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KANSAS FARMER REPORTS

WHEAT AND OATS WILL BE LIGHT.

Corn Increased in Acreage 50 Per Cent. Over Any Former Year--Good Stand, Condition Excellent.

SPLENDID GROWING WEATHER

In All Parts of the State--Abundant Rains, Grass Growing Vigorously, and Stock in First-class Order.

CHINCH BUGS BAD IN LOCALITIES.

Great Development in the Western Portion of Kansas.

The KANSAS FARMER this week contains reports from upward of sixty counties of the State, showing the condition of crops and live stock. There is complaint in some of the older counties of damage done to wheat and oats from two causes, (1) dry weather in early spring, and (2) ravages of chinch bugs. The acreage of wheat is small, and the condition generally not good, though some counties, and particularly the newer ones, report favorably. Oats headed out low, much of it is weedy; the crop will not average above fair. Some fields have been plowed up and seeded with corn. The acreage of corn is greatly increased over former years in all the counties, and thousands of acres of fresh land are now cornfields for the first time. Weather is good, all conditions seem to be promising, the stand is good and the condition excellent. With fair weather during the warm season, Kansas corn this year will reach 2,500,000,000 bushels. Grass is growing vigorously and stock is doing well. No disease reported except among hogs in two localities. Excepting shortage in wheat and oats, the general condition of the State is very good.

Anderson county.—Wheat almost a fail ure; a few pieces on timber, fair crop. Corn looking well; clean of weeds and ground in good condition. Oats almost a failure; heading out about twelve inches high. Sorghum, but little put out; looking well. Stock in good fix and doing well, except hogs; some cholera. Rains have been local, some localities having plenty, others dry. Chinch bugs, plenty of the old ones, but few, as yet, of the young.

Atchison.—Wheat is fair; heading out and of average height. Corn is a good stand and all planted; looking well. Oats good, but dry weather in the spring thinned it. Broom corn, very little planted, but what is planted looks well. Sorghum, a decrease in acreage. Stock is in good condition. Weather clear and seasonable. Chinch bugs, none.

Brown.—(1) Wheat short on account of drouth early in the season; promises an average crop. Recent rains have improved the prospects for oats wonderfully. Stock of all kinds in splendid condition. Vegetation growing nicely. Plenty of rain at present. Have heard of no chinch bugs since rain.... (2) Wheat is above the average; fall wheat is short on account of dry weather, but late rains have brought it out. Corn is a good stand and very clean. Oats, 100 per cent. Stock thin but improving fast;

hog cholera still at work. Weather was very dry until May 12, when we had heavy rains; since it has been warm, plenty of rain. No chinch bugs.

Butler.—Wheat, 50 per cent. plowed up; balance will make a good crop with favorable weather. Corn never looked more promising at this time of the year; increase 25 per cent. Oats almost a failure; chinch bugs have ruined the crop. Broomcorn, more planted than usual. Sorghum, an increase planted. Stock in fine condition. Weather is all that could be wished for. Chinch bugs decreasing rapidly.

Chautauqua.—Wheat, prospects good for one-half crop. Corn is as good as I ever saw at this season of the year. Oats, chinch bugs destroyed most all of it. Broomcorn, a good deal planted and it looks well. Stock doing fine; never saw it better so early; grass is good. Elegant rains for the past three weeks, accompanied with strong winds. Chinch bugs diminishing since the rains.

Clark.—Wheat fair; county new, not much sown. Corn growing nicely. Oats good. Stock in fine condition. Local rains in some part of the county every day. No chinch bugs.

Coffey.—Some fields of wheat fair, a few plowed under. Corn is doing as well as it ever did; mostly worked twice and a perfect stand. Oats will not be a full crop on account of bugs. Broomcorn doing well; very small acreage. Sorghum doing well; small acreage. Stock doing well and getting fat; no disease. Having rains every few days; warm and calm. Chinch bugs working in oats, wheat and rye; not hurting corn.

Cowley.—Wheat looking better; will make from fifteen to thirty bushels per acre of choice wheat. Corn is looking fine; a splendid stand and good color. Oats almost a failure—chinch bug and drouth. Broomcorn looks well. Sorghum is coming up nicely; some farmers are going to plant wheat stubble to sorghum. Stock looks splendid. Weather could not be better; plenty of rain and sunshine. Chinch bugs are not doing much damage now.

Crawford.—Wheat generally looking well; some few pieces damaged by chinch bugs. Corn, prospects very good at present for a large crop. Oats short; outlook not very good. Castor Beans rather small, but a good stand generally. Sorghum looking well, and a larger acreage planted than usual. Stock of all kinds doing fine; no disease. Weather pleasant with frequent showers. Chinch bugs plenty.

Dickinson.—Wheat, wind storms accompanied with drouth injured this cereal very much; has recovered some since the bounteous rains of the 14th, 21st and 22nd inst.; straw will be short; now heading out. Corn, fine stand and luxuriant growth; farmers busy with their cultivators. Oats suffered from the drifting winds; some fields are very thin; others, sheltered by wind breaks, are in fine condition. Broomcorn not grown to any extent in this section; small patches are looking well; plant strong and vigorous. Stock in fine condition; grass making rapid growth and plenty of it. Abundant rainfall. The hottest May in five years. Chinch bugs have received a severe check.

Doniphan.—Wheat doing well. Corn is all planted and mostly plowed over once. Oats are doing well. Sorghum looks well; mostly raised for seed. Stock is in good condition; no disease of any kind. Weather

is all that could be desired. Chinch bugs, none that I have heard of.

Edwards.—Wheat about one-half crop promised. There is about twice as much corn planted this year as last; it looks first-rate; good stand; good color and about one foot high. Oats, fair prospect. Broomcorn, just planting; it always does first-rate. Sorghum, in this locality this plant always does well. Stock, fat and sleek. Weather, soft with moderate showers. No chinch bug.

Ellsworth.—Wheat not to exceed one-half crop. Corn, increased acreage and fully 110. Oats, half a crop. Sorghum, 100. Stock in fine condition; feed good. Weather seasonable. Chinch bugs hard on oats; some in wheat.

Gove.—Wheat stands a little thin, but greatly improved by recent rains. Corn, area greatly increased; stand good; looking splendid. Oats, acreage small but looks fine. Broomcorn, quite an acreage planted; looks very well. Sorghum is the standard forage crop of western Kansas; large acreage; doing well. Stock in splendid condition; no disease. Weather warm and moist; plenty of rain for all crops. Chinch bugs, none appeared yet.

Graham.—Wheat, but little sown; what was, will not make half a crop. Corn nearly all planted and coming out nicely; no complaints about the stand. Oats is being damaged somewhat by insects. Sorghum but little planted yet, but plenty will be for forage. Stock in good condition; no disease; range good. Weather could not be better for farming; plenty rain every few days. Chinch bugs are making their appearance in some localities.

Harper.—Wheat cannot make a full crop; injured by the dry spring and now by chinch bugs. Corn is doing well and making a fine growth. Oats will be short; has been injured in localities by chinch bugs. Sorghum is doing well; this is just the climate for sorghum. Stock is in fine condition; pastures are splendid. Weather is very fine with plenty of good growing showers. Chinch bugs have injured oats in some localities; also wheat and corn to some extent.

Haskell.—Light acreage; prospects very good. Corn, large acreage planted; stand good; prospects excellent. Oats, light acreage; yield will be good. Broomcorn, acreage light; yield will be good. Sorghum, large acreage; yield good. Stock in good condition. Weather has been seasonable. No chinch bugs.

Jackson.—Wheat, very nice what there is; about half crop. Corn, Good stand. Oats in good condition. Stock in good condition. Weather splendid; have had good rains. Chinch bugs not doing any damage.

Jefferson.—Wheat improved wonderfully since rains; 90 per cent. of full average. Corn never was in better condition; clean and well grown. Oats short but heading well. Stock in Good condition. Weather pleasant since rain of 23d inst. Chinch bugs, not enough to report.

Jewell.—Wheat prospects are not flattering; acreage not large, and chinch bugs are damaging every field in the county. Corn, large acreage; prospects splendid. Oats is not generally looking well; many fields are being planted to corn. Stock is doing finely; very little hog cholera reported this season. Weather this month has been fine, with the exception of two hail storms in part of the county. Enough rain to keep

crops growing and not enough to interfere badly with spring work. Chinch bugs are plenty and doing much damage.

Kearny.—Wheat in excellent condition. Corn doing well and sod is still being worked over and planted. Oats looking well. Sorghum, large amount planted for fodder. Stock doing well; grass excellent; one alfalfa field mowed 23d, one one-half tons per acre. Heavy showers 13th, 16th, 22d and 27th, with lighter ones the 20th, 24th and 26th, and so an abundance for any crops; land under irrigation ditches has not needed the water so far. No chinch bugs.

Kiowa.—Wheat in good condition. Corn on rebroken ground good; on sod about one-half stand. Oats good. Castor beans good. Broomcorn good. Stock thriving. Abundant rain with some hail. No chinch bugs.

Labette.—Wheat looking fine and filling well; will be ripe about June 10th. Corn never was in better condition, and is being exceptionally well cultivated. Oats very short but bids fair. Castor beans growing finely. Stock doing well; pasturage good. Weather fine. Chinch bugs plenty and doing some damage.

Leavenworth.—Wheat is looking very fine; it looks now as if it would average twenty bushels or more per acre. Corn never was more promising, is clean and growing rapidly. Oats promising, but need a little more rain. Broomcorn looks well; also sorghum. Stock is doing splendidly; grass in abundance. Weather could not be better, just about rain enough to keep crops booming. Chinch bugs are doing no damage that I have seen.

Lincoln.—Wheat almost an entire failure on account of dry weather and chinch bugs; won't be over 5 per cent. of a full crop. Large acreage of corn, and prospects good—over average. Good acreage of oats, but hurt same as wheat, and weeds choking some. Sorghum, average amount for sirup and feed, and prospects good. Stock in good fix and free from disease. Had abundant rains a week ago; weather good. Chinch bugs have been pretty bad, but heavy rains a week ago killed a great many and checked them.

Linn.—Wheat area small—about same as last year; injured by early drouth and chinch bugs. Twenty per cent. more corn planted than last year; stand generally good; rather backward, but prospect good. Twenty-five per cent. more oats sown than usual; injured by hail and chinch bugs; will make one-half crop. Flax acreage large; injured some by hail; promises two-thirds of a crop. Tame grass meadows backward, and much of last year's seeding injured by dry weather. Stock doing finely. Weather too dry early in the season, but for the last fifteen days has been all that could be desired. Chinch bugs have damaged oats, rye and wheat, but have been checked by recent rains.

Lyon.—Wheat, less than half the usual acreage sown last fall; will make 20 per cent. of full crop. Corn all check-rowed; fully 100; the early-listed had to be planted over; prospect now 75 per cent. The early spring was too dry for oats; for two weeks we have had good showers; prospect 50. Too early to tell much about sorghum. Stock in good condition—100. Warm, growing weather. Chinch bugs are very numerous; have injured oats in some instances.

Marion.—(1) Wheat, 25 per cent. stand and 25 per cent. of average what does stand. Corn, 125 per cent. stand and condition 100. Oats, acreage 125, condition 50. Some sorghum sown for feed; condition good. Stock in good condition and doing very finely. Grass never was better. Plenty of rain and as fine weather as falls to the lot of mortals to enjoy. Chinch bugs largely checked by recent rains.... (2) But little wheat sown last fall, part looks promising. Large acreage of corn planted; good stand; never looked more promising. Oats

(Continued on page 4.)

The Stock Interest.

DATES CLAIMED FOR STOCK SALES.

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.

THE FRENCH COACH HORSE.

