple is best put into the vessel through the funnel in like manner. This process is a little more fully described in another article in this issue.

At first thought it may appear im-

practicable to apply the mixture to corn and other growing grain. Let us think about it a moment. As to corn, if there were a strip of ground, as above suggested, around the field, with corn growing on it, that strip would be first attacked. There would be no serious difficulty in the way of spraying that. And if there were no such strip, the outside rows of the field being first attacked, they could be reached. If it be necessary to go far into the field, then a smaller vehicle must be used, as a sled or low-wheeled cart, with a barrel of the mixture to pass between two rows.

As to wheat and oats, a wagon could be drawn across the field at distances of forty or fifty feet, and that would not injure one-fourth as much grain as would be saved if the spraying does any good at all.

As to method of application, it must be sprayed, not poured. The finer the spray, the nearer it approaches mist, the better. A spray nozzle attached to a hose through which the mixture is forced by a pump, does the work well. The distance to which the wash can be carried depends on the power of the force-pump and the length of the hose. Tall trees are sprayed from a tank on a wagon. With a powerful pump, several pieces of hose may be used at the same time, one person attending to each hose. The "Cyclone" nozzle is good for close work, but the Nixon nozzle is said to be better for long range. The wash must be kept well stirred all the time while spraying is going on, and this is very important where no flour is used. The flour retards precipitation or settling of the mineral matter at the bottom.

We do not know what effect this operation would have on chinch bugs or other matured insects; but London purple is certain death to all insects in the second or caterpillar stage. It is not believed, however, that they take the poison by absorption. They get it by eating leaves on which the poison has been placed by the spray. They eat the poison. Chinch bugs destroy growing grain by eating its sap, which they draw out through the fibers of the stalk. If poison in liquid form is sprayed on the corn or wheat where they are at work, it would seem that most of them would be poisoned effectually. At any rate, the experiment is worth trying. It can be done on a small scale. Let a nozzle be made for the experiment. Any good mechanic, when he knows what is wanted, can make something that will do with lead, or tin or zinc, or leather, and very fine wire sieve. Attach it to the spout or horn of a tin syringe large enough to hold a quart or a gallon of the mixture. And if any mechanical preparation be regarded as too expensive for an experiment, then apply the poison with a broom or a wisp of hay or straw. Half an ounce of London purple is enough to mix in an ordinary milk bucket or pail of water, with flour in proportion as given above, say one-third of a pint to a bucketful of water.

The Missouri State Horticultural Society will hold its summer meeting this year at West Plains, Howell county, June 7, 8 and 9. An interesting programme has been prepared, including essays and addresses and discussions on a variety of subjects of special interest to all fruit-growers.

While Boston and New York were quarreling about five cents a hundred pounds difference in freight rates from Chicago, the Baltimore & Ohio railroad company took freight from Chicago to Baltimore at two cents a hundred less than the lake and rail routes had been charging to New York.

Destroying Insects With London Purple.

It has been demonstrated that London purple is a certain destroyer of insect life. In the earlier experiments, a larger quantity of the poison was used than is necessary, as has been proven by the later tests. Eight to twelve ounces is said to be enough for a barrel (forty gallons) of water, if thoroughly mixed and sprayed upon the trees. A species of beetle almost defoliated many of the elm trees in Washington city and no remedy tried did any good until London purple was used. It did the work effectually.

Citizens of Kansas, whether on the farms or in the cities, are interested in this matter. Millions of trees, and of many varieties, were set out this spring, and many more millions were already growing. It is a well known fact that insect depredations are becoming more extensive every year, and this applies especially to trees. The destruction wrought on trees, however, is not so much observed in the country as it is in the towns. Sidewalks are sometimes green with crushed caterpillars trodden by the passing people. Fruit trees suffer greatly, so do all manner of shrubs and flowering plants. London purple, if well applied, will destroy the destroyers.

In preparing the poison it is better to mix a little wheat flour with it. Take about three quarts of flour and run it through a very fine sieve attached to a funnel, not dry, however, but wash it through with water. The flour, in passing through the sieve, is divided so finely that it does not afterwards appear in lumps, but is diffused in the water. Do this in the vessel, cask, barrel or whatever is to contain the prepared poison. The flour serves to make the poison more adhesive to the leaves to which it is applied. After the flour is thus washed into the vessel, then wash in the London purple in the same way. The purple and the flour may be mixed dry and then washed through the sieve together, if desirable, but more flour than is needed is likely to get in by this method. The London purple may be used alone with water, but it is less effective, because it does not adhere so readily to the leaves. Use the proportions here given in any quantity of the mixture needed. Eight ounces of the poison to forty gallons of water is equivalent to one ounce of poison to five gallons of water, and so on down for less quantities, dividing the flour in like manner.

In applying the mixture it ought to be done in a manner approaching mist as nearly as possible. Don't drench the trees. Use a force pump and a hose with a spray nozzle. The "Cyclone" or "Eddy Chamber" nozzle is good. Throw upward and let fall upon the leaves like fine rain; also spray well among the leaves from below. Where the work to be done is only a small matter, a brush or a wisp is better than nothing. But remember, all the time, that London purple is a virulent poison. The time to use it is when the insects appear to begin their work—about this time and within two or three weeks next to come. Then, again, later in the season whenever another attack is made, if one should follow in the same season. It is well to give two or three sprayings a few days apart, so as to take in the later broods, for the poison does not destroy the eggs.

Where a great deal of work is to be done, a tank can be placed on a wagon, filled with the poison and drawn about under or beside the trees. For high trees, or where the spray must be thrown a long distance, the Nixon nozzle is said to be better.

From a gentleman returned a few days ago from the western part of the State, we learn that things in general are in good condition out there; that an immense immigration is coming in and that it is of the best class of people. Weather is fair and the people in good spirits.

A new machine, of great importance—a smoke consumer—was subjected to some tests at the Santa Fe railroad shops in this city a few days ago. It was attached to a locomotive, and operated to the entire satisfaction of all the witnesses. The object is to consume all the fuel used in making steam, instead of having nearly one-half of it escape in smoke, gas, soot and cinder.

John Wannamaker, of Philadelphia, is reported as saying that for a business man to discontinue an advertisement is like taking down his sign. He says: "If you want to do business you must let the public know it. Standing advertisements, when changed frequently, are cheaper and better than reading notices. They look more substantial and business like, and inspire confidence. I would as soon think of doing business without clerks as without advertising."

A large number of the wealthy farmers of Texas, a hundred or more, representing a great deal of wealth, met in State convention at Waco and organized the State Farmers' Alliance. The object is to engage in the manufacturing of wagons, agricultural implements, cotton presses, gins and oilmills. Arrangements have been concluded for collecting statistics and for an early charter under the laws of Texas. Five hundred thousand dollars was appropriated to the erection of a cotton mill.

Hon. W. Sims, Secretary of the State Board of Agriculture, recently ordered one of the new Shellabarger cattle cars to ship some fat cattle in. The car differs from the ordinary stock car in that it is divided into apartments or stalls, each animal being consigned to a separate berth. The car is no longer than the ordinary stock car, yet it is claimed it will hold sixteen 1,800-pound cattle, which is about the number ordinarily placed in a car, and they are so situated that there can be no crowding or prodding each other with their horns, and at the same time they are accessible for watering and feeding while in the car, and have room to lie down and rest and not be trampled upon by other animals in the car.

The twelfth annual meeting of nurserymen, florists and seedsmen will be held at Chicago in the Exposition building, commencing June 15 next, continuing three days. The discussion of questions directly concerning the welfare of the trade, new methods of propagating, new labor-saving devices, making of personal acquaintance of others in the trade, exchange and sale of surplus stock, exhibition of new trees, fruits and plants, are among the many reasons why every person interested in horticultural pursuits will be interested in the proceedings of that meeting. The badge system of last year is retained this year. A numbered badge and badge book are furnished members—thus enabling all to distinguish any one at the meeting, soon as he ascertains the number of his badge. In the badge book each can give under his number any specialties, surplus stock, new fruits, wants of any kind, etc., etc., at a very moderate cost. An outline programme, hotel and railroad arrangements, and other information may be obtained by addressing the Secretary, D. Wilmot Scott, Galena, Ill.

Not So Very Novel.

We are in receipt of a circular, a reprint of an editorial in the Cleveland (Ohio) *Leader* of May 3, under the heading "Novel Decision." The matter is in relation to two decisions recently rendered by the Supreme court of Ohio.

The suits were instituted by the State, on relation of the Attorney General,—one against the Cincinnati, New Orleans & Texas Pacific Railway company, i. e. the lessees of the Cincinnati Southern railway, and its connections; and the other against the Cincinnati, Washington & Baltimore Railway company. The proceedings are in *quo warranto*, and are for a forfeiture of the charters of these corporations. The petitions charged these companies with conspiracy with the Standard Oil Company, and its various agencies, to build up that monopoly, and crush out its competitors, by numerous acts of unlawful discrimination in freight rates on petroleum oils, such as charging exorbitant and extortionate rates; suddenly, without notice, raising rates that had been given and relied and acted upon; making discriminations, amounting in some instances to 243 per cent. difference in favor of the Standard Oil Company, and against other shippers, and many other violations of the rights of shippers under the laws governing common carriers.

The railroad companies interposed demurrers to the petition, raising the question whether the facts alleged constituted misuse or abuse of the franchise, rights and privileges conferred upon the corporations by the law of their creation, and whether the proceeding of *quo warranto* to oust them of their franchises, and deprive them of their corporate existence is the proper remedy in such cases.

The court overruled the demurrers, thus settling the important doctrines that such acts are abuses and misuse of corporate franchise, which may be punished by a forfeiture of the charters of the corporations if the evidence sustains the charges; that *quo warranto* is the proper remedy; and that our courts may deprive a corporation—an artificial creature of the State—of its continued existence and power to do mischief, when it violates the law of its creation and ceases to fulfil the design and purpose of its organization to be a common carrier for all alike, whether such abuse of its powers occurs in a domestic or an inter-State transaction.

Such, in brief, is a history of the two cases which, being alike in that they involved the same question, were submitted and disposed of together. They were brought by the Attorney General in behalf of the State. It is not strange that such a proceeding should be styled "novel," yet the decision in accord with sound principles of law established many, many years ago. Corporations are creatures of the law; they are created for the use and benefit of the public and not for the use and benefit of private individuals. Corporators are agents entrusted with certain franchises which are intended for the public convenience, and the agents may be called to account whenever they fail to discharge the duties of their trust faithfully and for the purposes for which they were allowed the superintendence and management of the franchise. A railroad company is chartered by the Legislature for certain uses. It must serve the people honestly, promptly, efficiently, safely, fairly and for a reasonable compensation. Whenever it begins wilfully to cheat the people, they, through the courts, and by laws, customs and proceedings long ago established, the franchise may be declared forfeited.