An Ohio farmer, Mr. Newton Rector, recently wrote out his thoughts on the French coach horse and his good points. His article was printed in the *National Stockman* at Pittsburg. We reproduce it here:

We have several distinct breeds of horses in the United States, and they are all useful and profitable. The Thoroughbreds are noted chiefly for their running qualities, and are bred especially for that purpose. They are not regarded as good road horses; neither are they useful for agricultural purposes. The blood of the Thoroughbred, however, has been largely used upon other breeds to give them quality and endurance. Men of large fortunes and lovers of the turf delight in breeding and racing them, but the farmer has no use for the Thoroughbred horse. The American trotter is a very valuable horse, and, probably, for road purposes and for fast driving has no superior. For uniformity of size, general appearance and endurance they are not equal to the Thoroughbred, as they are of later date and have not been bred so carefully. There is also great variety in their color, size, form, endurance, etc. They spring from several different families—Hambletonians, Mambrinos, Clays, Morgans, Bashaws, Pilots, and others. With the indiscriminate mingling and crossing of all these families it is no wonder that the American trotter is so unlike in many ways. The principal object has been to produce a horse that can trot fast. No matter what his color or whether he weighs 900 or 1,300 pounds, is smooth and handsome or rough and homely; just so he can break the record. Many trotters are too small even for the road, and but few of them are heavy enough for agricultural purposes. Some of the largest are called Coachers. A very large majority of American trotters, if they fail to develop speed, are not fit for the plow and wagon.

We have, among draft horses, the Clydesdale and English Shire, which are very similar in form and breeding, and the Percheron and other French draft breeds. They are very profitable for the farmer to raise, and the demand for them is good at large prices. But among all the breeds enumerated above we have not one that can be classed as coach or general-purpose horses. J. H. Sanders, in his book on Horse-breeding, says there is a coach breed called Cleveland Bays, but goes on to prove quite conclusively that they are no breed at all; that there used to be a breed in England called Cleveland Bays, but they are now extinct. However, he quotes from numerous authorities to show that of late years a class of horses have been imported from England and sold in the United States as Cleveland Bays, but that they are not worthy the name of a distinct breed. There is but one breed of horses that can truly be called coachers, viz., the French Coacher. For several centuries the French people have bred with great care a race of horses suitable for army and cavalry purposes. As early as the tenth century, under the rule of Hugh Capet, this race of horses was extensively bred, and their great power of endurance was put to the test in the petty wars that took place between the nobility. Under the necessity of those times a powerful impulse was given to the breeding of horses suitable to the requirements of the period. From

that time on the government gave constant attention to improving this breed of horses. In 1690, under that great French Minister, Colbert, the number of royal and approved stallions in France was 1,600. The stallions kept at the haras were called the King's stallions, and were selected from the finest breeds to be found in France, and many were brought from Arabia, Turkey, Spain and England. Thus it will be seen that the government of France spared neither pains nor money to improve their horses.

In 1831 a great advance was made toward the further improvement of the light breeds suitable for coach and cavalry purposes, and in 1833 a royal decree was issued establishing a government stud book for the preservation of pedigrees. This was placed under the supervision of the Minister of Agriculture. After the establishment of this stud book more critical judgment was used in selecting government stallions than ever before, and large prizes were offered for colts of this breed. In 1874 the number of stallions owned by the government was ordered increased 200 per year until they should reach 2,500. Large prizes were offered for the finest breeding animals. A special sum of 50,000 francs per year was granted to make experiments with foreign blood, and for this purpose sixty finely-bred mares were purchased from other countries. The French government has by every possible means encouraged the breeding of the French Coacher, and the very finest and purest-bred specimens are kept by the government and furnished to owners of mares at a nominal fee. These consist, first, of stallions owned by the government itself; second, stallions belonging to private individuals, inspected and approved by the government. Such stallions receive from the government as long as they are kept from 300 to 3,000 francs, according to their breeding and quality. To prevent inferior stallions from being used, a decree was issued in 1885 excluding from public service all stallions not owned or approved by the government. In 1860 by a government decree, a prize of from 100 to 600 francs each was authorized to be given to approved mares with colts by government stallions.

Large prizes are given annually by the French government at the exhibitions and races. Thus the valuable qualities claimed by the French coach horse over other coach breeds are based upon a system of breeding not possessed by any other race. The breeding of horses in the United States and other countries is conducted by individual enterprise. Hence the great difference in form and quality shown in the same breed. Thus the fixed type is greatly affected or destroyed altogether by the variety of opinions entertained by each individual breeder. Hence the lack of uniformity of character so necessary to every successful breeding animal.

The French coach horse, instead of being the product of a multiplicity of ideas, has been bred and developed under the exclusive guidance of the Director General of the government studs of France. The uniting of all the good qualities of the different breeds and their concentration through generations of breeding, under the direction of a single mind, has developed a race of such uniform size and perfect symmetry, and with such great powers of endurance through the blood of the English Thoroughbred, that they are able to trot two and five-mile races drawing heavy carriages. True they do not attain the speed of the American trotter, yet their large size and great powers of endurance impresses every careful observer.

They weigh from 1,250 to 1,400 pounds

and are generally bay and brown in color, often beautifully dappled. They have the lofty carriage and fine head of the Thoroughbred, are very compact and smooth, with good bone and clean, flat legs, and are uniformly good movers. They are high steppers, have splendid knee action, trot squarely, and need no boots or toe weights to assist nature.

They supply a long-felt want in this country and are bound to be a popular and profitable breed. To show the value of this breed in France note the sale of "Elan," a French coacher, to a company of gentleman in France for \$4,000. European buyers are now in the United States buying just such horses as French coachers crossed on our native and trotting-bred mares will produce. There is a great scarcity of coach horses, and the demand for them at handsome prices is assured. Their produce invariably make the handsomest carriage teams to be found, and crossed upon our native and half blood draft mares, they will also produce the very best of fast-walking farm teams, weighing from 1,200 to 1,400 pounds.

The horse business is a sure and profitable one, provided we breed to the right kind of sires. Russia, Germany and Austria have prohibited the exportation of horses from their dominions and are large buyers themselves.

Let us imitate the example of France, and, like her, we shall reap the same golden harvest. Farmers, refuse to patronize the thousands of scrubs and mongrels that annually travel the country, and whose produce are a positive disgrace to American horse-breeding, and send your mares to the very best registered and pure-bred stallions to be found; and among these no breed will yield larger profits and produce better horses than the French coacher.

Care of Calves.

Kansas Farmer:

Calves that are allowed to run with the cows will usually take care of themselves; but hand-reared calves are more subject to disorders, and it is this latter class that I shall consider in this article.

There are certain natural laws which must be observed to maintain the health of any animal; they are fresh air, light, exercise, proper food, and regularity as to time and quantity.

Don't allow the calf to suck more than once if you intend to raise it by hand. Take it away out of the cow's sight, and she will soon forget it and cease to worry. In feeding young calves I would advise the use of a calf-feeder. There are two kinds of calf-feeders on the market. The kind that I use, which is the cheapest, consists of a rubber teat attached to a wooden float, which is placed on top of a pail of milk. The other one is trough with a teat on the lower side; it can be fastened to the side of a building and the milk poured into it. By the use of a feeder the bother of teaching a calf to drink is saved, the calf takes the milk more slowly, and in sucking the teat the saliva, which performs a very important part in digestion, is mixed with the milk.

If calves are fed skim-milk, the fat which has been removed in the cream should be replaced in some other way. This can be done by mixing cornmeal gruel with the milk which should be fed warm, as cold milk often causes colic. Calves will soon learn to eat fine cornmeal, and then the gruel can be discontinued. They should also be taught to eat hay. Take a small bunch of fine dry hay, tie a string around it, and hang it up just above their heads; they can not waste it, and will nibble at it, and soon learn to eat it in earnest. When that is

accomplished you have one of the best preventives for "scours."

When running with the cow a calf will suck about every two hours, and I have found that it pays to feed young calves at least three times a day.

The most common diseases to which calves are subject are scours or diarrhea and wind colic. Both of these diseases require immediate attention; scours will prove fatal in a few days, and colic in a few hours. The causes of scours are many, and sometimes beyond control; but the disease is more frequently caused by a want of proper care. Keeping a calf tied up in a dark, damp place without a chance of exercise, is almost sure to produce scours. Feeding too much milk at a time or not frequent enough, change from one cow's milk to another, exceedingly hot weather or a "rainy spell," are other causes. As to the cure: in the first place, if possible, remove the cause, and do not let the calf exercise until it is entirely well. If taken in the beginning it may often be cured by giving eggs. Open the calf's mouth, hold its tongue down with your thumb, pour the egg down, then shut its mouth and hold it shut, with its head up, until it swallows. Give two or three eggs every three hours until better. But the best and surest remedy is the leaves of red-root, which every one who has plowed new land in Kansas will remember. Feed the leaves dry or green, or if the calves will not take them that way, make tea of them, and mix with milk. Those who cut prairie grass can easily gather a sack or barrel full for future use.

Wind colic in calves is usually caused by taking a large quantity of skim-milk, and sometimes by drinking milk very fast. The best remedy that I know of is to drench with warm water and soda. Take a long necked pint bottle, fill with warm water, put in a heaping tablespoonful of soda, shake, and pour down the calf's throat as soon as possible. I have known calves to bloat and die in an hour. The same remedy is good for colic in a horse. W. C. C.

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.

The desire to breed and feed for a larger proportion of lean meat is, we are glad to note, increasing. It will make better and more palatable pork, bacon and hams, and give our meat higher standing and reputation in Europe.

Short-horn Bulls for Sale.

A number of choice young thoroughbred Short-horn bulls for sale at low prices and on satisfactory terms to purchasers. Address, at once, J. B. McAFFEE, Topeka, Kas.

The renovation of old fruit trees should be performed by degrees, a portion being removed each year for several years, that the tree may not receive too great a shock. Care should be used to preserve the symmetry of the tree. To the pruning must be added judicious cultivation and manuring.

Are You Going South?

If so, it is of great importance to you to be fully informed as to the cheapest, most direct and most pleasant route. You will wish to purchase your ticket via the route that will subject you to no delays, and by which through trains are run. Before you start, you should provide yourself with a map and time table of the Gulf Route (Kansas City, Ft. Scott & Gulf R. R.), the only direct route from and via Kansas City to all points in Eastern and Southern Kansas, Southwest Missouri, and Texas. Practically the only route from the West to all Southern cities. Entire trains with Pullman Palace Sleeping Cars, and Free Reclining Chair Cars, Kansas City to Memphis; through Sleeping Car, Kansas City to New Orleans. No change of cars of any class, Kansas City to Chattanooga, Knoxville and Bristol, Tenn. This is the direct route, and many miles the shortest line to Little Rock, Hot Springs, Eureka Springs, Fort Smith, Van Buren, Fayetteville, and all points in Arkansas. Send for a large map. Send for a copy of our "Missouri and Kansas Farmer," an 8-page illustrated paper, containing full and reliable information in relation to the great States of Missouri and Kansas. Issued monthly and mailed free. Address, J. E. Lockwood, G. P. & T. A., Kansas City.

In the Dairy.

SKIM CHEESE.

We are asked whether skim cheese should be made the same as whole cheese, and if not, what difference there should be in their manufacture? If we should assume that the interrogator was well informed as to the best mode of making whole milk cheese, and that there was no other difference between a sample of whole milk and another of skim milk, than a difference in the quantity of cream they respectively contained, it would be a sufficient answer to say that the only difference in manufacture should consist in an earlier checking of the separation of whey from the curd, from skim milk than from the curd of whole milk, so that an equal amount of moisture in proportion to cheesy matter might be retained in each, but in view of the scanty knowledge common among cheese-makers, of the philosophy of cheese-making, and of the very large amount of skim cheese made in the country and a very common error in its manufacture, a more extended answer seems appropriate.

The manufacture of cheese is largely a question of moisture. Milk is 87 per cent. water, and its conversion into cheese consists chiefly in separating so much of its water in the form of whey that there shall be left in the curd a weight of water equal to the weight of cheesy matter. If a hundred pounds of milk has three and a half pounds of coagulable caseine the curd should contain three and a half pounds of water, let the fat and sugar in the curd be what they may. Experience has settled the fact that this relation between cheesy matter and water is best for the welfare of the resulting cheese, and it is as true for skim cheese as for whole milk cheese. A common error in the manufacture of whole milk cheese is leaving too much water in the curd—more water than caseine—and a still more frequent error in making skim cheese is leaving too little water in the curd—less water than caseine.