This decision is novel in the fact that

most people had about come to the conclusion that great corporations had come to be master, and that there is no virtue in the law. But God still reigns and the people will win the battle.

About Farm Mortgages.

Some of our exchanges are discussing the question—"Are farmers prosperous?" A majority of the disputants take the affirmative. Some have doubts about it and one insists that farmers are hopelessly in debt. It says that in Kansas and Nebraska, "in counties taken at random, from 50 to 75 per cent. of the farm lands are mortgaged up to within 60 or 75 per cent. of their cash value; that there is no accumulation of capital in the hands of the farmers; that in case of a failure in crops the loaners would have to buy the lands; that in the States of Kansas and Nebraska there are 134 real estate loan companies who charge from 8 to 12 per cent. interest per annum; and, finally, that the much-denounced landlord system of the old world is rapidly appearing in a most revolting, plutocratic form in the new."

It is doubtless true that many farmers in Kansas are somewhat in debt, but we do not believe that more than one-half the farms are mortgaged for more than one-half their value. The statement as quoted above is given in quotation marks by *Farm, Stock and Home*, as the report of some Chicago capitalists who had been solicited to take stock in a loan and trust company, and they looked up the proposed securities. Every person who is familiar with lending money on real estate security in the West knows that property is rated for purposes of the loan at not to exceed one-third its market value. It would be something unusual to find a farm mortgaged for more than one-half its value. We suppose it would be much nearer correct to say that in the newer portions of the State, probably 25 per cent. of the farmers are more or less in debt.

Kansas farmers are doing as well as their fellow farmers in any of the other States. We have had a good deal to contend with the last two years. Our wheat crop was cut short, and our corn yield was somewhat diminished. Some farmers lost heavily by floods, and some lost by reason of dry weather. Still, we got through in good condition; immigration the past two years exceeded that of any former two years; stock has done well, generally, except hogs, and, take the State as a whole, as our reports show, farmers of Kansas are in good condition. They are not all making fortunes, but they are doing better than the business men are.

This mortgage subject, however, is worth looking after. Every owner of a home ought to keep at least that free from mortgage if it be possible. Sometimes it seems to be really necessary to contract debts, and in such cases it is excusable; but there is no good excuse for delaying payment a day beyond one's ability to pay. The man who owns a good farm and is out of debt is in good circumstances. There is no investment equal to it. The farms of Kansas are worth more than the mines of Colorado.

Western Cattle Interests.

The Boston *Commercial Bulletin* publishes the details of special reports on the Western cattle interests. Summarized, they amount to this: The early reports of winter losses have been considerably exaggerated. The only territory where cattlemen have suffered severe losses is in Colorado. In western Kansas and Nebraska they were very light, the past winter running under 5 per cent. of the average. Parts of Idaho

and Wyoming suffered quite severely, particularly in the northwestern sections, but the average losses in both territories were not excessive. Utah, New Mexico and Arizona were particularly fortunate. New Mexico correspondents write that the loss does not exceed 3 per cent. in the territory named. Texas reports some suffering because of drouth, but the winter was much more favorable to stockmen than that of 1885-86.

In discussions of matters pertaining to range interests, the KANSAS FARMER steadily maintained that settlement would soon crowd the ranches out and that cattle-raising on immense areas where twenty acres of land are needed to support one animal, must, in the course of events, become unprofitable. This state of affairs is now at hand. In the report above alluded to the correspondents show that settlers are closing in upon the ranches like a conquering army. From every section comes reports of encroachments of immigrants upon the grazing territory, and particularly from Nebraska, Kansas and Colorado, where the cattlemen are being pushed steadily westward.

The letters from which the report is made up are plain on this subject. It is the opinion of some correspondents that the cattle-raising industry has reached its height, and several stations report it is becoming necessary to raise alfalfa and grass for feed. The decay of the ranch system is evidence of advancing agriculture. A dozen farmers will raise five times as many cattle and better ones on the same ground as one rancher, because farmers improve their lands, they raise corn and other grains and feed it to stock. As soon as ranches begin to give way to farms, then will be begun the march toward the time when one acre of land will be made to support one animal.

The spring opened favorably for stock in all parts of the country. The condition of all domestic animals is reported good.

Inquiries Answered.

GYPSUM ROOFS.—A correspondent, some weeks ago, inquired about the method used by Mexicans in Mexico, of constructing roofs of gypsum for dwelling houses. We have not been able to collect any satisfactory information on the subject. The writer of this was in Mexico a good many years ago, but he saw no such roofs nor did he hear of any.

HOW TO PROCURE A PATENT.—We cannot state the method of proceeding any more plainly or succinctly than is done in this paragraph, clipped from last week's *Weekly Inter Ocean*: "The applicant for a patent is required first to file in the Patent Office a petition on oath or affirmation that the inventor believes himself to be the first to frame the invention, and does not believe that it has been known or used before, and this must be accompanied by a full description of the invention, with drawings and a model where it is possible. It is not at all necessary that the invented article shall be sent to the Patent Office, but if a model, in miniature, can be made of it, that is essential. The application must be in writing, addressed to the Commissioner of Patents, and if the inventor is living his signature must accompany it, no matter who makes the application. The description of the invention must specify the manner of constructing and using it so clearly and fully that any person familiar with the art or science to which it pertains can make and use it. These specifications must be followed by the claim, in which the inventor shows very plainly the part, improvement or combination which he claims as purely his own discovery. It is quite important that the specifications should be well and carefully prepared, as patents have often been refused, and indeed have been declared invalid after granting, because of defective specifications." A fee of \$15 must accompany the application. If on examination of specifications and model the invention is found to be quite new, the inventor is so informed, and "letters patent," as the official papers are called, are sent to him on payment of an additional fee of \$20. After the filing of the application, the applicant, or his attorney, if he employs one, is notified of every step taken, and informed as to any additional information required.

Horticulture.

GOVERNMENT INTEREST IN FORESTRY.

The KANSAS FARMER is in receipt of several circular letters from the Agricultural Department at Washington, calling attention to the general subject of forestry and asking the co-operation of newspaper people, teachers and people generally in collecting and disseminating information in this direction. The Forestry Division of the Department of Agriculture desires to be informed about the interest and success, with which Arbor Day has been observed this year in our State. The Division will be gratified if some one in each town will send an account of the manner in which the day was observed, the number and kinds of trees planted, and any other facts of interest in connection with the celebration.

The Department is organizing a force for work in this matter, the object being to arouse the people to a just appreciation of the necessity for the growing of more trees. Our national forests are being destroyed at a rate much more rapid than most people are aware, and it is believed that the consequences will be vastly more serious than we now dream of.

The forest area of the United States seems to be less than 450,000,000 acres, of which more than 10,000,000 acres yearly are destroyed by fire, and to supply the needs of fuel, ties, lumber, etc., it is estimated that certainly not less than 10,000,000 acres are denuded, altogether an area of over 60,000 acres per diem, the product representing a value of more than \$700,000,000 per annum. The consumption of the forests in supplying our railroads with ties is enormous and increasing with the rapid extension of the roads. It is estimated that the building of existing roads has taken the available timber from an area as large as the States of Rhode Island and Connecticut, and that to keep them in repair by replacing decayed ties with new ones requires annually the yield of more than 500,000 acres. In 1853 the forest area of Ohio was 55.27 per cent. of the area of the State. In 1881 it was but 22.53 per cent. A similar rapid consumption of the forests has taken place in other States. In many cases the flow of streams has been lessened or made irregular by the removal of the forests from their vicinity. Floods and droughts have become more frequent and destructive from the same cause, and agriculture and manufactures have suffered greatly in consequence. The consumption of the forests so far exceeds their growth that, if no effective measures are taken to check the decline, the forests would entirely disappear within a hundred years. The great pine forests of the northwest will hardly last till the close of the present century.

The Department in its Forestry Division has been charged to obtain such information as may form a basis for intelligent action, and to exert, by the diffusion of accurate knowledge on the subject and otherwise, its influence in leading to a reform in the present methods of using the forests and to secure their renewal. This most desirable work, however, is only inadequately provided for by the appropriation given by Congress for that purpose. And the difficulty of obtaining precise and reliable information as to actual conditions and needs is great. Knowing that there is no body of men in the country, as a class, more intelligent and more capable of aiding this important work, nay more interested in it, than the educators of the coming generation, per-

ceiving also that the two purposes of obtaining and diffusing information for which this Forestry Division was constituted are subserved at one and the same time by the following plan:

1st. To engage teachers upon the ascertainment of facts in regard to forest areas, their distribution, utilization, etc., in their immediate precincts.
2d. By thus directing their attention to the subject and supplying them with such information as the Department may be able to give in regard to forestry, to have their own and their pupils' interest excited, and thus by indirect influences to arouse a desire to understand the questions involved.

It is not proposed to introduce a new branch into the course of studies, but simply to create a moral sentiment which will do its share in enlarging the views of those soon to become citizens.

Schools of every grade, without departing at all from their proper work, can supply some practical lessons in regard to the object and use of forests, the nature and growth of trees, and the significance of their existence or absence, awakening thereby the interest of pupils in a kind of knowledge too little fostered in the schools of the agricultural classes. In schools of the higher grade it can be united with instructions in botany and natural history in general. In colleges forestry should be presented in lectures on its various relations to arboriculture, agriculture, and political economy. Engaging thus the popular and higher education, we may establish a popular system of forestry suited to the peculiarities of our country and its people. We shall foster at the same time sympathy with rural objects, which will tend to make our youth content with rural life, instead of being overcome by the attractions of the great cities. The Commissioner calls special attention to the value of object lessons in any branch of study, and recommends to all heads of the higher educational institutions, as far as in their power, to cause the grounds of their respective institutions to be planted with collections of forest and ornamental trees and shrubs, grouped in accordance with their botanical relations or with a view to successful growth by a system of judicious mixing of kinds for mutual protection. A general adoption of this recommendation would soon convert the much-neglected grounds surrounding our colleges and schools into park-like groves of great attraction, the exponents of correct taste in ornamental planting, and perpetual volumes of forest botany and arboriculture. In like manner might the study of botany be promoted and popularized by the culture of representative kinds of plants united in accordance with their systematic relationship. Botanical parterres of plants, both economic and ornamental, might easily be introduced into the school grounds of the country, through which much useful information, both practical and scientific, would be imparted, assisting rural life in its onward course to a higher plane of culture. The Commissioner will take pleasure in promoting the adoption of his recommendation, as far as in his power, by contributions of plant material, and has especially instructed the Western agent of the Forestry Division, Prof. M. G. Kern, of St. Louis, Mo., a professional landscape gardener, to correspond with all who desire further information or advice in the design and improvement of the grounds of educational institutions.

All communications on this subject intended for the Department, should be addressed—"Forestry Division Department of Agriculture, Washington, D. C."

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The Poultry Yard.

Suggestions on Duck-Raising.

Extracts from an article on duck-raising which appeared recently in the *American Poultry Yard*:

Duck eggs hatch as certainly as hen's eggs, and shipping them by boat or rail does not appear to injure them, even though they have a very thin shell.

Fowls of any kind appear to do better after they have had a little time to become accustomed to their new home. They will usually stop laying a few days after being shipped, and will remain idle for a week or two, sometimes longer, much to the annoyance of their impatient owner. So to avoid such delays get your new ducks a few weeks before they are expected to lay, or before their eggs will be wanted to set.

A pond or stream of water may not be absolutely essential to the existence of ducks, but we are strong in the belief that no permanent success can be attained unless there is at least a fair amount of brook or marsh land convenient for the ducks. The best sort of water for ducks is a marshy, sluggish stream, in which they will find an immense quantity of aquatic plants, bugs and worms of which they are very fond and upon a diet of which they will make a rapid and healthy growth. The runs that wind through meadows and old pastures are the delight of a flock of thrifty ducklings. But where a good brook is not available an artificial pond or trough, large enough for the ducks to bathe in, will insure good results.

What is good food for common fowls will usually be found good for ducks. We have fed all out of the same dish and found all do equally well. A duck will lay well when fed with the same food that will make a Plymouth Rock or Bronze turkey lay.

We prefer common hens as hatchers. We have had some ducks do splendidly in hatching, have had them hatch every egg and raise every duck, yet, taken all in all, less vexation and loss is incurred when hens are used. The ducklings should not be allowed free access to a pond or brook until several weeks old, and it is well known that it is a trying matter for the old duck to be kept away from the water after having had such a small quantity of it for four long feverish weeks.

A duck house should be moderately warm, have a dry floor, water-tight roof and be well ventilated. It is not necessary to have the house as warm as a coop should be for gallinaceous fowls, but if it can be made rather warm the ducks will lay sooner in the spring, which is often very desirable when ducks are wanted for early fall market or extra large ones are wanted for showing at the fairs and poultry shows early in the season. Artificial heat is hardly necessary, as a well-constructed coop or house will be warm enough. For ventilating a very closely-built house a sub-drain of large size tiling, running a considerable distance and at a depth of a couple of feet beneath the surface of the ground and entering the coop in the center, will admit plenty of fresh air of a very moderate temperature. A small opening in the center of the roof will give egress for the impure air and gases. This opening must be arranged in such a way that wind and rain cannot blow in the house and upon the ducks. The floor may be either a plank one covered with sand or dry gravel to a depth of several inches, upon which straw, leaves or litter of some sort must be strewn in laying time, or it may be made of some mineral or other substance forming a concrete floor, to be treated in either case the same as far as litter is con-

cerned. A duck house need not be high, as most ducks roost right on the floor (we know of only two breeds, or species, rather, that roost upon perches—Wood ducks and Brazilian or Muscovy ducks), and they are not to be kept in the house excepting at night and in very inclement weather.

Meat for Fowls.

Mrs. Shute, in *Colorado Farmer*, says that when the fancier can obtain from two to five dollars per sitting for eggs, he certainly can afford to go to market for beef to feed his hens.

It is an established fact that fowls with animal food thrive better and the number of eggs are increased, which adds largely to the breeders' profit. We have learned by experience that chicks hatched out of eggs laid by birds fed a reasonable amount of animal food are far stronger than those fed entirely on grain.

It is the feed and care that keeps the birds healthy, and makes them productive of eggs, and from only well cared for breeding stock can we expect to raise strong and healthy progeny. It is just here that makes the difference, that people—particularly amateurs—overlook when they complain that the birds that they purchased of that "reliable fancier" do not lay as that breeder claimed they would. Then if the eggs hatch the chicks are too weak to live. Give the same care to your thoroughbred fowls that you would to any other fine-bred stock and they can be tried and not found wanting.



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Surrounded by the FINEST LANDS in Kansas. Lands cheap, but developing rapidly. Now is the time to invest! Deeded Lands, \$4 to \$7 per acre. Write for full information to B. F. STOCKS & CO., The leading Real Estate Firm in GARDEN CITY, KANSAS.

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The Busy Bee.

Cave for Wintering Bees.

A writer in *Gleanings* describes a cave in which he winters his bees: I have no land of my own as yet, so I can not build a cellar with underground ventilator, etc., as I should like to do. I made my cave three feet below the surface, 10x16. Three upright posts were placed on each side, and three rafters were laid on top of these. The sides of the cave were the only support to the posts. Boards were laid around the outside, and banked up with straw and earth to the top. The roof was made by laying boards on the rafters, then three inches of chaff, and then another layer of boards, lapped, to keep out the rain. It was six feet high inside, roof slanting one way; a door in the end, and two blind ventilators, completed the cave. I have used it successfully the last two winters, and would much prefer it to any cellar under a house, which is used for general storage—anything except a cellar built expressly for bees. Old cellars usually have more or less foul air, while in this cave the air is pure, and it never reaches the freezing point. I do not think the thermometer fell below 40 deg. any time last winter.

I can build such a cave in two days, by using new 16-foot lumber; and it would surely pay any one, having thirty or more colonies, to build such a cave, if bees have no better place for winter quarters.

The main advantage in leaving bees with plenty of stores in the cellar till late in the spring is this: the old workers live much longer in than out, not being exposed to the weather vicissitudes of the spring season. Many a colony that now dwindles and dies outside would, if left inside in proper quarters, come through all right. If they are fairly quiet, and have plenty of both pollen and honey, and the repository is comfortable, they are much better in until the weather gets warm and settled. If the hives are on bottom boards in the cellar there will of course be more or less of an accumulation of dead bees below, and this is one of the main objections to leaving them in late. In the case of movable bottoms this difficulty can, however, be easily overcome by quietly lifting each hive off its bottom board and placing it on another clean one. This, if done carefully, will disturb the bees very little. Fast bottoms can be pretty well cleaned off through the entrance by means of a wire with a crook on one end.

Patents to Kansas People.

The following is a list of patents granted Kansas people for the week ending May 14, 1887; prepared from the official records of the Patent office by Mr. J. C. Higdon, solicitor of patents, Hall building, Kansas City, Mo.:

A printed copy of any patent here named can be had for 25 cents.

Land anchor—Thomas Nevison, of Florence.

Steam boiler—George Kingsley, of Leavenworth.

Windmill—Vanpelt & Nichols, of Eureka.

Lawn-mower—Jesse F. Powell, of Eureka.

Harvesting machine—James Giles, of Pleasant View.

Kitchen cabinet—Orren Bates, of Wetmore.

A Terrible Fire

arouses the apprehensions of a whole city. And yet the wild havoc of disease startles no one. Sad to relate, women suffer from year to year with chronic diseases and weaknesses peculiar to their sex, knowing that they are growing worse with every day, and still take no measures for their own relief. Dr. Pierce's "Favorite Prescription" is the result of life-long and learned study of female complaints. It is guaranteed to cure.

St. Louis Wool Market.

Reported by Hagey & Wilhelm:

As our wool season advances with increasing receipts, the demand for all grades grows heavier at full values. There are no held-over stocks here, and consignments meet quick sale at following prices:

Choice 3/4 and 1/2-blood.....	25a27
Medium.....	23a25
Low medium.....	20a22
Light fine.....	20a22
Heavy fine.....	18a20
Heavy Merino and bux.....	15a17
Common.....	10a12
Carpet.....	14a17
Pulled.....	10a12
Burry wools 2 to 5 cents per lb. less.	

There are said to be between 3,000 and 4,000 pensioners of the United States residing in Germany.

The tear down childhood's cheek that flows
Is like the dewdrop on the rose;
When next the summer breeze comes by,
And waves the bush, the flower is dry.

—Scott.

The horse that is well fed and made to work will come out in the spring in much better condition for service than the one that had been idle all the time.

To feed an animal only that quantity of food necessary to prevent it from losing flesh is a waste of time. The aim should be to secure an increase every day.

At Los Angeles, Cal., a ten-acre vineyard, three years old, produced three tons of Sultan raisins. This is an important raisin grape, and crops of extraordinary size and quality are reported.

While planting the tree do not try to rattle the dirt among the roots by shaking the tree up and down, for this draws the fine, hair-like roots out of place, but does not push them back; it folds them up and gets them all out of shape.

All plants or vegetables grown for their leaves, as cabbage, lettuce, spinach, etc., require an abundance of nitrogenous manures, and it is useless to attempt their culture without it. Leguminous plants are injured by manure of this character; it causes too great a growth of stem and leaf and the earliness of the vegetable is injuriously affected.

Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought.

T. E. BOWMAN & Co.,
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Direct Packing.—Can butter be packed directly from the churn into the package, with success and with a saving of labor? is an important inquiry. It is easily done if two points are complied with. The well-washed and salted butter must be allowed to stand and drain for some time, without letting the temperature fall, and when the butter seems dry, then pack it, only putting a small quantity at a time into the package. If a certain amount of pressure is applied—not a turning, twisting movement of the packing implement—no difficulty need be experienced, and a great saving of labor made.

Brine-Salting.—Is now fast gaining ground, as it is found out "how to do it." The well-washed butter is left in the granular state to drain, and then the brine is applied—all the salt that can be dissolved in water at 53 to 55 deg., after standing for a short time. This brine is drawn off and more salt dissolved in it, and turned back into the churn, and complete work is the result. The first brine is weakened by the water remaining in the butter, and the second bath, reinforced by the salt, brings up the dissolved salt in each pound of butter to the half ounce to the pound, minus a decimal too small to be detected by the taste.

THE MARKETS.

By Telegraph, May 16, 1887.

LIVE STOCK MARKETS.

St. Louis.

CATTLE—Receipts 2,200, shipments 100. Choice heavy native steers 4 60a5 00, fair to good shipping steers 4 10a4 55, fair to choice butchers steers 3 60a4 30, fair to good feeders 3 20a4 20, fair to good stockers 2 20a3 10, common grass to good corn-fed Texans 1 90a4 00.
HOGS—Receipts 4,200, shipments 2,000. Choice heavy and butchers selections 4 90a5 00, fair to good packing 4 75a4 85, medium to prime Yorkers 4 60a4 70, common to good pigs 4 50.
SHEEP—Receipts 800, shipments Market strong. Fair to fancy clipped 3 20a—, lambs 3 60a4 20.