This difference in the separation of moisture is chiefly due to the fact that when rennet is employed for cheese-making it acts strongly upon the caseine in the milk, hardening it and causing it to separate from the watery part or whey, while its action on the milk fats is very feeble. When cream, which is about half water, is retained in the curd, it holds on to a large share of its moisture, because rennet has little or no tendency to separate it, and makes the curd too moist, unless care is taken to reduce it by a continued elevation of the temperature of the curd.

Skim milk, to the extent that cream is taken from it, is relieved of this retention of moisture. It is left with only the caseine from which the whey separates so readily and completely as to become too much exhausted, if the operator is not fully aware of the situation. If the same quantity of rennet is applied to the same quantity of whole milk and skim milk, both at the same temperature, and the respective curds treated just alike, all the way through the process of manufacture, the curd from the skim milk will part with much the greater per cent. of moisture. If in such a case the curd from whole milk is just right, the other will be altogether too dry to cure well, and this difference is the rock on which the great majority of skim cheese-makers split. They separate so much moisture, from the above reason and because of the commonly greater age of the milk, as to make the curd so dry as not only not to cure well, but to dry out so quickly as to become

dried curd instead of cured cheese, and so hard as to approximate "white oak" instead of the plastic and salvy cheese it should be.

There are other ways in which the separation of whey from curd is made more or less complete. An increase of rennet used, increases the liberation of whey, all other conditions being the same, and less rennet diminishes it. The same results follow an increase and lowering of the temperature at which the curds are manipulated, fine and coarse cutting of the curds, an increase and decrease of salt used, more or less acidity, and giving the milk much or little age before curding it, all of which are effective in skim cheese-making as in whole milk cheese, and a variation in any one of these particulars is usually enough to make all the variation in moisture desired in any case. If all of them were used in one direction or the opposite, they would make a cheese as hard and dry as a brick, or as soft as pudding, out of any milk which any one would think of using for cheese. It is important, therefore, that the operator should guard against extremes.

The most successful skim cheese-makers pursue the same course with skim milk as with whole milk, with the exception of one mode of preventing too much dryness. They will use, for example, the same strength of rennet, and cut the curd, and scald, and salt the same as for whole milk cheese, but cut short the time of keeping the curd warm, by cooling it suddenly with cold air or cold water, to stop the liberation of whey. Others do the same as with whole milk all the way through, keeping the curd warm the same length of time, but work it all through at a lower degree, and produce the same effect as by sudden cooling.

Others employ some other one, or two, of the different agencies for producing the same effect and make a fairly good cheese out of milk from which a large share of the cream has been taken. There is no one particular mode which one must follow to be successful. He may work in different ways, but whatever mode he employs he must see to it that his cheese, when it has stood in the curing twenty-four hours, or long enough to assume the temperature of the room, has the soft and pliable consistency a whole milk cheese should have at the same temperature, and if it is properly cured he will have as good a result as the quality of his milk will produce, but no one should ever run away with the impression that he can make a whole milk cheese out of skim milk—the loss of the cream will tell on the flavor and richness of the product—yet by following the course as above indicated, a fairly palatable and useful article of food may be made out of any skim milk which is sweet and clean.—*National Live Stock Journal.*

Victory at Last.

Consumption, the greatest curse of the age, the destroyer of thousands of our brightest and best, is conquered. It is no longer incurable. Dr. Pierce's "Golden Medical Discovery" is a certain remedy for this terrible disease if taken in time. All scrofulous diseases—consumption is a scrofulous affection of the lungs—can be cured by it. Its effect in diseases of the throat and lungs are little less than miraculous. All druggists have it.

It is said that a pasture occupied by scabby sheep has been known to give the disease to another flock three years afterward. The disease is caused by a minute insect—*Acarus scabiei*—and anything which will loosen the scab and poison the insect will cure the disease.

Black Diamond Prepared Roofing don't need skilled workmen to apply it; rather lasts as well with cheap work. M. EHRET, JR. & Co., sole manufacturers, No. 113 N. 8th St., St. Louis.

BREEDERS' DIRECTORY.

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(Continued from page 1.)

hurt some by chinch bugs, but late rains have brought them out. Stock in good, healthy condition, many still being full fed. Have had several heavy rains since the middle of month; never had better growing weather than since that time. Heavy rains of late have destroyed chinch bugs.

Marshall.—Prospect for good half crop of wheat. Large acreage of corn and in very fine condition. Oats in fair condition; weedy. Just planting broomcorn; likewise sorghum. Stock in excellent condition. Weather fine; delightful rains. Some chinch bugs left; mostly drowned.

Meade.—Wheat is in good condition. Corn growing finely. Oats rather short, but doing well. Considerable sorghum and it is growing well. Stock in good order, plenty of good grass. Raining every night, everything doing well. No chinch bugs reported.

Mitchell.—(1) Wheat not more than 20 per cent. of a full crop expected; killed by chinch bugs. Corn looking remarkably well; greater acreage than usual. Oats damaged by the bugs. Stock in fair condition and now doing well. Weather had been very dry till about middle of May; since have had plenty of rain. Chinch bugs bad, but think many were killed by late rains. (2) Wheat doing well except where attacked by chinch bugs. Very large acreage of corn, splendid stand and doing well. Oats look well where free from chinch bugs. Average crop of broomcorn being planted. Stock doing well; no disease. Very pleasant weather, with occasional light showers. Chinch bugs plenty; oats nearly used up.

Montgomery.—Wheat looks fine; in a few more days will be out of danger. Corn, in some places plowing second time. Oats very poor, mostly destroyed by chinch bugs. Castor beans not a very good stand; show rows some. Stock doing finely; many have lost young colts; hogs scarce. Weather very fine, frequent rains, warm. Chinch bugs set back by cold rains.

Morris.—No wheat in this section. Corn never looked better and is a good stand. Oats prospects very poor—leading out six to eight inches high and damaged by chinch bugs. Stock all in fine condition and doing well. Fine growing weather, with good showers. Chinch bugs very plenty on oats.

Morton.—There was but little fall wheat sown—about three hundred acres. Corn looks well. Oats in fine condition. Broomcorn, one hundred acres planted. Farmers are still sowing sorghum. Stock in good condition. Weather fine, plenty of rain, everything in a flourishing state. No chinch bugs.

Neosho.—Wheat on bottom land promises a larger yield than last year; on the upland almost an entire failure. Corn, large acreage, good stand and looking very fine. Oats very short and badly chinch-bugged. A very large acreage of castor beans planted; look well. Smaller acreage of broomcorn than usual. Stock in good condition. Weather very favorable for farming. Chinch bugs very numerous.

Norton.—Wheat is doing well; there will be a very fair crop. Corn was never better; almost double the usual acreage planted, and everything points to a heavy yield. Stock is doing well; little or no disease; large numbers are being shipped east. Weather cool and in the main pleasing; rains in abundance. Some parts are troubled with chinch bugs, but not seriously.

Osage.—Wheat prospect not very flattering. Corn is in fine condition, looks well; generally clean. Oats, some good fields, but in a good many parts of the county they are pasturing and plowing them up. Stock is in good condition; no disease; although grass is short they are thriving. First part of the month dry, about the middle some good showers, all parts of the county getting a share, and it is a good growing time. Chinch bugs are damaging the wheat and oats.

Osborne.—Wheat a failure, drouth and chinch bugs the cause. Corn a good stand and growing nicely. Oats poor; unless rain comes soon will be a failure. Not much sorghum sown yet; generally poor stand. Stock doing well; no prevailing disease. Weather dry; showers occasionally, but only local and light. Chinch bugs worst ever known; crops destroyed by them.

Ottawa.—(1) The condition of wheat is very poor, owing to dry weather in the spring. Corn prospects were never better, with very large area. Oats will not average half a crop; short and weedy. Stock in good condition. Weather fine, with copious rains. Chinch bugs numerous, though doing but little damage. (2) Wheat is a failure in this county, not more than one-half will be out. Corn in good shape; ground is in good growing condition. Oats is heading out and is about six inches high. Stock is doing well; pasture is fine. We are having fine rains. Chinch bugs plenty.

Pratt.—Wheat will be about half a crop; dry weather during winter and spring damaged it badly. Corn looking well. Oats poor. Stock

doing finely; no disease. Weather fine; plenty of rain the last two weeks. Lots of chinch bugs; doing no damage since rain.

Republic.—(1) Prospect for a good crop from early-sown wheat. Corn doing well in general; some washed out and covered up by excessive rains. Oats a little thin, but bids fair for a good crop. Stock in extra good condition, with no disease. Since the 10th have had much rain, and farm operations retarded. Chinch bugs plenty, but no damage noted. (2) Not enough wheat sown in this county to make a report on. Corn is coming forward very rapidly; color good, plants thrifty and stand unusually good. Oats injured some by chinch bugs early in the season, but recovering rapidly now. An increased acreage of broomcorn has been planted this year. Stock doing remarkably well; grass growing rapidly; pastures excellent. Weather favorable, plenty of rain for all purposes. Chinch bugs did some damage early in the season, but are largely destroyed by heavy rains.

Rice.—Dry weather the fore part of May materially shortened the wheat crop. Corn mostly planted, some a second time on account of rain covering up listed corn. Oats growing nicely since the late rains. In east half of county quite a quantity of broomcorn being planted. Many farmers are raising sorghum for feed for stock, and near Sterling for sirup. Stock in good condition. Weather warm and threatening to be wet. Chinch bugs checked for the present by recent rains.

Rooks.—Wheat thin on the ground, but growing nicely; will make half a crop. Corn planted in good season and looks well. Oats coming out all right since the late rains. Sorghum in this county is being sown broadcast or drilled in for feed. Stock never looked better at this time in the year. Weather for the last two weeks has been very favorable for the growing crops. Chinch bugs are here, but if favorable weather continues will not do much harm.

Scott.—Wheat, not a large acreage sown but looks well. Farmers plowing corn; a large area planted; looks well. Oats look well. Stock looks well; wintered without much feeding; grass plenty and good. Weather warm and wet; rained every day for past week. No chinch bugs.

Shawnee.—Chinch bugs in wheat, crop will be unusually small. Corn looking well, with excellent prospects for the increased acreage. Oats rather short, and will hardly exceed an average. Stock generally in good condition. Weather favorable generally with plenty of rain. Chinch bugs not very numerous, but still doing some damage.

Smith.—Wheat good, except where bugs exist; some few pieces listed to corn. Corn unusually promising; acreage large. Oats very good, except some few pieces damaged by bugs. Stock all doing well, twenty days ahead of last year. Weather fine and pleasant, rain plenty. Chinch bugs knocked into "pl" by rain of 22d.

Stafford.—Wheat is in fine condition, all headed out and growing finely. Corn looks nice, a very large acreage in. Oats look pretty well, but not an extra good stand. Small acreage of broomcorn, looks nice. Stock in fine condition. Weather very favorable for all kinds of crops. Chinch bugs not doing any damage.

Sumner.—Taking the area sown, wheat will not be over one-third of a crop. Corn a good stand, but very small for the time of year. Oats, worst I have seen in a residence of fourteen years. Not as much sorghum as usual on account of the price of seed—\$1.80 per bushel. Stock in good condition, no disease. Weather very favorable for the past three weeks, an abundance of rain. Chinch bugs are hatching, seem to be plenty.

Trego.—Wheat crop short and light. Corn mostly planted and a much larger acreage than ever before, looking fine. Oats small and poor prospect, small acreage. Some broomcorn planted with good prospect. Very little sorghum put in yet, will be large crop planted later. Stock in fine condition and getting fat, grass splendid. Splendid growing weather; more rain than needed, but nothing suffering except on a few pieces of lowland where corn is not up yet. Chinch bugs quite plenty and doing some damage.

Wabawnee.—Wheat very badly damaged by chinch bugs, some pieces eaten up. Corn generally a good stand; some pieces had to be replanted on account of being planted too early. Some pieces of oats quite good, others plowed up and planted to corn; too many bugs. A few pieces of broomcorn planted. Some sorghum sown for feed and a small quantity for sirup. Stock of all kinds doing well. Weather very fine and quite warm, plenty of rain recently. Chinch bugs a full crop.

Washington.—Wheat fair, but a less acreage than usual. A larger acreage of corn; the heavy rains have made replanting a necessity; prospect not quite as good as usual. Oats very good. Stock in good condition. Weather extra good, plenty of rain and warm weather. No chinch bugs to amount to anything.