Chicago.

The Drovers' Journal reports:

CATTLE—Receipts 9,000, shipments 2,900. Market slow and steady. Shipping steers, 950 to 1,500 lbs., 4 00a4 40; stockers and feeders 2 75a4 30; cows, bulls and mixed 2 00a3 80, bulk at 2 90a3 20; Texans 2 90a4 15.
HOGS—Receipts 22,000, shipments 4,000. Market weak, 5c lower. Rough and mixed 4 60a4 90, packing and shipping 4 90a5 05, skip 3 00a4 50.

SHEEP—Receipts 1,000, shipments 400. Market stronger and 10c higher. All shorn natives 3 50a4 15, Western 3 35a4 00, Texans 2 50a3 75, lambs 1 50a4 50.

Kansas City.

CATTLE—Receipts since Saturday 1,834. The market was slow, weak and 5a10c lower on all classes except stockers and feeding steers, which were steady. Sales ranged 3 55 for butchers steers to 4 25 for shippers.

HOGS—Receipts since Saturday 5,544. Market slow and weak, with values 10c lower than Saturday. Extreme range of sales 3 00a4 60, bulk at 4 35a4 50.

SHEEP—Receipts since Saturday 1,102. Market firm. Sales: 220 clipped natives av. 92 lbs. at 3 60, 221 clipped natives av. 92 lbs. at 3 60.

PRODUCE MARKETS.

New York.

WHEAT—1/4a1/2c higher. No. 2 red, 97 1/2c elevator.

CORN—A shade easier, but quiet. No. 2, 47 1/2a47 3/4c elevator, 49 1/2c delivered.

St. Louis.

WHEAT—Higher. No. 2 red, cash, 85 1/2a85 3/4c.

CORN—Firm, dull. Cash, 37c bid.

OATS—No sales.

RYE—No bids; sellers ask 58c.

Chicago.

Cash quotations were as follows:

WHEAT—No. 2 spring, 87a87 1/2c; No. 3 spring 77c; No. 2 red, 87 1/2c.
CORN—No. 2, 38 1/2a38 3/4c.
OATS—No. 2, 26a26 1/2c.
RYE—No. 2, 56 1/2c.
BARLEY—No. 2, 57c.

Kansas City.

WHEAT—No. 2 red winter, cash, 71 1/2c bid, 72 1/2c asked.

CORN—Receipts at regular elevators since last report ... bus., and withdrawals 1,271 bus., leaving stock in store as reported to the Board of Trade to-day 102,429 bus. No. 2 cash, 34c bid, no offerings.

OATS—No. 2 cash, no bids nor offerings.

RYE—No bids nor offerings.

HAY—Receipts 7 cars. Market steady. Fancy, small baled, 10 00; large baled, 9 50; wire-bound 50c less.

OIL-CAKE—Per 100 lbs. sacked, 1 25; 2100 per ton, free on board cars; car lots, 20 00 per ton.

SEEDS—We quote: Flaxseed, 90c per bushel on a basis of pure. Castor beans, 1 25 for prime.

BUTTER—Receipts large and the market weak. We quote: Creamery, fancy, 20c; good, 15c; fine dairy in single package lots, 15c; store-packed do., 10a11c for choice, 8c for common.

CHEESE—We quote: Full cream 14a14 1/2c, part skim 13a13 1/2c, Young America 15c, Kansas, choice, 11c.

EGGS—Receipts fair and market steady at 9 1/2c per dozen for fresh.

POTATOES—Nebraska and Iowa 1 00, choice Michigan 1 10.

BROOMCORN—We quote: Green self-working, 2 1/2a3c; green hurl, 3 1/2c; green inside and covers, 2c; red-tipped and common self-working, 1 1/2a1 3/4c; crooked, 1c.

PROVISIONS—Following quotations are for round lots. Job lots usually 1/4c higher. Sugar-cured meats (canned or plain): Hams 11c, breakfast bacon 9c, dried beef 12c. Dry salt meats: clear rib sides 7 05, long clear sides 6 95, shoulders 5 50, short clear sides 7 25. Smoked meats: clear rib sides 7 65, long clear sides 7 55, shoulders 6 50, short clear sides 7 65. Barrel meats: mess pork 16 00. Choice tierce lard 6 25.

Neither wine, ale nor brandy has ever been manufactured in Japan.

Stewart's Healing Cream, for chapped hands, face, or gentlemen to use after shaving. The cheapest and best article for the purpose in the world. Please try it. Only 15 cents a bottle at drug stores.

WOOL HAGEY & WILHELM, Commission Merchants, 220 N. Commercial St., ST. LOUIS, MO.

REFERENCES:—Boatmen's Bank, St. Louis; Dunn's Mercantile Reporter, St. Louis; Kansas Farmer Co., Topeka, Kas.; First National Bank, Beloit, Kas.

PHILADELPHIA.

ST. LOUIS.

CHICAGO.

BLACK DIAMOND PREPARED ROOFING!

FOR ANY ROOF AND ANY CLIMATE.

Put on by Anybody! Ready to Apply! Cheapest Roof

—IN USE!—

FIRE-PROOF!



WATER-PROOF!

E. S. FRAGER, of FRAGER & PAIGE, Wetmore, Kansas, writes us, May 2d: "The longer I use your Black Diamond Prepared Roofing the better I like it, and can recommend it without the least hesitation." [Send for true copy of his letter to be sent you.]

CAPT. SYDNEY SMITH, Secretary of the Dallas State Fair and Exposition Association, writes us, April 27th:

"We have some 4,000 squares of your Black Diamond Prepared Roofing on all our buildings, and it suits all our purposes admirably." [True copy of letter sent on request.]

Send for Samples, Prices, etc., to

M. EHRET, Jr., & CO.,

Sole Manufacturers.

W. E. CAMPE, Agt.

No. 113 N. 8th St., ST. LOUIS, MO.

THE STRAY LIST.

HOW TO POST A STRAY.

THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the names and residence of the taker-up, to the Kansas Farmer, together with the sum of fifty cents for each animal contained in said notice.

And such notice shall be published in the Farmer in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested in strays. A penalty of from \$5.00 to \$50.00 is affixed to any failure of a Justice of the Peace, a County Clerk, or the proprietors of the Farmer for a violation of this law.

Broken animals can be taken up at any time in the year.

Unbroken animals can only be taken up between the first day of November and the first day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray.

If an animal liable to be taken up, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

Any person taking up an estray, must immediately advertise the same by posting three written notices in as many places in the township giving a correct description of such stray.

If such stray is not proven up at the expiration of ten days, the taker-up shall go before any Justice of the Peace of the township, and file an affidavit stating that such stray was taken up on his premises, that he did not drive nor cause it to be driven there, that he has advertised it for ten days, that the marks and brands have not been altered; also he shall give a full description of the same and its cash value. He shall also give a bond to the State of double the value of such stray.

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting), make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than ten dollars, it shall be advertised in the KANSAS FARMER in three successive numbers.

The owner of any stray may, within twelve months from the time of taking up, prove the same by evidence before any Justice of the Peace of the county, having first notified the taker-up of the time when, and the Justice before whom proof will be offered. The stray shall be delivered to the owner, on the order of the Justice, and upon the payment of all charges and costs.

If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker-up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker-up; said appraisers, or two of them, shall in all respects describe and truly value said stray, and make a sworn return of the same to the Justice.

They shall also determine the cost of keeping, and the benefits the taker-up may have had, and report the same on their appraisal.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray.

Any person who shall sell or dispose of a stray, or take the same out of the State before the title shall have vested in him, shall be guilty of a misdemeanor and shall forfeit double the value of such stray and be subject to a fine of twenty dollars.

FOR WEEK ENDING MAY 5, 1887.

Franklin county—T. F. Ankeny, clerk.

MARE—Taken up by John Glaspie, in Ottawa city, one bay mare, about 7 years old, no marks or brands visible; valued at \$50.

Stevens county—J. W. Calvert, clerk.

HORSE—Taken up by W. S. Hamby, in Lincoln tp., April 15, 1887, one dark brown work horse, about 11 years old, about 16 hands high, white spot in forehead, moon-eyed. (P. O. address of taker-up is Valparaiso.)

Harvey county—John C. Johnston, clerk.

STEER—Taken up by Clements Gatz, (P. O. Newton), April 20, 1887, one red yearling steer; valued at \$12.

McPherson county—E. L. Loomis, clerk.

MARE—Taken up by John Christofferson, in Harper tp., one iron-gray mare, 13 hands high, 2 years old, a small white stripe in face, both hind feet white, no marks or brands; valued at \$50.

FOR WEEK ENDING MAY 12, 1887.

Bourbon county—E. J. Chapin, clerk.

MARE—Taken up by Wm. Rodgers, in Marion tp., April 20, 1887, one iron-gray mare, 14½ or 15 hands high, 8 years old, thin in flesh; valued at \$25.

Sumner county—Wm. H. Berry, clerk.

HEIFER—Taken up by J. M. McKee, in Wellington tp., March 29, 1887, one red and white spotted 1-year-old heifer, no marks or brands; valued at \$10.

PONY—Taken up by M. S. Glasgow, of New Wellington, March 31, 1887, one light bay mare pony, white face, 14 hands high, 6 years old; valued at \$25.

FOR WEEK ENDING MAY 19, 1887.

Osborne county—Frank Stafford, clerk.

COLT—Taken up by F. A. Kiser, in Lawrence tp., May 7, 1887, one dark bay mare colt, about 2 years old, 14½ hands high, no marks or brands; valued at \$22.50.

Osage county—R. H. McClair, clerk.

MARE—Taken up by D. P. Clement, in Ridgeway tp., December 23, 1886, one light bay mare, 15 or 16 years old, heart brand on left shoulder; valued at \$25.

Crawford county—Geo. E. Cole, clerk.

COW—Taken up by D. P. Stricker, in Lincoln tp., April 14, 1887, one white cow with red and yellow spots, 9 years old, crop and under-bit in right ear; valued at \$18.

Cowley county—S. J. Smock, clerk.

PONY—Taken up by Isaac Boggs, in Dexter tp., April 23, 1887, one spotted roan horse pony, 13 hands high, no marks or brands; valued at \$25.

McPherson county—E. L. Loomis, clerk.

PONY—Taken up by August Schultz, in Canton tp., May 9, 1887, one roan horse pony, 4 years old, branded A and O on left hip and S on left shoulder; valued at \$25.

Rush county—L. K. Hain, clerk.

HORSE—Taken up by Thomas A. Edwards, in Lone Tree tp., (P. O. LaCrosse), April 27, 1887, one roan

horse, 8 years old, star in forehead and snip on the nose; valued at \$20.
COLT—Taken up by James Sutton, in Illinois tp., (P. O. Pioneer), April 28, 1887, one sorrel horse, 2 years old, blaze in face; valued at \$15.

C. E. JEWELL & CO. Chattel Mortgage Loans

A SPECIALTY.

OFFICE:—North Room under First National Bank. TOPEKA, KAS.

CITY HOTEL, :- CHICAGO.

State Street, Corner Sixteenth Street.

Rate \$1.50 Per Day.

Convenient to Stock Shippers. A good Family Hotel.

Table and Rooms first-class. State street, Archer avenue or L. S. & M. S. Dumrey pass the house to all parts of the city and depot.

W. F. GREGG, Proprietor.

Geo. B. Carpenter & Co.,

MANUFACTURERS OF

Harvester,

Binder and

Separator

COVERS,

Of Every Description.

Hay Caps and Stack Covers.

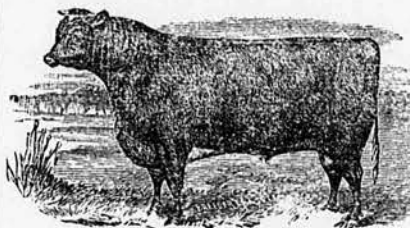
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SEND FOR CIRCULARS.

202 to 208 South Water St., CHICAGO, ILL.

BLOODED CATTLE!

AT AUCTION.



AT LINCOLN, NEB.,

Tuesday, May 31, 1887,

Sixty head highly-bred SHORT-HORNS, pure Bates and Bates-topped. Forty females and twenty grand young bulls, including one richly-bred Kirklevington and one Filbert. Young Marys, Josephines, Phyllises and other standard families. It is no culling sale, but a closing out caused by ill health.

TERMS:—Ten months time at 8 per cent.; 5 per cent off for cash. Catalogues on application to Nebraska Farmer, Lincoln.

J. W. FITZGERALD.

F. M. WOODS, Auctioneer.

PUBLIC SALE!

Of High-Bred

POLLED ABERDEEN-ANGUS CATTLE.

AT RIVERVIEW PARK,

KANSAS CITY, MO.,

G. & J. Geary (late of Bothwell, Canada,) will offer,

June 9, 1887, at 1 o'clock p. m.,

A choice selection from this unrivaled herd of Polled Aberdeen-Angus Cattle, consisting of seven young bulls, six cows with calves at foot, ten 1-year-old heifers, and eleven 2-year-old heifers and cows in calf. The offering will consist of representatives of many of the leading families of the breed, and are for the most part selected from the famous herds of Gavenwood and Rothiemay, imported by us last spring. This will be a rare chance to select grand specimens of the breed that beats the record.

Catalogues now ready. Apply to

Geo. & J. Geary, Brookfield, Mo.

SPECIMEN OF CALVES BRED AT THE

MOUNT :- PLEASANT :- STOCK :- FARM.



Descendants of Royal English winners and Sweepstake winners at the prominent fairs of the United States. Sweepstakes herd at the great St. Louis Fair in 1885.

This herd is one of the oldest and largest in the country, comprising 300 head of choice Herefords from all the best strains in England and America. The herd is headed by famous first-prize and sweepstakes bulls: FORTUNE 2080, one of the most celebrated bulls of the breed, by the famous Sir Richard 2d 970a—the smoothest, blockiest family of the breed: Sir Evelyn 9650, one of the best sons of Lord Wilton 4057; Grove 4th 13732, an illustrious son of Grove 2d 2490; Dewsbury 2d, 18977, by the celebrated Dolly 9493.

FOR SALE — Cows, Bulls and Heifers, either singly or in car lots, at the very lowest prices consistent with first-class breeding and individual merit. Special prices given to parties starting herds. Visitors always welcome. Catalogues on application. J. S. HAWES, Colony, Anderson Co., Kas.



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Hereford Cattle Co.,

TOPEKA, :: KAS.

ONE HUNDRED HEAD OF COWS AND HEIFERS FOR SALE. LIBERAL PRICES. TERMS TO SUIT PURCHASERS. Twenty head coming two-year-old Bulls on sale at Topeka Stock Yards.

New Catalogues free on application. Address

F. P. CRANE,

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E. S. SHOCKEY, MANAGER, LAWRENCE, KAS.

EARLY DAWN HEREFORD HERD, The Champion Herd of the West,

—CONSISTING OF—

200 HEAD OF THOROUGHbred HEREFORD CATTLE,

Including the IMPORTED FOWLER HERD and the FAMOUS SHOCKEY & GIBB HERD, 1,200 head High-grade Hereford and Short-horn Cattle.

We want 1,000 calves annually, sired by bulls purchased of us. Inspect our herd and learn particulars. Address

E. S. SHOCKEY, Manager, Lawrence, Kansas.

Devon Cattle!

We are the largest breeders of this hardy, easy-keeping breed, one of the best for the West. Stock for sale singly or car lots.

RUMSEY BROS. & CO.,

EMPORIA, KANSAS.

TIMBER LINE HERD Holstein - Friesian Cattle.

We have for sale any or all of our entire herd of Holstein-Friesian Cattle, consisting of Cows, Heifers and Calves—full-bloods, and Grades up to fifteen-sixteenths. Ask for just what you want. Send for prices of family cows—grades. All our Holsteins will be at Winfield, Kas., after April 1, 1887.

W. J. ESTES & SONS.

Kansas City Stock Yards,

KANSAS CITY, MISSOURI,

Are by far the most commodious and best appointed in the Missouri Valley, with ample capacity for feeding, weighing and shipping cattle, hogs, sheep, horses and mules. No yard is better watered and in none is there a better system of drainage.

Higher Prices are Realized

Here than in the markets East. All the roads running into Kansas City have direct connection with the Yards, which thus afford the best accommodations for stock coming from the great grazing grounds of Texas, Colorado, New Mexico and Kansas, and also for stock destined for Eastern markets.

The business of the Yards is done systematically, and with the utmost promptness, so that there is no delay and no clashing, and stockmen have found here, and will continue to find that they get all their stock is worth, with the least possible delay.

Kansas City Stock Yards Company Horse and Mule Market.

FRANK E. SHORT.

CAPT. W. S. TOUGH.

F. E. SHORT & CO.

Managers.

This company has established in connection with the Yards an extensive Horse and Mule Market, known as the KANSAS CITY STOCK YARDS COMPANY HORSE AND MULE MARKET. Have always on hand a large stock of all grades of Horses and Mules, which are bought and sold on commission, by the head or in carload lots.

In connection with the Sales Market are large feed stables and pens, where all stock will receive the best of care.

Special attention given to receiving and forwarding.

The facilities for handling this kind of stock are unsurpassed at any stable in this country.

Consignments are solicited, with the guarantee that prompt settlements will be made when stock is sold.

C. F. MORSE,
General Manager

E. E. RICHARDSON,
Secretary and Treasurer.

H. P. CHILD,
Superintendent.

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KANSAS CITY.

ST. LOUIS.

James H. Campbell & Co., LIVE STOCK COMMISSION MERCHANTS.

—FOR THE SALE OF—

CATTLE, HOGS AND SHEEP.

Rooms 23 and 24, Exchange Building, Kansas City Stock Yards.

Unequaled facilities for handling consignments of Stock in either of the above cities. Correspondence invited. Market reports furnished free. Refers to Publishers KANSAS FARMER.

The Veterinarian.

[The paragraphs in this department are gathered from our exchanges.—ED. FARMER.]

IMPACTION OF STOMACHS.—Please give treatment or remedies for stock that get in threshed grain and eat all they want, both for cows with calf, and two-year-olds and yearlings. Is a physic of any use? We kept them from water for forty-eight hours; one died in three days, the other in six. Should we have kept them from it longer? [In such cases a physic should be given, after which the animals should be allowed plenty of water to drink. While water in such cases is a cause of bloating, still it aids digestion and should bloating occur, the animal should be tapped with proper instruments. A dose of physic in such cases for a full-sized cow would be Epsom salts, 1½ pounds; linseed oil, 1 pint; carbonate of ammonia, 1 ounce; ginger, 1 ounce. Give suspended in two quarts of thin oatmeal gruel; the dose should be varied according to the size and age of the animal.]

GREASE-HEEL.—A mare that I have has scratches, grease-heel, or some other foot evil. The mare's heels got sore two years ago this spring. I got some oil and oiled them a few times and they healed up again, but as soon as I quit oiling them they would crack again. She has been that way ever since until about two weeks ago, it broke out on the side of one ankle. The cracks seem to be dry. Her hocks are swelled some now and have some fever in them. The cracks have never been above the fetlock. Would like to know whether she can be cured or not, and what to. She is with foal and looks well. [It will be necessary to give the mare rest for a week or more and poultice the part with a mixture of six parts of linseed meal to one part of pulverized charcoal. Apply warm and continue poulticing till the fever and discharge ceases, then apply a little vaseline twice a day. Do not interfere with the hocks, the swellings are only the effects of the grease-heel, and removing the cause the effects will disappear.]

ABDOMINAL DROPSY.—I have a mare that has been sick for some time. She was taken, first, I think, some time in November. The first I noticed of anything wrong, I put her in the barn one night apparently all right, and the next morning she was so stiff and sore she could scarcely walk, and during the day she had a chill. I did not give her any medicine, but kept her blanketed and warm all the time, and in a short time she commenced to get better, and in the course of four or five weeks was seemingly well, and I drove her a few times but very moderately. I noticed she seemed stupid, so I did not drive her any more, and in a few days she got bad again, got stiff and sore, and this time her front legs swelled very badly, and also her belly from the chest back, and she would emit a grunt when moved or when I pressed on her sides. She chilled pretty hard when first taken this time, so I got a horse farrier book, and I made up my mind she had the influenza. I doctored her for this, and she seemed to improve and commenced to look and feel pretty well. I did not work her any at this time. About two weeks ago she got worse again. This time I did not notice her chilling any, and her legs are not swollen much, but her belly is swollen pretty badly from the chest back, and she will grunt when moved the least bit or when you press on her. Her appetite has been pretty good most of the time, but not as good this time as the first time. Her nostrils and mouth are dry and she is not

thirsty. [You should have stated whether the mare is with foal. We are of opinion that she is suffering from dropsy of the abdomen, although a personal examination might reveal something else as being present. Place in a box-stall, where she can move about, and when the day is fine turn her out. Give highly nutritious food, as much as she will eat. Rub a liniment composed of equal parts of fluid extract of witch-hazel, alcohol and water, into the swelling twice daily, using plenty of friction. Keep the bowels working freely with linseed meal, and give a tablespoonful of a mixture of equal parts of gentian, ginger and nitrate of potash, every night, mixed in a mash, for one week.]