Correspondence.

INDUSTRIAL CO-PARTNERSHIP.

Kansas Farmer:

One of the most hopeful signs of the speedy improvement of the condition of wage-workers in this country is the recent report of the Hon. Carroll D. Wright, United States Commissioner of Labor, in regard to the remarkable success of factory employes in organizing and operating their branches of industry on a co-operative basis. It is estimated that in the last year one million people and 5 per cent. of the factories were entirely idle. Among those who were fortunate enough to be employed many suffered the usual 10 per cent. reduction in wages, making it barely possible to live, to say nothing of the privilege of books, papers, and other means of culture and improvement which is the right and duty of citizens to use. These employes, feeling that even a small degree of comfort belongs to the sober and industrious who earn it, formed themselves into associations to carry on foundries, boot and shoe factories, and cotton mills. By looking over their forms of organization and studying their manner of doing business, it is easy to see why they have succeeded. The principles upon which they are built are correct and just, and will always succeed whenever and wherever brought into action. Since their organization they have not seen an idle day, neither have they been tormented with "strikes," which shows that they have rendered their employment steadier and more certain. They have received their wages promptly and without reduction and discontent, and, also, a share in the profits at the end of the year.

It may be of interest to know something of the regulations governing an establishment conducted upon this system, therefore a set of by-laws is given *verbatim*. They have been used for a long time, and are still used, by the Somerset (Mass.) foundry, which is one of the oldest and most successful co-operative stock associations in the United States. They are as follows:

ARTICLE 1. This company shall be known by the name and title of the Somerset Co-operative Foundry Company. The business of this company shall be the manufacturing of iron castings.

ART. 2. The capital stock of this company shall consist of \$15,000, divided into 150 shares of \$100 each, and no person shall be permitted to hold an amount to exceed ten shares.

ART. 3. All stock shall be paid for within thirty days from the time of subscribing, and no one shall be a member of this association or entitled to vote in its meetings until he shall have paid an amount equal to one share.

ART. 4. The salaries of the officers shall be fixed at the yearly meetings.

ART. 5. The officers of this company shall consist of a President, Treasurer, and not more than thirteen Directors, who shall be styled a board of managers; they shall also have a corporation clerk and foreman.

ART. 6. The board of managers shall have power to make such prudential by-laws as they may deem proper for the management and disposition of the capital stock and business affairs of the company, not inconsistent with the laws of this State, as they may elect, and of prescribing the duties of officers.

ART. 7. It shall be the duty of the President to preside at all meetings of the Directors and stockholders; he shall make and execute all contracts as directed by the board of managers; he shall be the authorized agent of the company, and his signature, when attested by the clerk, shall be the bond of the company.

ART. 8. The clerk shall keep a correct record of the meetings of the stockholders and board of managers; he shall be chairman of the finance committee, and perform such other duties as the board of managers may prescribe.

ART. 9. The Treasurer shall have charge of the funds of the company; he shall receipt for all money received by him, and deposit the same in such place as the board of managers may designate; before entering upon the duties of his office he shall give bonds in the penal sum of \$5,000 for the faithful performance of the duties of his

office, said bonds to be acceptable to the board of managers.

ART. 10. There shall be annual meetings of the stockholders for the choice of officers held on the second Monday in January of each year, and special meetings of the stockholders may be called by the President at any time by giving seven days notice of the time, place and object of the meeting, by mail or otherwise, to all the stockholders, and in the absence or inability of the President to perform the duties of his office, it shall be the duty of the clerk upon the application of five or more of the stockholders of the company in writing, setting forth the object of the meeting, to notify the stockholders in the same manner prescribed by the President.

ART. 11. The board of managers shall hold regular meetings at least once in each month, or when ordered by the President; for the transaction of any business that may require their attention; it shall require a majority of the board to constitute a quorum for business.

ART. 12. There shall be such distribution of the profits or earnings of the association among the workmen, purchasers and stockholders as shall be described by the by-laws, at such times as therein prescribed and as often as once in twelve months, provided that no distribution shall be declared and paid until a sum equal to at least 10 per cent. of the net profits shall be appropriated for a contingent or sinking fund, until there shall have accumulated a sum equal to 30 per cent in excess of such capital stock.

ART. 13. Members employed by this company shall conduct themselves properly and for the interest of the company; failing to do so they subject themselves to dismissal by the foreman or superintendent, and they shall not be again employed without the consent of two-thirds of the board of managers.

ART. 14. In taking apprentices, sons of stockholders shall have the preference.

ART. 15. No member shall be considered a working member except he shall hold five shares, but he may be employed by the agent or foreman.

ART. 16. This company shall not be bound to redeem any share of its capital stock within two years of its corporation, and then it shall require four months notice from any member desiring redemption of stock, but the same may be transferred at any time to any person acceptable to the board of managers.

ART. 17. Any member having shares to sell shall first offer them to the company.

ART. 18. No person not a stockholder shall be eligible to office.

ART. 19. The by-laws may be amended at any regular meeting of the stockholders, but any alteration shall require a vote of two-thirds of the members present.

This is combining capital and labor in the true spirit, and will encourage all workmen. This system, though very simple, is just to all concerned. The employer or manager receives good profits on his capital invested, and knows that the workmen have an interest in common with him. The workman is placed on a higher plane, he becomes part of the establishment, and his intelligence and character have a bearing in proportion to his interest in it. They are all partners and associates. The social and moral tone of the whole community is raised. The employer looks upon the workman in the true light, and harmony exists instead of disturbances. This industrial co-partnership has been tried all over Europe and has been successful. Among the most noted establishments that have adopted it are Leclair's, in Paris, the Paris & Orleans Railway Co., the factory of M. Godin, at Guise, France, Briggs Bros., Yorkshire, England, and Herr Krupp, at Essen, Prussia. Many enterprises in this country have likewise adopted something like it, and have been wonderfully successful.

This profit-sharing arrangement offers a practical means of producing goods on a basis which is just to both capital and labor and at the same time produces social harmony between capitalist and workman. In reviewing the industrial depressions of 1837, 1847, 1857, 1867, 1873-78, and 1882-86, the Bureau of Labor suggests this system as a remedy for such misfortunes. Since there have been no strikes in connection with co-operation, it is also suggested as a preventive against such commotions. It may be urged that great numbers of needy men are waste-

ful, improvident and inclined to dissipation, and could not be benefited by such an arrangement, because they could not command the necessary amount for purchasing stock. This has been a misfortune through many years and will continue to be so if something is not done to encourage them to do better for themselves. Even as far back as 1588 Richard Hakluyt, in his "Discourse Concerning Western Planting," complains of the something, using the following quaint language: "But wee, for all the statutes that can be devised, and the sharpe execution of the same in poonishinge idle and lazye persons, for want of sufficient occasion of honeste employments, cannot deliver our commonwealthe from multitudes of loyterers and idle vagabondes. Truthe it is, that throughe our longe peace and seldome sickness (twoo singular blessinges of Almightye God), we are growen more populous than ever heretofore, so that nowe there are of every arte and science so many that they can hardly lyve one by another, nay rather, they are readie to eate upp one another; yea many thousands of idle persons are within this realme, which, having no way to besett on worke, be either mutinous and seeke alteration in the State, or at leaste very burdensome to the commonwealthe, and often fall to pilferinge and thievinge and other lewdnes, whereby all the prisons of the lande are daily pestered and stuffed full of them, where either they pitifully pyne awaye, or else at lengthe are miserably hanged, even XX at a clappe, oute of some one jayle."

The idlers of the present time represent no unusual state of affairs since they were complained of at that early date. The objective point, or the acquirement of sufficient capital with which to do business, is too far off to be a stimulus to this class. Why not place an objective point near enough to a poor man that he may have some hope of reaching it? In a smaller business sell cheap shares, say \$5 or \$10, and give them a chance, at least, to try. A little encouragement and room for hope of things better works wonders. When men feel that they have an interest in what they are doing, and that that interest may be obtained at a reasonable price, much tramping about will be stopped and many idlers will be turned into earnest workmen. SAM WINDER.
Topeka, Kas.

Shall We Abandon Wheat-Growing?

Kansas Farmer:

It seems to be kept very quiet, but it is nevertheless true that in the midst of our boom the farmers in this section are not feeling very boomish. The wheat crop is a failure, the rye crop also, and the oats crop is in a very critical condition. Listers are kept running in our wheat and rye fields, and if both of these crops are not all plowed up, it is only because farmers have not time to do it. Kansas has not yet been, and probably never will be, educated up to that heavenly condition which is proof against the ravages of drouth and chinch bugs. It used to be said that it is not drouth, but the hot winds that destroyed the crops. Now it is said it is not the drouth but the chinch bugs that have caused the devastation. The facts are that the dry, hot weather of our early spring was favorable to the activity of the bugs, which were numerous last year, and the old bugs which it has been said heretofore are harmless, like old fools, have proven themselves to be the worst kind of bugs. Wheat fields which two weeks ago promised a fair yield, now lie prostrate beneath the ravages of these unmerciful creatures. Rye fields in like manner, while the oats still has a fighting chance, the tide of the battle is decidedly against them. On the whole, with hogs and cattle down, bugs victorious at every point so far, with the probability of their continuing their devastating work still further, the prospects of our farmers are not very flattering just now.

Still, if a kind providence should interfere in our behalf, as we hope, and send a destroying angel upon the bugs in the form of abundant, dashing rains, we shall come out all right on "the home stretch." Corn is our only hope now, of which there is a boundless area planted this year. It is a good stand generally and growing nicely with the exception of some which was listed.

The present state of things causes the thoughtful farmer to reflect. Has the time

come to abandon wheat growing and depend upon corn and forage crops? The sentiment of our farming community generally is in favor of the affirmative of this question. It is believed that the period of successful wheat-growing in our section has passed, and that hereafter the farmer who would be successful must depend upon hogs, cattle and horses, and must raise such crops as may be necessary to put them into the world's markets in the quickest time and in the best condition possible.

This thought, which for some time has been crystallizing in the minds of our people, is further intensified by the general belief that the growing of wheat tends to propagate bugs and is a serious detriment to the growing of corn. However this may be, a change of base will be effected and wheat will be dropped very largely from the farmers' curriculum. M. MOHLER.
Downs, Kas., May 27, 1887.

About Reeling Silk.

[We have a letter from Mrs. Davidson, silk culturist, at Junction City, giving figures showing the difference in labor and expense between the old method of reeling by hand and the new method by the Terrell machine. Our columns are very much crowded this week, and we take the liberty of omitting all the details, giving only that part which is of general interest, namely, the conclusion—the actual saving by the new process, which Mrs. Davidson, quoting from French authority, puts at 78 per cent. In other words, one person, with the Terrell machine, can reel as much silk as four persons can reel by hand. The work is better done, too. Mrs. Davidson's letter concludes as follows.—EDITOR.]

"It will be a proud day for Kansas when this new process of reeling is tested at her silk culture station on cocoons raised from the product of her own soil, and a still prouder one when her fair daughters are arrayed in silk grown and manufactured in their own State. That day is not far distant if we make as much progress in the next five years as we have in the past five, for the most sanguine would hardly have dared to anticipate the act of the government and the noble act of the past Legislature for the benefit of silk culture. It is to be hoped there will be a large crop of silk harvested this spring and sent to the station."

Gossip About Stock.

Remember the sale of E. P. Gamble's Short-horns at Kansas City on June 8. Now is your time to get some choice pure-bred Young Marys and Phylisses.

S. J. Gilmore, of Denver, formerly Land Commissioner of the Kansas Pacific railway, wants to buy some thoroughbred Galloway cattle and very properly advertises his wants in the KANSAS FARMER.

Whaley & Young, of Pleasant Hill, Mo., will hold a public sale of Herefords on June 23. The entire herd is to be sold, and enterprising breeders will not be slow to avail themselves of this unusual opportunity.

At Topeka, on Wednesday, June 15, there is to be a joint public sale of Hereford and Short-horn cattle by well-known Shawnee county breeders, Martin I. Lee and F. R. Foster & Sons. Read their advertisement and prepare to come to the sale.