The agricultural fairs of 1886 showed more and better horses than ever before. There is no branch of our improved stock breeding as progressive and prosperous as the draft horse interest, nor any one that is as profitable.

* * * * Premature decline of manly powers, nervous debility and kindred diseases, radically cured. Consultation free. Book 10 cents in stamps. Address, confidentially, World's Dispensary Medical Association, Buffalo, N. Y.

Have good tools, suitable to do your work. You cannot expect a man to do good work if he has poor implements to work with. The very fact that they are poor will discourage him. The loss in time and energy pays the difference between poor and good.

Decay of the Bones, with some thirty other symptoms, mark the progress of that terrible disease known as catarrh. It advances from stage to stage of fearful annoyance, and if neglected, is certain to end in general debility, and possibly in consumption or insanity. Dr. Sage's Catarrh Remedy will cure it at any stage. This medicine has been long before the public, and thousands have been restored to health by its never-failing virtues.

RIVERSIDE STOCK FARM, DEGEN BROS., Ottawa, Ill.



Importers and Breeders of French Draft and French Coach Horses. We have now over 75 head of imported French Draft Stallions and Mares on hand. Our importations this year have been selected from the best breeding district in France. Our stock is all recorded in France and in the National Register of French Draft Horses in America. Our French Coach Horses are the best that could be found in France. We will be pleased to show our stock to visitors. Correspondence invited and promptly answered.

E. BENNETT & SON, TOPEKA, - KANSAS,



IMPORTERS AND BREEDERS OF
Percheron, Clydesdale and Coach Horses.

106 Head of Stallions just arrived from Europe. Choice stock for sale on easy terms. We won all the leading prizes at Kansas State Fair last fall. Send for Illustrated Catalogue, free on application.

Sexton & Offord,

In connection with G. M. SEXTON,
Auctioneer to the Shire Horse Society of England,
Importers and Breeders of



Monitor (3322).

ENGLISH SHIRE & SUFFOLK PUNCH HORSES RED POLLED CATTLE and LARGE YORKSHIRE PIGS,

Have on hand a very choice collection, including a recent importation of Horses, several of which have won many premiums in England, a special guarantee of their soundness and superiority of form and action. Prices very moderate and terms easy. Send for New Catalogue.

Address 34 East Fifth street, TOPEKA, KANSAS.

PURE POLAND-CHINAS.

LARGE ENGLISH BERKSHIRES.

Rome Park Stock Farm.

T. A. HUBBARD, PROP'R, WELLINGTON, KANSAS.

SWEEPSTAKES ON HERD, BREEDERS' RING, BOAR AND SOW, WHEREVER shown in 1886, except on Boar at Winfield, winning (75) premiums at four fairs, including Grand Silver Medal for Best Herd, at Topeka, Kas.

Stock recorded in Ohio Poland-China and American Berkshire Records. In addition to my own breeding, the animals of this herd are now and have been

PRIZE-WINNERS,

selected from the notable and reliable herds of the United States, without regard to price. The best and largest herd in the State. I will furnish first-class Hogs or Pigs with individual merit and a gilt-edged pedigree. Single rates by express.

PERSONAL INSPECTION SOLICITED. CORRESPONDENCE INVITED.

OAK GROVE FARM

To the front for



CLYDESDALES

I have a choice collection of pure-bred Registered Import'd Clydesdale Horses on hand and for prices away down. Terms made very easy. Each Stallion guaranteed a breeder. Send for Catalogue.

JOHN C. HUSTON,
Blandinsville, McDonough Co., Illinois.
A. B. McLAREN, Superintendent.

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Importer and Breeder of



Clydesdale & Norman HORSES.

I have a choice collection of Imported Pure-bred and Registered Clydesdales at low prices.

Each Stallion guaranteed a breeder. Correspondence solicited.



Chester White, Berkshire and Poland-China Pigs, fine Setter Dogs, Scotch Collies, Fox Hounds and Beagles, Sheep and Poultry, bred and for sale by W. Ginnons & Co., West Chester, Chester Co., Pa. Send stamp for Circular and Price List.

SELECT HERD OF LARGE BERKSHIRES!

G. W. BERRY, PROP'R, TOPEKA, KAS.

My breeders have been selected, regardless of expense, from the leading herds of the United States; are bred from the best stock ever imported, and represent seven different families. Healthy pigs from prize-winning stock for sale. Write for circular and prices or come and see. [Mention this paper.]

CHOICE

Berkshire and Small Yorkshire

PIGS and MAMMOTH BRONZE TURKEYS. We have a splendid lot of the above named hogs and turkeys for sale at hard time prices. Write for prices before making purchases if you need anything in this line. Satisfaction guaranteed.

WM. BOOTH & SON,
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NATIONAL HERD.

Established 1845. THOROUGHbred POLAND-CHINAS as produced by A. C. Moore & Sons, Canton, Ill.

We breed from 160 sows and 12 males. All recorded in A. P. C. Record. Pigs all eligible to record. Pedigree sent when desired.

Photo Card of 43 breeders sent free. SEE OUR STOCK. We have special rates by express. If not as represented we will pay your expenses.

THE GOLDEN BELT HERD OF THOROUGHbred POLAND-CHINAS.

Choice animals of all ages generally on hand at prices to suit the times. Orders for extra show Spring Pigs should be sent in at once. A few choice sows with pig, for sale. Breeders recorded in A. P. C. Record. Pedigree with every sale. Safe arrival and satisfaction guaranteed. Low rates by express.

ENGLISH BERKSHIRES.

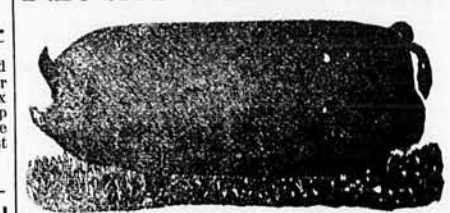


THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE 4880, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chickens. Your patronage solicited. Write. [Mention this paper.]

M. B. KEAGY, Wellington, Kas.

PLEASANT VALLEY HERD

Pure-bred Berkshire Swine.



I have thirty breeding sows, all matured animals and of the very best strains of blood. I am using three splendid imported boars, headed by the splendid prizewinner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for pigs of either sex not akin, or for matured animals. Prices reasonable. Satisfaction guaranteed. Send for catalogue and price list, free.

S. McCULLOUGH,
Ottawa, Kansas.

POULTRY KEEPERS' GUIDE.

Price, 50 cts. (Stamps taken.) This is a new Poultry Book, written and compiled by GEO. F. MARSTON, who is a well known authority on poultry topics. It tells all about how to manage poultry to obtain the best results, how to kill vermin, how to fatten quickly for market and the best plan for raising the chicks. It also tells how to raise capons, which is exceedingly profitable; also how to make incubators and brooders at a very small cost, that will do excellent work. Every one interested in poultry should have this book. Send 25 ct. stamps, and it will be sent by mail post paid. Address the author, GEO. F. MARSTON, Denver, Colorado.

RUPTURE

Have you heard of the astounding reduction for DR. J. A. SHERMAN'S Famous Home Treatment, the only known guarantee comfort and cure without operation or hindrance from labor? No steel or iron bands. Perfect retention night and day, no chafing, suited to all ages. Now \$10 only. Send for circular of measurements, instructions and proofs. Get cured at home and be happy, office 294 Broadway, New York.

**\$50 REWARD**

will be paid for any Grain Fan of same size that can clean and bag as much Grain or Seed in one day as our Patent MONARCH Grain and Seed Separator and Bagger or our Improved Warehouse Mill which we offer cheap. Price List mailed free.

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Columbus, Ohio.



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SUCCESSORS TO FURST & BRADLEY MFG. CO.
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RELIABLE
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CULTIVATORS
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CHICAGO ILL.
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FAMILY CANNING.

MUDGE PATENT APPARATUS received from the Bismarck Fair Committee this award: "That it possesses great merit in simple and permanent preservation of fruits and vegetables." It gives woman an independence for her work, as with this apparatus she cans thirty-two quarts per hour, and all the fine flavors of the fruits, are retained as if fresh-gathered from the garden. Cooking perfect, with great saving of labor. Costs only \$10. Will pay its first cost in one day's work. Agents wanted in every county. County rights for sale. Special inducements given to any one who will secure fifty customers in one county. For terms, etc., address CHAS. F. MUDGE, Eskridge, Kansas.

The Lightning Hay Press.

SUPERIOR TO ANY OTHER PRESS made. Send for descriptive circular and price list. **K. C. HAY PRESS CO.**, Foot of 6th St., Kansas City, Mo. When writing to advertiser mention Kansas Farmer.

DUTTON GRINDER

Perfect Mowing MACHINE KNIFE GRINDER. Weighs but 18 Lbs. Can be carried into the field and attached to Mowing Machine Wheel. Send for Descriptive Catalogue. Agents wanted in every county. **R. H. ALLEN CO.**, 189 Water St., New York.

CHAMPION CREAMERY.

Awarded **FIRST PREMIUM** over everything at the Great St. Louis Fair, Oct., 1885. Has both Surface and Draw off Skimming attachments. Draws milk or cream first as desired. Is the **BEST CREAMERY** of its class on the market. One at wholesale price where there are no agents. Davis Swing Churns, Eureka and Skinner Butter Workers, Nesbitt Butter Printers, &c., &c.

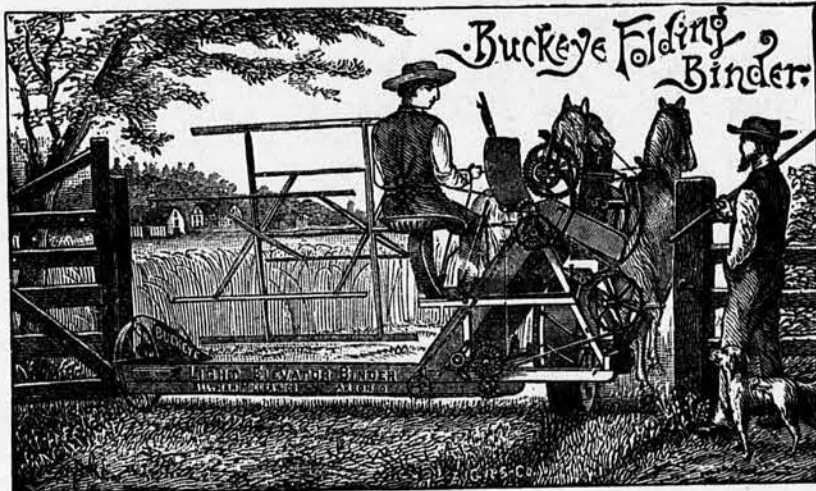
DAIRY IMPLEMENT CO., Bellows Falls, Vt.