Col. W. S. White, of Sabetha, Kas., advertises his next public sale of Short-horns to take place June 21. Col. White has been one of the most successful of Kansas Short-horn exhibitors at the leading fairs of Kansas and Missouri, as well as the champion Short-horn exhibitor at the World's Fair, New Orleans. Write him for catalogue.

Akron Bukeye Machines for All Parts of the World.

From the Cleveland Leader: "While many Ohio towns are booming on paper and gas, Akron is forging ahead in a quiet and more substantial manner. The largest establishment in the city, that of Aultman, Miller & Co., is now busy filling orders for Buckeye mowers, reapers and binders for export to Australia, New Zealand and South America. Their orders from these countries are more than double those of any former year. A single order recently received from South America will amount to more than twelve carloads. Aultman, Miller & Co. are said to be the largest American exporters of harvesting machinery to the countries named."

Inquiries Answered.

SKUNK IN WELL.—I would like to inquire if you know anything about a drilled well where a skunk and rabbits have fallen in over one year and have the smell of the skunk. Have cleaned it out and tried many things, but is always the same. The well is forty feet deep and is not tubed.

—Try unslaked lime. Make several applications, and then after a day or two have elapsed, clean out thoroughly, and after that protect the well from skunks and rabbits.

CLOVER SOD.—Will you or some of your contributors tell me when will be the best time to plow clover sod for fall wheat? Will it do to plow and sow as soon as plowed, or does it want to be let rot like prairie sod?

—The best time to plow clover sod is when the clover is in full bloom; plow deep and use a chain to draw all the grass under the turning ground, so that it will be all wholly buried. It is well to follow the plow with a roller or plank drag—some implement that will fill up all the open spaces, pulverize the ground and firm it. A good harrowing just before seeding will be sufficient, unless weeds have started, in which case plow shallow with a sharp plow, harrow and sow.

QUINCY.—Please to insert in your valuable paper the remedy for quincy in hogs, if any. Is it contagious? Also cause for same.

—If the hog eats give a mixture of equal parts of lard oil and turpentine in doses of two teaspoonfuls in pint of gruel. If he does not eat swab the throat with the same mixture as far back as can be reached. Use a feather attached to a light stick. If there be great difficulty in swallowing, let the skin under the throat be scarified with a sharp knife or lancet, deep enough to draw blood freely, and foment the parts with cloths wet with hot water partially wrung out. Apply repeatedly so as to "induce bleeding and reduce the inflammation." And use the following injection: 4 oz. sulphate of magnesia, 2 drachms oil of turpentine, ½ pint soapsuds. Not contagious.

HEDGE.—I wish to ask what would be best and cheapest to use for a hedge round two village lots (150x100). Where can I procure the Osage orange? Is it grown from seeds or from plants? What cultivation is necessary? How long will it take to make a thick hedge? When should it be planted?

—Osage orange makes the cheapest hedge, but whether it is best for a village lot, we doubt. Russian mulberry makes a better hedge in town; indeed, we prefer many other plants, both evergreen and deciduous. Osage orange plants may be had at any nursery in Kansas, we suppose. It is usually grown (in hedges) from plants. It ought to be planted in May or early June—at any time when transplanting is in order. It re-

quires about the same cultivation as corn. Keep the ground soft and clean. Will make a good hedge in three to five years.

SICK STEERS.—Can you tell me what ails my 2-year-old steers? They were fed on shock corn, millet and prairie hay during the winter, and had access to pond water, plenty of salt with an open shed. About two weeks before I took them to pasture, one shrank in flesh very fast, but I did not notice any particular ailment; another that was in fair shape had a lump under the jaw; he is now a perfect skeleton, has not shed, his hair standing out, with ridges swelled under each jaw extending back to the throat, and don't eat or move only when compelled to. The first mentioned is also swollen in throat and one eye, has broke in two or three places, is very poor, but eats some, and three more of them that are in fair condition but don't look as well as those that are all right, have a lump on the under part of jaw on one side. I took them to pasture about the 1st of April, and have cattle of different ages all doing splendid except the 2-year-old steers.

—There must be some other important symptoms which are not mentioned in the description, as to coughing, breathing, appearance of eyes, tenderness to touch, condition of bowels, etc. We can only guess in the case, and our guess is that the animals became diseased from overfeeding on the particular kinds of food named, which are liable, when fed long and continuously, to produce abnormal conditions of the liver and blood; and then we guess, further, that the animals took cold and became stiffened from that cause. If they do not improve on grass, report again, describing condition and symptoms more minutely and particularly.

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.

According to the report of the Nebraska Horticultural Society, that State has now about 250,000 acres of growing forests, in which have been set 600,000,000 young trees. Besides these there have been planted over 12,000,000 fruit trees, over 2,500,000 grape-vines, a vast number of berry bushes and plants and countless quantities of ornamental shrubs.

One of the best and cheapest devices for plowing to prevent barking trees in orchards is a short whiffletree with the hooks for the traces on the back, and so fixed that the traces have to be passed over the end. Thus when the whiffletree rubs against the tree the latter is protected by the leather. There was once a patent on this device, but it has long since expired.

The owner of a fruitful little garden, where the earliest radishes, peas, strawberries and potatoes grow in plenty, and beautiful flowers abound, though the soil was pure and the location exposed, was asked: "How do you make so much of your little garden?" "I give my mornings to it," he answered, "and I don't know which is most benefited by my work, my garden or I."

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.

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The Home Circle.

Compensation.

In that new world toward which our feet are set
 Shall we find aught to make our hearts forget
 Earth's homely joys and her bright hours of bliss?
 Has Heaven a spell divine enough for this?
 For who the pleasure of the spring shall tell,
 When on the leafless stalk the brown buds swell,
 When the grass brightens, and the days grow long,
 And little birds break out in rippling song?
 Oh, sweet the dropping eve, the blush of morn,
 The starlit sky, the rustling fields of corn,
 The soft airs blowing from the freshening seas.
 The sun-flecked shadow of the stately trees,
 The mellow thunder and the lulling rain,
 The warm, delicious, happy summer rain,
 When the grass brightens, and the days grow long,
 And little birds break out in rippling song!
 O beauty manifold, from morn till night,
 Dawn's flush, noon's blaze and sunset's tender light!
 O fair, familiar features, changes sweet
 Of her revolving seasons; storm, and sleet,
 And golden calm, as slow she wheels through space,
 From snow to roses; and how dear her face,
 When the grass brightens, when the day grows long,
 And little birds break out in rippling song!
 O happy earth! O home so well beloved!
 What recompense have we, from thee removed?
 One hope we have that overtops the whole;
 The hope of finding every vanished soul
 We love and long for daily, and for this
 Gladly we turn from thee, and all thy bliss.
 Even at thy loveliest, when the days are long,
 And little birds break out in rippling song.
 —Celia Thaxter, in the Century.

In the spring a fuller crimson comes upon the robin's breast;
 In the spring the wanton lapwing gets himself another crest;
 In the spring a livelier iris changes on the burnish'd dove;
 In the spring a young man's fancy lightly turns to thoughts of love. —Tennyson.

Come, death, with gently-stealing pace,
 And take me unperceived away,
 Nor let me see thy wished-for face,
 Lest joy my fleeting life should stay.
 —Cervantes.

Garden Watering in Santa Barbara.

For a market garden in this region, water, applied in large quantities, is a first essential. Nothing can be grown without some form of irrigation, unless it be the coarse grains and some of the larger fruits. The market gardens of Santa Barbara are only a short distance from the seashore and only a few feet above high tide mark. The land is doubtless the ancient contribution of the ocean to the shore. The soil is fine, and when enriched by a liberal supply of manure, it produces an almost endless amount of the finest vegetables. The reader must bear in mind that this land can be occupied with crops throughout the whole year. There is no winter freezing of the soil so that it cannot be worked. It is now the middle of January, a time of year when the old almanacs used to say, "now look out for a cold snap," and the gardens here resemble those around the Eastern cities when seen in May or June. In short, there is nothing that the market gardener grows that cannot be had at the present date.

The soil of the surrounding country is very dry and vegetation is at a standstill. Everything upon the unwatered foothills is as brown as the dry, hard-baked earth that forms the bottom of every "cow path." Here and there a green patch may refresh the sight and form a resting place for the weary eyes. The secret of the wonderful changes in the scene is water. There is either a natural spring, the source of which is in some undiscovered recess in the mountains, or else a pipe or ditch has brought the invigorating liquid down from the hills above. These growing spots, which resemble green patches upon an old brown garment, teach the value of water. The market gardener has learned this lesson. He would as soon think of growing lettuce and beets without the watering can as without seed or soil. The water supply is, therefore, the first consideration in growing vegetables in this dry and sunny climate. A sufficient quantity at a reasonable price must be secured at the outset. The water from the mountains has a definite market value. For example, the water for a horse in Santa Barbara is 50 cents per month; the same for a cow; and for other animals, for families, and for use in flower gardens and lawns, in the same proportion. At this rate the large amount of water used on an acre of market

garden would cost more than the crop would bring many times over.

Yesterday I visited the largest market garden in this vicinity, and witnessed the method of watering as there in practice. There are several large wells placed at about equal distances from each other throughout the garden. They are dug down square and with sloping sides, being about ten feet in diameter at the top. The water was within from six to ten feet of the surface. Over each well is a framework supporting a pulley that bears a rope with a large tin bucket attached to each end. A large spout leads from the well landing to a trough, through which the water is conveyed to a pool or vat made of boards to receive it. This vat is broad at the top, with a square central place nearly a foot deeper than the surrounding part and with upright sides. It is somewhat like a great grain hopper, but with terraced sides instead of a gradual incline.

This garden, if not owned by Chinamen, is worked by them. The watering was being done by five Celestials. Two of them were at one of the wells, rapidly raising the large buckets and emptying their contents into the trough. The other three Chinamen, with bare arms and trowsers that did not come below the knees, were provided with shoulder yokes, each bearing two large watering-pots. The pool, or vat, was full of water, and each barefooted Chinaman with his empty buckets ran into the pool, and with a motion that is quicker done than described, he had his pots filled and passed out on the opposite side of the pool. He quickly trotted along the path until he came to the desired place, and then turned into a narrow alley between the beds of vegetables. Here the watering pot on the left end of the yoke was tipped to the right and in front of the body, so as to discharge its contents on the narrow bed to the right, while the other watering-pot was tipped directly forward and mingled its heavy spray with that of its mate. The positions were changed when the sprinkling was on the opposite side of the narrow path. The Chinaman keeps up a slow trot as he passes along the beds and the water just lasts to the end. The water-carrier quickly turns, enters the pool in an opposite direction from that taken the last time, and passes on out to another part of the garden. When all the beds in this vicinity are watered, the work is continued from another pool which may have been filled from the same well but through a different trough. This watering is a daily exercise as well as a daily necessity, unless good fortune favors the marketman and he enjoys a shower. There has been only one rainy day this winter, and every one is anxious to see the clouds gather for another rain.

The water that the gardeners use is doubtless from the sea, and is not fit for culinary purposes. There are in the gardens, however, no signs of any salt that might be left by evaporation. It is fortunate that this kind of water is easily and cheaply obtained. No vegetable gardens have been found in the upper part of the town, and the people very generally depend upon the low seaside gardens for their daily supply of vegetables, from a dozen radishes to a cauliflower or a cabbage. When the water supply for a small grass plot costs \$2 a month it does not pay to grow vegetables. —Byron D. Halsted, in Country Gentleman.

Dublin is only four hours from Liverpool, and Liverpool not much more than that from London. Glasgow and Edinburgh are about as far apart as Baltimore and Washington, and in England you may strike a half dozen cities of several thousand inhabitants each within a radius of an hour or two on the cars.

For snake bites, says an eminent physician, various internal remedies may be recommended, of which the best is carbonate of ammonia in doses of ten or twenty grains every half hour. Friction to the surface of the body, with pieces of flannel dipped in hot alcohol, is also beneficial. These remedies cannot be applied too soon.

A Texas sportsman says he has discovered the secret of the quail being able to hide so well. One of these birds alighted near him in a field one day, and the moment it did so seized a dead oak leaf, crouched to the ground and threw the leaf over its back, so that it was hidden from view. He had to go and turn over the leaf before he could believe the evidence of his own eyes.

American Raisins.

The 1,700 boxes of raisins shipped from Los Angeles county in 1880 represented the entire product of southern California. A careful estimate of last year's crop in this vicinity makes it 230,000 boxes; or taking the whole State, 350,000; and the vineyards, drying-houses and apparatus, \$3,000,000 capital invested. The rate of increase shown by these figures may seem startling; but it is typically Californian, and is based on sound business principles. The annual consumption of raisins in the United States is stated to be 7,000,000 boxes. California is the only State that offers facilities for the industry, in possessing the requisite climate and soil.

As to the profits, after allowing the necessary grano sales, I find the average net result to be about \$100 per acre, though I know of several instances where by skillful husbandry it was run up to \$250 and \$300. Success in this branch of agriculture depends as much on the ability and "savvy" of the man as in any other pursuit; and it would be folly for any one to imagine that he could step from the counting-room, behind the counter, or an Eastern farm, and by coming to California make his fortune growing embryotic mucopolies. In the first place it takes about six years for a vineyard to bear profitably. Some little returns may be had at and after the third year, but not much till the above-mentioned period. Peculiar combinations of soil and climate are necessary; though as the result of the shrewd idea of one of the heaviest raisin producers here, which I shall refer to, the matter of climate becomes of secondary importance. The long waiting for an income, combined with the price at which good raisin land is held, makes the undertaking almost prohibitory to the small capitalist.

Foreign raisins are respectively graded regarding quality, as "Dahesa Clusters," "London Layers," "Layers," and "Loose Muscates." Californian producers have adopted the same plans, making their boxes, however, to hold each only twenty pounds, as against the twenty-two pound boxes of the imported fruit. This shortage has militated somewhat against their interest, dealers and consumers naturally preferring the box containing the fullest weight. Two other difficulties have had to be met, want of knowledge in packing and handling, and the hostility of jobbers who had a developed trade in the imported article. Five years' study and practice have overcome the first, and the fineness and keeping quality of the domestic product, coupled with the late cholera epidemic in Spain, have overcome the barriers erected by prejudice and self-interest.

The American people still possess, though to a less extent than in former years, more or less contempt for native products, and a corresponding desire for anything "imported." It is almost an open secret that California meets part of the great demand for the Chateaux wines by a discreet use of foreign labels, and many a housewife who would not dream of using American raisins has gladly paid almost twice as much for a box with a Spanish label as the storekeeper would ask her for a box probably from the same vineyard as the first, only honestly marked "California Fruit." However, I am obliged to admit that I find the supply of "Dahesas" and "London Layers" limited; raisin makers having made an easy and large profit by packing inferior grades have not been pushed to use much care. This season, however, a widespread effort is being made to put up the finer qualities.

The acreage occupied by raisin vineyards, though limited to localities more or less free from fogs and early rains, has increased for the last two years at the rate of nearly 33 1-3 per cent. per annum. The question of climatic dryness has been a very serious consideration, but is now solved by a very simple expedient—so simple, indeed, that it seems absurd that no one ever thought of it before.

Mr. Robert McPherson, a large producer at Orange, had about 90,000 boxes of raisins on the drying trays not long ago when an unexpected rain set in. A short shower will not do material damage if the weather turns warm afterward; but as in reply to a dispatch of inquiry, "Old Probs" wired Mr. McPherson that a long storm was indicated, the latter immediately loaded his fruit into freight cars, rushed them down to the Colorado desert and set up his drying trays

there; at the present time he has fourteen carloads concentrating their sweetness on the desert air. His experiment has proved so satisfactory that he intends hereafter to ship his grapes as soon as picked, and do the whole drying and packing process there. Others will doubtless follow his example. This happy thought will increase the possibility of soil the main desideratum, and will partially solve the conundrum so often asked from the time of Fremont's first visit to the desert town to to-day's Pullman carload of tourists, "Why was the abomination of desolation ever created?"

Among other charges, which have proved to be without foundation, made against the California raisins, it has been said they would not keep and that they crystallized almost at once. I saw at the late fair at Los Angeles several boxes three and four years old, which were as fresh and mellow as if of this season's pack. Drying and evaporating machines have been much experimented with, but thus far with unsatisfactory results. For the lower grades, such as steamed raisins, they answer well enough, but are more than useless when it comes to making clusters. The cost of fuel is such as to preclude their use even if they answered the purpose. The utilization of the desert, referred to above, seems to present so many advantages that packers will probably not look for aid from artificial measures.—Los Angeles Cor. New York Tribune.

Notes and Recipes.

To sweeten bitter yeast thrust into it a red-hot iron.

Simplest polish for oiled furniture: Rub with a woolen cloth saturated slightly with oil.

A roasted or boiled lemon, filled while hot with sugar, and eaten still hot, just before retiring, will often break up a cold.

Keep large squares of pasteboard hung conveniently to slip under pots, kettles, stew dishes and spiders, whenever you set them down.

Sew on buttons over a darning needle, and, when done, pull out the needle and the buttons will be found to be much looser than those sewed on in the ordinary way and will not pull off as easily.

Corn Muffins.—Two cups corn meal, one cup of flour, a tablespoonful of sugar, one-third of a cup of shortening, two eggs, one pint of sweet milk, a little salt, one teaspoonful of baking powder.

Steel knives which are not in general use may be kept from rusting if they are dipped in a strong solution of soda, one part of water to four of soda, then wipe dry, roll in flannel and keep in a dry place.

It is now claimed that rubbing the face downward while washing is the cause of many of the wrinkles on women's faces today, and the best remedy is to reverse the process and always rub the face upward.

A good remedy to prevent the hair from falling out is to take a handful of southernwood leaves, cover them with alcohol and let them stand until the full strength is extracted. Add one teaspoonful of this to a third of a cup of water, and wet the scalp thoroughly once a day.

Tongue Toast.—Make some slices of toast, not thick, browned evenly all over on both sides, and minus crust. Butter it slightly. Grate with a large grater a liberal sufficiency of cold tongue and spread it thickly over the toast. Lay the slices side by side on a large dish. Serve at breakfast, luncheon or supper.

Paint on the walls of a kitchen is much better than kalsomine or whitewash. Any woman who can whitewash can paint her own kitchen. The wall needs first to be washed with soapsuds, then covered with a coat of dissolved glue; this must be allowed to dry thoroughly, and then covered with paint. A broad, flat brush does the work quickly.

A Good Pudding.—Two eggs and their weight in butter, sugar and flour. Have the butter soft and mix it with the sugar. Beat the whites and yolks of the eggs separately, and mix with the butter and sugar; add the grated peel of half a lemon, and then stir in the sifted flour. Pour into a buttered pan, filling it a little more than half full, and bake in a moderate oven.

Too well known to need lengthy advertisements—Dr. Sage's Catarrh Remedy.

The Young Folks.

Song of the Sea Wind.

How it sings, sings, sings, blowing sharply from the sea-line,
With an edge of salt that stings;
How it laughs aloud and passes,
As it cuts the close cliff grasses;
How it sings again and whistles
As it shakes the stout sea thistles—
How it sings!

How it shrieks, shrieks, shrieks in the crannies of the headland,
In the gashes of the creeks;
How it shrieks once more and catches
Up the yellow foam in patches;
How it whirls it out and over
To the cornfield and the clover—
How it shrieks!

How it roars, roars, roars in the iron under-caverns,
In the hollows of the shores;
How it roars anew, and thunders,
As the strong hull splits and sunders,
And the spent ship, tempest driven,
On the reef lies rent and riven—
How it roars!

How it walls, walls, walls in the tangle of the wreckage,
In the flapping of the sails,
How it sobs away, subsiding,
Like a tired child after chiding;
And across the ground swell rolling,
You can hear the bell-buoy tolling—
How it walls!—Austin Dobson.

"New occasions teach new duties; Time makes ancient good uncouth;
They must upward still, and onward, who would keep abreast of Truth;
Lo, before us gleam her camp-fires! we ourselves must Pilgrims be,
Launch our Mayflower, and steer boldly through the desperate winter sea,
Nor attempt the Future's portal with the Past's blood-rusted key."

Come, gentle spring, ethereal mildness, come,
And from the bosom of yon dropping cloud,
While music wakes around, veiled in a shower
Of shadowy roses, on our plains descend.
—Thomson.

THE LAST INDIAN BATTLE IN KENTUCKY.

The ability of the renegade Simon Girty combined the warlike tribes beyond the Ohio in an expedition which he ably commanded. No name was more dreaded or abhorred than his. He was the incarnation of savage cruelty. He was one of the four sons of a drunken reprobate who wandered into the extreme west of Pennsylvania, and was there murdered by some companion wretch. * * * He was adopted by the Senecas, and except for a brief period, when in the employ of Lord Dunmore on the frontier, he lived with them and the Shawnees. At one time he and Kenton were brother scouts, and the remembrance of it induced him, in a caprice of mercy, to save his old comrade from the stake to which he was already bound. But the weakness was never repeated. He advised and witnessed the burning of Colonel Crawford, and laughed heartily at the wretched sufferer's prayer that his torments might be ended by a bullet. He was a slave to drink and when under its influence, it is said, "he had no compassion in his heart." Girty profoundly and sincerely hated the white man and lost no chance of displaying his animosity.

Assembling more than six hundred warriors of the Shawnees and neighboring tribes at the old Indian town of Chillicothe, he moved rapidly and secretly, crossing the Ohio where Cincinnati now is built, and pushing toward the settlements in the Bluegrass. * * *

Silently, on an August night, Girty, with six hundred Indians, surrounded the station. Within it there was activity and preparation, for the men were to start at early dawn to relieve Captain John Holder's little fort across the Kentucky; which was reported as threatened; but no one dreamed that Girty was near. At dawn the riflemen set out from the eastern gate, but fortunately a volley checked them before it was too late to regain the stockade. Elijah Craig was the commander, and from his experience of Indian tactics he guessed the force and plan of the enemy, and foresaw the siege that he was to repel. Fortunately there were provisions and ammunition, but by some providence the enclosure of the station did not take in the spring of water upon which the garrison must rely.

Calling all the women together, he explained that the Indians were concealed, as he believed, in force about the spring. But he thought that the ambuscade would not be developed until an attack by a smaller party on the other side of the stockade, in-

tended to divert the pioneers' attention, should first be made; and he asked the women to volunteer to fetch from the spring, before the grand attack commenced, the supply of water that was indispensable.

It was naturally objected by the women that the men ought to go, but Craig reasoned that the women usually went to the spring with their buckets and rarely the men; that the one would be regarded by the Indians as a proof that their ambuscade and plan of attack was not suspected, while the other would bring on the attack in the open ground. The crisis was urgent, the peril great; but the women speedily reached their conclusion. Thirty or forty women went out through the western gate, each carrying her pail or bucket, and endeavoring by laughter and song to disguise the fear that penetrated every bosom. Across the open space and past the side of the canebrake they passed on to the bubbling spring that burst out from the foot of the knoll. Their faces betrayed no fear, their manners showed no agitation, their walk was not quickened, though they felt sure that the rifles of five hundred savages bore upon them, and that not one of them would survive a signal of attack.

The buckets were dipped one after another in the spring, and loaded with their precious burden the brave women returned toward the fort. It was not until the thick cane was again passed, and bushes and tall weeds left behind, that their composure was disturbed. Then, safe from the tomahawk and the knife of the savages, and well within the protecting range of the rifles of their husbands and fathers, they hastened with trembling limbs toward the open gate, spilling in their safety part of the treasure they had carried so steadily through danger, and bursting into tears of agitation and pride and gratitude. Not a gun was fired at them, nor did an Indian move, though the little company passed within twenty yards of five hundred. Craig had exactly guessed his enemy's plan and forecast his action. It was the boldest of bold risks, but it was confidently proposed and perfectly carried through. Men often wondered afterward what would have become of Craig had the Indians fired upon the women, or rushed out and captured them; but Craig's good-natured reply was that his good sense and the women's courage made the exploit a safe venture.