ARTESIAN AND TUBE WELL MACHINERY, best in the world. Steam, horse or hand power. Large profits on small outlay \$15 to \$50 a day often made. Through correspondence we find out parties wanting wells, and sections where drills are badly needed, can give purchasers this information. Men thoroughly experienced in well making can find employment as canvassers. Address, for full information, **GOULDS & JUSTIN**, 167 and 169 Lake St., CHICAGO, ILL.

The Light Draft Buckeye Folding Binder

Is the lightest-running elevator binder in the world. The year 1886 demonstrated this in thousands of harvest fields, and we stand ready to maintain this claim against any and all comers by actual tests of draft in the harvest of 1887. Its merits in the field are unequalled by any binder in existence.



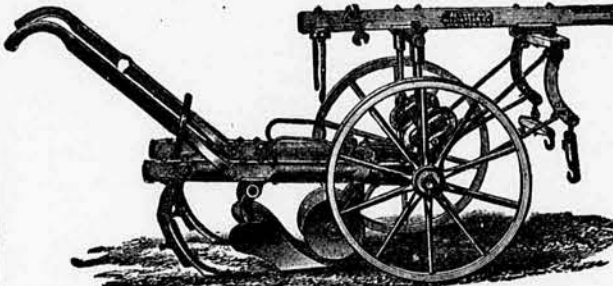
We also Manufacture Buckeye Down Binders, Buckeye Table-Rakes and Drop-pers, and the World-Renowned Buckeye Mowers.

Which for thirty years have been the acknowledged standard of excellence in this class of machines. Call on our nearest agent and examine samples, or send for our Illustrated Catalogue.

AULTMAN, MILLER & CO., AKRON, OHIO.

THE HAMILTON Adjustable-Arch Bar-Share CULTIVATOR.

Easily Handled, Direct Hitch, Equal Draft, Plows Deep, Runs Steady.



Side View with Bar-Shares, Coulters and Bull-Tongues Attached.

there will be no ridge of unplowed ground left standing. The Vibratory movement of the uprights and direct hitch compels each horse to draw his share of the load, and prevents the pole from being carried from right to left when one horse gets ahead of the other. Not a particle of weight on the horses' necks. Bar-Shares are reversed "to lay the corn by."

THE LONG & ALLSTATTER CO., Hamilton, Ohio.

SPRINGFIELD BUCKEYE HAY RAKES.

No Ratchets or Cog Wheels to get out of order.

PRACTICALLY A Self-Dump Rake.

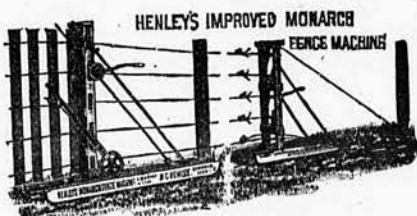
HIGH WHEELS with tires bolted on. **TEETH** are long and adjustable. Made of Crucible Steel with Oil Temper. Has a Lock Lever and Swinging Cleaner-Bar. Made of the very best material. Neatly finished. Can be operated by a small boy. Not excelled by any rake in the market. We make both the Coll and Drop Tooth. See it and you will appreciate it.

We also manufacture Buckeye Grain Drills, Buckeye Old Mill, Buckeye Riding and Walking Cultivators, and Buckeye Seeders.

Branch Houses: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; and San Francisco, Cal. Send for circular to either of the above firms or to **P. P. MAST & CO., Springfield, O.**

Henley's Improved Monarch Fence Machine

Patented July 21, 1885, May 18, 1886, Aug. 3, 1886.

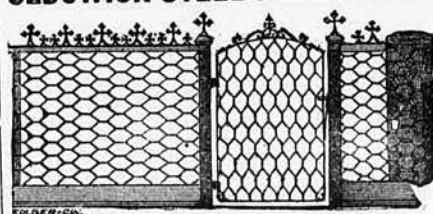


THE only Practical Machine in use which makes the Fence in the field wherever wanted. It has no equal, and makes the best, strongest, and most durable Fence for general use, and especially for farm and stock purposes. Weaves any length of picket, slat or board, and any sized wire can be used. The Fence made by this machine is far superior to any net-work wire, or barb wire Fence, and will turn all kinds of stock—sheep, hogs and poultry—without injury to same. The Monarch Machine is made of the best materials, is strong, light, durable, can easily be operated by man or boy, will last a lifetime, and the price brings it within the reach of every farmer to own a Machine. For elegant new Catalogue, and full particulars, address

M. C. HENLY, Sole Manfr.

Factory: 523 to 533 N. 16th St. Richmond, Ind., U. S. A.

When writing for catalogue mention this paper.

SEDGWICK STEEL WIRE FENCE.

The best Farm, Garden, Poultry Yard, Lawn, School Lot, Park and Cemetery Fences and Gates. Perfect Automatic Gate. Cheapest and Neatest Iron Fences. Iron and Wire Summer Houses, Lawn Furniture, and other wire work. Best Wire Stretcher and Plier. Ask dealer in hardware, or address, **SEDGWICK BROS., RICHMOND, IND.**

**DAVIS STUMP PULLER**

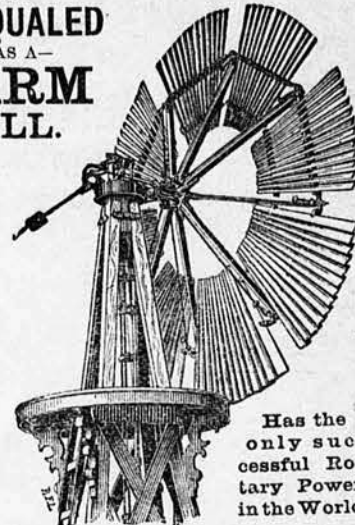
Lifts 20 to 50 tons, worked by two men. 3 sizes. Price, \$50 to \$75. Stands on runners. Circulars free. H. L. BENNETT, Westerville, Oh.

CONSUMPTION

I have a positive remedy for the above disease; by its use thousands of cases of the worst kind and of long standing have been cured. Indeed, as strong is my faith in its efficacy, that I will send **TWO BOTTLES FREE**, together with a **VALUABLE TREATISE** on this disease, to any sufferer. Give Express and P. O. address. **DR. T. A. SLOCUM**, 181 Pearl St., N. Y.

THE VANELESS MONITOR.

—IS—
UNEQUALED
—AS A—
FARM MILL.



Has the only successful Rotary Power in the World

SEARLES BROTHERS

GENERAL AGENTS,
No. 621 Commercial St., ATCHISON, KAS.

WANT AGENTS for best SASH LOCK ever invented. Excellent ventilator. Stops rattling. Big pay. Sample & terms to agents. 10c. **SAFETY LOCK CO.**, 108 CANAL ST., CLEVELAND, O.

CHICAGO, KANSAS & NEBRASKA R'Y.

ROCK ISLAND ROUTE**TIME CARD:**

ATLANTIC EXPRESS.

Arrives from Chicago.....12:25 p. m.
Leaves for Chicago.....2:45 p. m.
Depot, Union Pacific R. R., North Topeka.

ALMA ACCOMMODATION.

Arrives at Topeka.....11:50 a. m.
Arrives at North Topeka.....12:00 noon.
Leaves North Topeka.....1:00 p. m.
Leaves Topeka.....1:10 p. m.
From crossing R. R. street and C. & N. track, North Topeka.

ALL TRAINS RUN DAILY.

The Line selected by the U. S. Gov't to carry the Fast Mail.



5,000 MILES IN THE SYSTEM. With Elegant Through Trains containing Pullman Palace Sleeping, Dining and Chair Cars, between the following prominent cities without change:

CHICAGO, PEORIA, KANSAS CITY, ST. LOUIS, DENVER, ST. JOSEPH, QUINCY, BURLINGTON, HANNIBAL, KEOKUK, DES MOINES, ROCK ISLAND, LINCOLN, COUNCIL BLUFFS, ATCHISON, TOPEKA, LEAVENWORTH, SIOUX CITY, ST. PAUL, MINNEAPOLIS.

Over 400 Elegant Equipped Passenger Trains running daily over this perfect system, passing into and through the important Cities and Towns in the great States of

ILLINOIS, IOWA, MISSOURI, KANSAS, NEBRASKA, COLORADO, MINNESOTA.

Connecting in Union Depots for all points in the States and Territories, EAST, WEST, NORTH, SOUTH. No matter where you are going, purchase your ticket via the

"BURLINGTON ROUTE"

Daily Trains via this Line between **KANSAS CITY, LEAVENWORTH, ATCHISON, ST. JOSEPH and DES MOINES, COUNCIL BLUFFS, OMAHA, SIOUX CITY, ST. PAUL and MINNEAPOLIS.** **KANSAS CITY, ATCHISON, ST. JOSEPH and QUINCY, HANNIBAL and CHICAGO**, Without Change.

J. F. BARNARD, GEN'L MGR., K. C., ST. J. & C. B. AND H. & ST. J., ST. JOSEPH.
A. C. DAWES, GEN'L PASS. AGT., K. C., ST. J. & C. B. AND H. & ST. J., ST. JOSEPH.

TRUMBULL, REYNOLDS & ALLEN, SEEDSMEN,

— JOBBERS OF —

Clover, Timothy, Blue Grass, Orchard Grass, Red Top, Millet, Hungarian, Seed Potatoes, Onion Sets, Seed Grains, Garden Seeds, Etc.

EVERYBODY USES T. R. & A. GARDEN SEEDS. }
GUARANTEED BEST IN THE MARKET.

N. E. COR. ST. LOUIS AVE. and
LIBERTY ST.,

KANSAS CITY, MO.

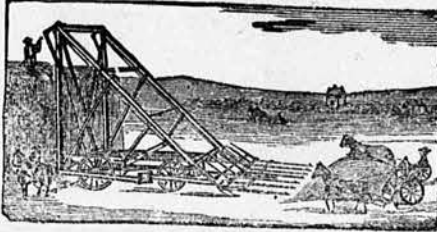
SEND FOR FULL DESCRIPTIVE CATALOGUE.