As the fight opened, and the little garrison of forty men held out stoutly against such odds, two brave fellows, Bell and Tomlinson, mounted their horses to carry the news to other stations and bring up help. The gate was suddenly swung open and they dashed at topmost speed into the very face of the Indian ranks, and were through and beyond, and into the cover of the waving corn that hid them from the aim of their astonished foe. Soon Todd and the men from Lexington came hurrying up, and the news went on to Boone, and from him to Trigg at Harrodsburg, and still farther on to Logan. Never had there been such a general uprising. The word flew from settlement to settlement that every fighting man was needed. The response was instant and unanimous. The little garrison meanwhile was sorely pressed, but activity and courage availed them. The women moulded bullets and cut "patching," and cared for the wounded and dying as they fell. The very children caught the inspiration of their parents' courage and ran from place to place with gourds full of water to extinguish the flames that the fire arrows lighted. An infant, destined to be the slayer of the renowned Tecumseh, and to become a Senator and Vice President of the republic, slept peacefully in the cradle in care of a little sister, whose fidelity to that tender duty still left her time to carry ammunition to the men.

It was indeed a gallant fight. The arrival of Boone and Todd caused Girty to draw off his force and retreat toward the Ohio; and then followed the pursuit that ended in the battle of the Blue Licks and the death of so many of Kentucky's best men.

The pursuers felt sure of a victory over the repulsed Indians, and insisted upon a rapid march and a fight. The prudence of Boone and the cool judgment of Todd were overborne by the rash and insubordinate courage of McGary, who rushed into the ford, carrying with him the excited and shouting hunter-soldiers. How Boone endeavored to retrieve the error, and how

Trigg and Todd and scores of others, the best men in the country, fell, has often been told. How Netherland held the ford single-handed, and rallied the routed force, is a landmark of Kentucky heroism. How Aaron Reynolds saved his captain, Robert Patterson, dismounting and giving his horse that his friend might escape the massacre, while he bravely took all the chance of death, is told in every story of the infant State. The gratitude of the rough woodman, whose profanity had been rebuked by Patterson in a former campaign, who had become deeply religious, was there proved. The reason for it was given in simple words in after years: "He saved my soul, and I felt I must save his life." It was the last great Indian battle on Kentucky soil. Girty retired with numberless scalps to the Scioto towns, and for weeks there was savage revel and joy throughout the tribes.—Harper's Magazine.

A Four-Thousand-Dollar Overcoat.

What is undoubtedly the most expensive overcoat ever sold in this city, is one made by Edward Kakas for a Boston gentleman. The value of the coat is said to be \$4,000, though it is declared that the coat would not be duplicated for a much larger sum. It contains sixty-nine Russian sable skins of the finest quality. The overcoat, which is quite large, is of the finest German castor, the body and sleeves being lined with sable, while a broad collar and deep cuffs of this costly material give a rich finish to the garment. Although so warm that the wearer would not feel the most intense cold, the overcoat is much lighter than an ordinary ulster.—Boston Transcript.

Some Queer Names in Virginia.

Near Ground-Squirrel bridge, in Hanover county, where the South Anna river turns gracefully toward the junction with the North Anna, there are four persons living within less than a mile of each other who respond to the patronymics of Hare, Owl, Coon and Minks respectively. And, singular as it may appear, until recently the three first named occupied the same dwelling house. Referring to odd names, I would also state that on my pilgrimage hitherward I passed through a farm in the historic county of Spotsylvania, which is now owned by a gentleman by the name of Turnipseed.—Richmond State.

Cocoanut growers say that each tree in a grove produces one nut a day, or 365 in one year. Owing to the great height of the tree it is impossible to pick the nuts, and they are allowed to hang till they fall. The natives gather them up and carry them to the husking machines, where the nuts are stripped of the thick outside shells. A nut is most delicious just after it has dropped from the tree.

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KANSAS FARMER.

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The exercises of the nineteenth annual convenement at the Kansas State Agricultural College will begin next Sunday with a baccalaureate sermon by President Fairchild. The annual address will be delivered Tuesday evening, the 7th, by President Willits, of the Michigan State Agricultural College.

Galbraith Bros., famous breeders and importers of pure blood horses, favored us last week with a large lithograph neatly mounted of their champion Shire stallion Blyth Ben (4239), winner of the grand gold medal at the Illinois State Fair last year. It is a very handsome picture, indeed, and the horse, we doubt not, is perfectly represented.

Patents to Kansas People.

The following is a list of patents granted Kansas people for the week ending May 23, 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.

Rotary engine—Avery W. Billings, of Larned.

Washing machine—Nathan W. Hawkins, of North Branch.

Barrel-auler—Horace N. Hopkins, of Garnett.

Ironing-board—Harriet B. Mavis, of Burlingame.

Coal and rock-drilling machine—Edmund Moser, of Pittsburg.

Double lister, corn-drill and planter—Jerome S. Williams and B. F. Whitney, of Garnett.

Bag-holder—George W. Wright and A. H. Burns, of Enterprise.

Line-protector for vehicles—Frank C. York of Salina.

American Pomological Society.

The next session of the American Pomological Society will be held in the city of Boston, commencing September 14, '87, at 10 o'clock a. m., and continuing three days. The session will be held in one of the rooms of the Massachusetts Charitable Mechanics' Association Building, and the exhibition of fruits will be held in conjunction with the Massachusetts Horticultural Society's annual exhibition in the great hall of the same building.

All horticultural, pomological, agricultural and other kindred organizations in the United States and British provinces are invited to send delegates, and all persons interested in the cultivation of fruits are cordially invited to attend.

The society will not have the hoped for pleasure of meeting its beloved president, who was stricken down by death, full of years and honors, just as he had commenced to prepare for this

meeting; but it is hoped and expected that in honor of his memory there will be an unusually large attendance of members and delegates from all parts of the country, and that the session will be one of the most interesting and useful ever held by the society.

WHY NOT BE FAIR?

An agricultural paper called *The Farmer*, published at St. Paul, Minn., in criticising an address delivered last fall by Thomas H. Dudley before an association of Pennsylvania farmers, and which was mentioned and commented upon in the KANSAS FARMER some time ago, makes use of facts and arguments which would have more force if they were not misleading. *The Farmer*, to begin with, quotes this passage from the address and calls it "an inexcusable bit of stupidity."

The foreign manufacturer who brings his goods here now has to pay duty, and in this way most of the federal taxes are paid. Repeal the tariff and you then permit him to bring his commodities into the country without paying one cent of our taxes, and you shift the whole burden of their payment upon our own people—our manufacturers, farmers and mechanics.

It is not as stupid as our contemporary would have us believe. The total amount of duties collected on foreign goods during the last fiscal year was \$188,533,171. Receipts of the government from internal revenue for the same period was \$116,805,936, from public lands \$5,630,999, and about \$21,000,000 from miscellaneous sources, making a grand total of \$336,439,727 for the year. It will be seen that the customs revenues amount to considerably more than one-half the total and that is what Mr. Dudley said is the fact.

The Farmer, further commenting, says "an ordinarily intelligent clam knows that the foreigner doesn't pay one cent, nor the smallest fraction of a cent, of our taxes, in any way, shape or manner. The foreigner has nothing to do with our taxes. It is the American citizen who buys the imported goods who pays the tax." That sounds strange in face of the fact that the prices of a great many articles on which tariff duties are paid are as cheap in this country as they are anywhere, and on none, except possibly sugar, is the difference in price equal to the duty.

The Farmer, in answer to Mr. Dudley's statement that within the range of his knowledge there is no single manufactured commodity "but what is cheaper to-day in the United States, under our protective system, than it was under the free trade and before 1861, when the protective tariff went into operation," says:

We take pleasure in calling Mr. Dudley's attention to these facts, which he can find in any statistical almanac. In 1851 the bar iron, which is now selling at \$50a52 a ton, sold at \$33.50. In 1860 it sold at \$41. In 1851 the pig iron, which is now selling at \$23 a ton, sold at \$19. In 1854 the hemlock leather, which now sells at 23 cents a pound, sold at 18 cents. As far back as 1851 it sold for 12 cents. In 1854 the New Orleans molasses, which now sells for 50a60 cents a gallon, sold for 19 cents a gallon. In 1858 the fine dairy salt, which now sells for \$2.20 a sack, sold for 80a84 cents a sack. In 1852 the raw sugar, which now sells for 6a7 cents a pound, sold for 3.4 cents a pound. Here are a few commodities which have not been reduced in price. If Mr. Dudley will look into the record a little further he will find a good many more.

We find a list of prices in the AMERICAN ALMANAC for 1887. It gives the lowest and the highest prices in New York city for the articles and the years named. In 1851 the lowest price for iron bar in tons was \$33.50 and the highest, \$41; in 1886, the lowest price was \$34 and the highest price was \$47. In 1860 the price ranged from \$41 to \$44. Pig iron (Scotch) in 1851 ranged \$19 to \$25; in 1886 the range was \$18 to \$21.50. Leather (hemlock tanned) sold at 18c. to 25c. in 1854, and at 19 to 24 in 1886. As to molasses, the old style is not now

sold at all. Salt (Liverpool) in 1858 sold at 62c. to 80c. per sack, and in 1886 it sold for 70 to 2.15. Sugar in 1852 ranged from 3c. to 5c., and in 1886 from 4½ to 5½.

Now, let us look at these matters a little further. Our contemporary looked up the lowest figures in past years. It would have been fairer to take a period of say five or ten years or longer. Take the articles above enumerated and compare the prices during a period of eleven years. Bar iron ranged in

1845	.....	\$32.00	to	\$85.00
1846	.....	75.00	to	80.00
1847	.....	70.00	to	77.50
1848	.....	60.00	to	70.00
1849	.....	40.00	to	55.00
1850	.....	40.00	to	45.00
1851	.....	33.50	to	41.00
1852	.....	34.00	to	55.00
1853	.....	55.00	to	75.00
1854	.....	62.50	to	77.50
1855	.....	65.00	to	65.00
Average	.....	\$52.45		\$66.00

Now, let us take the last eleven years, and see how the prices for the same article ranged.

1876	.....	\$40.00	to	\$54.00
1877	.....	44.80	to	48.72
1878	.....	42.50	to	45.00
1879	.....	45.00	to	78.50
1880	.....	50.00	to	85.00
1881	.....	53.75	to	65.00
1882	.....	56.00	to	67.20
1883	.....	47.00	to	56.00
1884	.....	37.00	to	44.80
1885	.....	34.75	to	38.00
1886	.....	34.00	to	47.00
Average	.....	\$44.06		\$57.20

The average, then from 1845 to 1855 was \$52.45 to \$66; the average from 1876 to 1886 was \$44.06 to \$57.20, a difference in favor of the later period of \$8.39 to \$8.80 per ton.

Pig iron prices compare in about the same way. We do not care to take up space for all the figures. In 1846, the range was \$35 to \$42.50, and for the same eleven years quoted above (1845 to 1855) the average was \$23.50 to \$31.69. For the years 1876 to 1886 inclusive the average was \$21.10 to \$27.05, a difference in favor of the later period of \$2.40 to \$3.55.

Of leather, the prices, in the first period above named, ranged 14 to 18½ and in second period 20½ to 26. Salt (Liverpool) \$1.27 to \$1.54 per sack in first period, and \$1 to \$2.35 in second period. Sugar, first period, 4½ to 7½; second period, 5½ to 7½.

Leather is higher now than it was then, and it may be doubted whether it is as good. But notwithstanding the advance in leather, shoes are now made by machinery cheaper than they were ever made by hand. Tariff duties on leather under the act of 1846 were 20 per cent. *ad valorem* (according to value.) The act of 1857 reduced the duty to 15 per cent. The act of 1861 and 1862 raised the rates on sole leather, but in 1872 the rates were put at 15 per cent. on sole and 20 per cent. on upper, and they have remained at those figures ever since. The act of 1842 levied a specific duty of 6 cents to 8 cents per pound. Inasmuch, then, as the tariff duties on leather during the period from 1845 to 1855 were higher than they were from 1876 to 1886, it must be evident that the higher price of leather during the later period was not caused by the tariff.