T. R. & A. Manufacturing Co.,

MANUFACTURERS OF

The Dain Automatic

Hay-Stacker and Gatherer.



JOBBERS OF

IMPROVED

Hay :: Machinery.

Office with Trumbull, Reynolds & Allen, Kansas City, Mo.
Manufactory: Armourdale, Kansas.

TWO-CENT COLUMN.

"For Sale," "Wanted," and small advertisements for short time, will be charged two cents per word for each insertion. Initials or a number counted as one word. Cash with the order.

FOR SALE—An Aultman-Taylor ten-horse-power Traction Threshing Engine. Good as new. Address S. H. Downs, Topeka, Kas.

FOR SALE—Two yards Wyandotte Chickens, one yard Partridge Cochins. One cock and five hens each. I will sell cheap. Extra good stock. Jno. I. Hewitt, Tenth street east, Topeka.

FOR SALE OR TRADE—A Clydesdale Stallion, six years old, a splendid breeder. For this bargain, address Col. J. E. Bruce, Peabody, Kas.

FOR SALE—Four Thoroughbred Galloway Bulls, at reasonable prices, by Dr. A. M. Callahan, Topeka, Kas., or F. R. Huntoon, Snokomo, Wabaunsee Co., Kas.

CHAS. H. HARTUNG wants you to find his advertisement in this paper and send for his circular of fine poultry.

50 SALESMEN WANTED—To sell Nursery Stock. Good wages. Address, enclosing stamp, for terms, E. F. Brower, Eaton, Ohio.

WILL SELL OR TRADE—One-half blood Clyde Stallion, Annandale, Jr.: brought from Illinois; acclimated and a good breeder. W. Guy McCandless, Cottonwood Falls, Kas.

BARTHOLOMEW & CO. Real Estate and Loan Brokers, 189 Kansas avenue, Topeka, Kas. Write them for information about Topeka, the capital of the State, or lands, farms or city property.

FOR RENT—For cash, a Farm of 800 acres, fourteen miles northeast of Council Grove, Kas. It has a good house and barn and well, 52 acres broke and 640 acres fenced with four strands of barbed wire. Address S. S. Cartwright, Topeka, Kas.

FRUIT TREES—We have in surplus, Budded Peach Trees, twelve of the best varieties, 4 to 6 feet, \$4.50 per 100. Apple Trees of all the leading varieties, largely winter, 4 to 5 feet, \$4 per 100. No. 1 Concord 1-year Grape Vines, \$15 per 1,000, \$1.75 per 100. 1-year Maple, 12 to 30-inch, \$1.75 per 1,000. Other stock cheap. We will box free and deliver at depot any of the above stock. Douglas County Nursery, Lawrence, Kansas. Wm. Plasket & Sons.

A VALUABLE BOOK

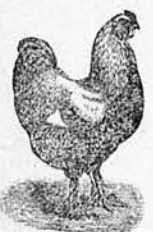
On plans for constructing nine sizes of INCUBATORS—with latest improvements, moisture apparatuses, information on incubation, heat-regulators, egg-turners, etc., sent on receipt of 5 cents in stamps.
J. W. HILE, VALLEY FALLS, KAS.

Sheep--For Sale--Sheep!

Rams, Wethers, Ewes, Lambs. Rams thoroughbred, balance high-grade Merinos. Staple long; fleeces average eight pounds. Ewes lamb in May. Shearing commences June 1. Will sell before or after that time. Range overstocked and must sell. T. O. FOX, Ellsworth, Kansas.

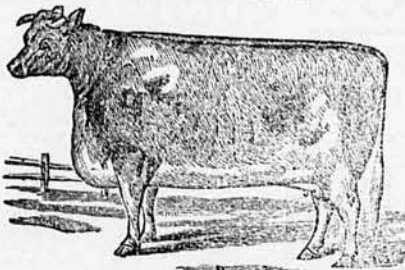
Morton Co., Kansas!

THE SOUTHWEST CORNER COUNTY and BEST County in Kansas. Fertile soil, fine climate, pure and never-falling water. Health unsurpassed. **CHEAP HOMES**, Government and Deeded Lands. For particulars, write to **Pierce, Taylor & Little**, Richfield, (county seat), Morton county, Kas. They are old and reliable Land Agents of the Southwest. Your business will receive prompt attention. Information free. Correspondence solicited.



I pay the Express on Eggs for Matching from the following choice varieties of fowls: Plymouth Rocks, Wyandottes, Light Brahmas, Black-Breasted Red Games and Royal Pekin Ducks. Male birds heading these yards cost me from \$8 to \$12 each, direct from Massachusetts. Eggs, \$2.00 per 13, \$3.50 per 26, except Wyandottes, \$3.00 per 13, \$5.00 per 26. Send for my new illustrated circular. Inquiries cheerfully answered. **CHAS. H. HARTUNG**, Teller Benton Co. Bank, VAN HORN, IOWA.

PUBLIC SALE —OF— SHORT-HORN CATTLE,



AT THE FAIR GROUNDS,
MINNEAPOLIS, OTTAWA CO., KANSAS,
FRIDAY, MAY 27, 1887,
At 1 o'clock p. m.,

The entire herd of THIRTY-TWO RECORDED ANIMALS—eight males and twenty-four females—will be sold without reserve. These cattle are in good condition, represent the best Short-horn families bred, and a majority of the cows have calves by their sides.
TERMS:—Cash, or six months time on bankable notes, with approved security, at 10 per cent. interest. Sale under cover.

WHITE & HOLCOMBE.

COL. S. A. SAWYER, Auctioneer.
For Catalogues address J. T. WHITE, Ada, Kas.

Closing-Out Sale

—OF— SHORT-HORN CATTLE!

On my farm two miles southwest of

FORT SCOTT, KAS.,

Thursday, May 26, 1887.

I will, on the day above mentioned, sell to highest bidder my entire herd of Short-horn Cattle, consisting of

Forty-six Cows and Heifers and Eleven Bulls,

Representing Josephines, Lady Elizabeths, Ianthes, Belle of Republic, and other families. The Prince of Clarence No. 44,629, bred at Side View, Ky., and for which I paid \$500 when a yearling, will be included in the sale. I have bred these cattle for many years with great care, and without regard to cost in securing the best bulls.

Sale positive, regardless of weather, as it will be held under shelter.

Conveyances will be in readiness to convey strangers to and from my farm. Catalogues will be sent on application to undersigned.

Terms of Sale:—A credit of six months without interest. Five per cent. discount for cash.

Sale commences promptly at 1 o'clock.

CHAS. NELSON.

COL. L. P. MUIR, Auctioneer.

FOR SALE! SHORT-HORN BULLS

Bred at the Agricultural College. We offer a good lot of SIXTEEN-MONTHS-OLD BULLS—all recorded, reds, of good families, good individuals. Price \$100 and upwards. Also choice POLAND-CHINA and BERKSHIRE PIGS.

Address **E. M. SHELTON**, Superintendent of Farm, MANHATTAN, KAS.

PUBLIC SALE.

I will sell at

LAWRENCE, KAS.,

On Friday, June 17, 1887,

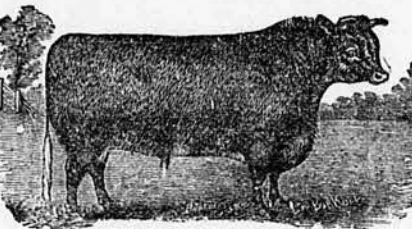
Commencing at 10 o'clock a. m., to the highest bidder, for cash or bankable notes on four months time at 8 per cent. interest, 24 Thoroughbred Holstein-Friesian cows and bulls, 14 Thoroughbred A. J. C. Jersey cows and bulls, 9 High-Grade Holstein cows and heifers, 8 High-Grade Jersey heifers and cows. Write for Catalogue.

WM. BROWN, Box 60, Lawrence, Kas.

PUBLIC SALE

—OF—

High-Bred Short-horns!



I will sell at Public Auction, at the Residence of MR. WM. CHRISMAN,

INDEPENDENCE, MO.,

—ON—

Wednesday, May 25th, 1887,

At 1 o'clock p. m., sharp,

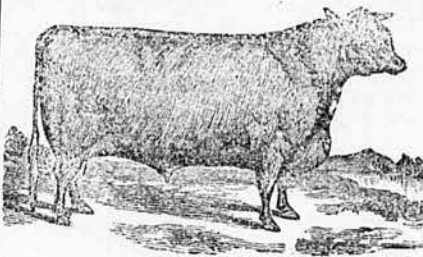
FORTY FEMALES, representatives of the following families: KIRKLEVINGTON, BULLS, viz: KIRKLEVINGTON, CONSTANCE, ROSE OF SHARON and BRACELET. NINE

For Catalogues apply to

COL. L. P. MUIR, Auctioneer.

G. L. CHRISMAN, Independence, Mo.

Public Sale of SHORT-HORN CATTLE!



For the very best of reasons, I will sell at Public Auction, at my place, five and a half miles west of

GARNETT, KANSAS,

—ON—

Wednesday, June 1, 1887,

the entire FISH CREEK HERD OF SHORT-HORN CATTLE, consisting of 35 Females and 15 Bulls, of the following families: Rose of Sharon, Young Phyllis, Young Mary, Lady Elizabeth, Blooms, Mandanes, Amelias, and calves by their sides or be bred to the champion Rose of Sharon bull, Sharon Duke of Glenloch (K., N. & D.) Parties wishing bulls to head herds or to breed common stock, will find this a good opportunity.

FISH CREEK RANCH—Is five and a half miles west of Garnett (Southern Kansas) Missouri Pacific R. R.), and three and a half miles north of Mont Ida (Missouri Pacific), and two miles south of Glenloch (K., N. & D.) Conveyance free from all above railroad stations on day of sale.

TERMS:—Cash. Parties desiring time will be accommodated on approved notes bearing 10 per cent interest. Sale to commence at 1 o'clock. Lunch at noon. Catalogues on application.

COL. S. A. SAWYER, Auctioneer.]

WALTER LATIMER, Garnett, Kas.



SLICKER

Is The Best
Waterproof Coat
Ever Made.

None genuine unless stamped with the above TRADE MARK. Don't waste your money on a gum or rubber coat. The FISH BRAND SLICKER is absolutely water and wind proof, and will keep you dry in the hardest storm. Ask for the "FISH BRAND" SLICKER and take no other. If your storekeeper does not have the "FISH BRAND", send for descriptive catalogue to A. J. TOWER, 20 Simmons St., Boston, Mass.