Tariff duty on salt, by the act of 1842, was put at 8 cents per bushel of 56 pounds. It had been 10 cents since 1832, and much higher before that (20 cents from 1816). The act of 1846 reduced the rate to 20 per cent. *ad valorem*, which was equal to about 2½ cents a bushel on an average. It so remained until 1857, when it was reduced to 15 per cent. In 1861 the rate was raised to 6 cents the 100 pounds, about 3½ cents a bushel. Rates were afterwards further increased, but in 1872 they were reduced to 12 cents the 100 pounds in packages, and to 8 cents per 100 pounds in bulk, and it has so remained to the present. As appears from the figures quoted above, the price of foreign salt has somewhat increased in the last thirty

years. It rated at \$1.27 to \$1.54 per sack. American salt (common) was sold at the Michigan salt works in 1876 for 97½ cents per barrel on an average, and fine salt at \$1.05. Those figures have not been exceeded since. It is a fact, too, that foreign salt has not decreased more than about three cents a bushel (without reference to the tariff) in the last sixty years, while our domestic article has fallen at least 50 per cent. since 1860.

Sugar was taxed 30 per cent. by the act of 1846, and that is about what the duty has been the last fifteen years, so that there must be some reason for the slight increase in price other than the tariff duties.

The Farmer quotes Mr. Dudley further: "Steel rails," says Mr. Dudley, "have been reduced by the tariff from \$150 a ton in 1867 to \$27 a ton in 1885. Crockeryware has been reduced 37 per cent., cotton goods 20 per cent., woolen goods 20a25 per cent., silk goods 35a40 per cent., and iron, steel, edge tools, etc., in proportion." In answer to that it says:

The tariff hasn't had anything to do with these reductions. The prices of these commodities have fallen all the world over. They have fallen relatively just as much in Siam as they have in America. They have got cheaper because the world has learned to make them better and make more of them. The trouble is that there is just the same relative difference between the prices in this country and the prices in Europe that there always was. That difference is very nearly represented by the tariff.

"The tariff hasn't anything to do with these reductions," our contemporary says. Why not? Is it to be inferred that if the manufacturing interests in this country had not been developed in this country that prices would now be as low as they are? and is it to be understood that this development would have been made without the tariff? And then our Minnesota neighbor says that prices here and in Europe have the same relative difference that they always had, and that the tariff very nearly represents that difference. A little investigation of this subject would show the error of that position. There are very few articles to which that doctrine will apply. We do not just now think of any unless it be sugar, and that article, by the time it gets to the consumer, is but little dearer here than it is in England, and in some parts of the country there is no difference against us. As is shown in the figures before quoted, sugar averaged 5½ to 7½ cents per pound in New York city during the eleven years from 1876 to 1886. By reference to consular report No. 36, for December, 1883, it will be seen that work people in the consular district of Bradford, England, paid for sugar 5 to 8 cents the pound, an average of 6 cents. In a review of consular reports by the Secretary of State under date December 12, 1884, prices are given of a large number of articles in different cities of Europe and the United States. It is shown that the price of sugar at retail was, in Liverpool, England, 4 to 7 cents; in Berlin, Germany, 8 to 13; in Berne, Switzerland, 8; in Marseilles and Rheines, France, 6½ to 12; Vienna, Austria, 7 to 8; Brussels, Belgium, 12; Amsterdam, Holland, 9 to 15; New York city, 8; Chicago, 7 to 8½; Chester, Pa., 6½ to 8; Newark, N. J., 8.

A great many articles in common use, such as plain cotton and wool goods, many articles of hardware, nails, cutlery, building tools, tinware, furniture, shoes, etc., are made and sold as cheap in the United States as in other countries, notwithstanding there is a tariff duty on them of 30 to 50 per cent. There is no sufficient reason for believing that prices of manufactured articles would have been as low in this country as they are if our tariff laws

had not served to protect home industries against foreign competition. It is always better in an argument to be fair and not attempt to mislead. Truth is what is needed—actual facts, not garbled statements or misleading generalizations.

Printing by Electricity.

It is forty years since the writer of this saw a little machine—only one wheel and a lever—run by the application of electricity. It was the result of long and careful experimenting and came about the time the magnetic telegraph was first successfully operated. The fact that electricity could be applied in the propelling of machinery was justly regarded as a great advance in science, and it suggested still further progress. Seeing that single wheel run by a force too subtle to comprehend and yet of presence and power everywhere recognized, was foundation upon which to build predictions. Men of genius believed that if a small and simple machine could be started and kept in motion by means of electricity, a large and complicated one could. At last the time has come when strong and rugged machinery is driven by the unseen power that moved the little wheel near half a century ago. City railway cars are propelled by electricity in Berlin, a good many small machines requiring light power are moved by the same agency, and many of them are being used in printing houses. The KANSAS FARMER this week is printed by the use of an electric motor—a little machine not occupying more space than a sewing machine. It is made of heavy iron and steel, is about 30 inches in length by 20 in width and 16 in height, bolted solidly to the floor, with a shaft and pulley extending out at one end, and though the pulley runs at the rate of 200 revolutions to the minute, an observer would hardly detect the movement (so noiseless is it and true) if he did not see the big leather belt in motion, the belt which communicates the motion of the engine to the shafting above with drums and band wheels belted to pulleys on four printing presses. It looks more like a low, wide iron kettle inverted, with a few attachments, than what one would guess as being a machine for the application of the most powerful and least understood force in nature. And thus do we learn and go ahead.

Several similar machines are now in use in Topeka printing houses, the one particularly referred to in this article is used by C. B. Hamilton & Co., book and job printers, who do all our press work.

St. Louis Wool Market.

Reported by Hagey & Wilhelm :

Our market increases in interest daily to both buyer and seller on account of heavy receipts to select from, increased demand, and quick sales at good prices. Fine wools are eagerly sought and mediums badly wanted at the following prices :

Choice $\frac{3}{4}$ and $\frac{1}{2}$ -blood.....	25a27
Light medium.....	23a25
Low medium.....	20a22
Light fine.....	20a22
Heavy fine.....	18a20
Heavy Merino and burr.....	15a17
Common, burr and heavy.....	14a16
Carpet.....	14a17
Pulled.....	16a19

Dark heavy, earthy, medium, 1 to 3 cents per pound less than bright, light fleeces.

When purchasing pure-bred stock, give the preference to those breeds best adapted to the soil, climate and facilities of the farm. It will not do to suddenly transfer an animal from a luxuriant pasture to a barren hillside. Good breeding is important, but the best of breeds will fail to give satisfaction unless kept under proper conditions.

THE INTER-STATE COMMERCE LAW WILL BE ENFORCED.

Our faith in the sterling integrity of Judge Cooley, President of the Inter-State Commerce Commission, and our knowledge of his law learning, gave us confidence that whatever would be done by the Commission would have his sanction and approval before it would be published, and that before his sanction and approval would be given, the thing done would be proven to be within the purview of the law and within the scope of the Commission's authority. The excellent judgment of Mr. Morrison added strength to that confidence, and the good reputation of the other members of the Commission, supported by the spirit of the law and encouraged by the temper of the people, left no room for doubt about the ultimate success of this first great and general effort of the people to "regulate commerce among the several States."

On the 18th day of May, in answer to a complaint made by the Minnesota & Northwestern railroad company, Judge Cooley, for the Commission, stated the object of the law and the authority and duty of the Commissioners very clearly. We give his letter in full, believing that our readers will be interested and instructed in reading it. Omitting the heading, date, etc., the body of the letter is as follows :

1. It is obvious that the cases the law contemplates in which the commission is authorized to make orders for suspension are exceptional cases. That is to say, cases whose facts make them stand apart from ordinary cases. The act does not define them. It does not state the grounds on which it will warrant relief. But it plainly intends that those grounds in every case shall be special and peculiar; that where only general reasons operate the general law shall be left to its ordinary course, however serious may be the consequences in particular cases and to particular roads and interests.

2. It is also made plain by the act that any order for suspension was intended to be based upon an investigation which should satisfy the commission that the case was, in fact, exceptional and fairly within the intent of the provision made for relief. The jurisdiction of the commission to make such orders was evidently meant to be somewhat closely restricted. The commission in its correspondence and otherwise is every day made aware of the prevalence in some quarters of a vague notion that power has been conferred upon it to interfere anywhere and for any reasons satisfactory to itself, in order to prevent what it may think likely to be harmful. But you, of course, indulge in no such baseless notion. The commission, as you will agree, must find its authority in law, and not in its own ideas of right or policy.

3. It must be assumed that Congress intended the general law, in its main features at least, to be a permanent law for the country. It must, therefore, have contemplated that considerable sacrifices would necessarily have to be submitted to by some parties and some interests, while the general law is being established, for the very obvious reason that it would be quite impossible to introduce considerable changes in a branch of law which concerns so intimately the commerce of the country without serious consequences to some private interests. In all such cases incidental injuries, however great they may be, are necessarily to be borne for the general good, and if the Legislature misjudges as to what the general good demands, it is to be expected that in due time it will provide a remedy.

The first questions to confront the commission upon its organization were raised upon applications for relief filed by railroad companies under the fourth section of the act. Cases in which companies were charging more for the shorter than for the longer haul over the same line in the same direction were to be met with in all parts of the country. The reasons for doing this were thought by managers in many cases to be absolutely imperative and to concern the interests of the public quite as much as that of the roads themselves. The interests involved in the continuance of the custom are very great, and anticipation of serious injury from any sudden change was in some quarters quite general. The commission, therefore, had very earnest appeals made to it in support of corporate applications for relief from boards of trade, other public or semi-public bodies and from representatives of large business interests which feared or professed to fear destruction or bankruptcy. In many cases the appeals seemed to be made in a belief that probability of injury was of itself sufficient warrant for the commission to interfere and grant a relieving order.

It is scarcely necessary to say to you that any such belief is without legal support. The probability, or even certainty, that injury to corporations or individuals will re-

sult, does not by itself, under the act, constitute any ground for the suspension anywhere of its ordinary operations. It would not, in fact, be made a ground for relief without giving the commission such general dispensing power as would not be consistent with sound principles of government. Congress has not intimated any purpose to give such power. If the law in its general operation were to prove generally and equally mischievous in all directions, the commission, instead of having greater power for that reason, would on the other hand have no power of suspension whatever, for the plain reason that there would have been no exceptional cases for it to act upon, and therefore, no cases such as are referred by the act to its judgment.

But uniform effects were, of course, far from being possible as they were from being contemplated. There must and will be exceptional cases. In the absence of any specification of these in the act itself, the commission was obliged to determine, as best it might, what cases were probably in the mind of Congress when the exceptional relief was provided for.

It also found itself confronted with the question whether railroads might determine for themselves, but at their peril, whether in any particular case the circumstances and conditions were so far different as to justify a greater charge for a shorter haul, or whether, on the other hand, it was only upon and in view of such different circumstances and conditions that the commission was empowered to act that the suspension authorized by the act was to be ordered after investigation. This is plainly determined by the act itself. The commission, however, deemed it wise to grant some temporary orders on investigations not so complete as it expected finally to make. This was done in the belief that no considerable mischief could follow from allowing the existing condition of things to remain for a brief period, whether they be then suffered to stand or not, and that the harmful results from a sudden change in law might thereby, to some extent, be averted. This course also gave the commission such opportunity for careful study of the system which Congress undertook to reform as would otherwise have been wanting. This method of proceeding the commission at the time believed had important advantages, and still believes will conduce to the best results in the end.

You speak strongly and earnestly of reasons for granting your applications, but in order to warrant its being granted it is not enough that the application, if considered by itself, appears to have merits. The commission must consider in each case what effect the giving of relief to one applicant will have on other interests, and your knowledge of railroad matters must enable you to perceive that in some sections of country granting one application may so affect interests on other roads as to create a necessity for like relief to several more, the satisfaction of one claim begetting others, equally meritorious, until, if all are satisfied, the exception becomes the rule.

But when such result is probable, the reasons for declining to make any temporary order are very conclusive. The commission cannot consent to deliberately enter upon a highway where, to all appearances, there can be no halting place within the limits of its lawful jurisdiction. If a general suspension of the "long and short haul clause" of the statute is not to be made by a single comprehensive order, neither should the same result be reached or approached by granting successive orders in individual cases.

In whatever the commission may do, it must keep in view the preservation of the general rule. It is not our purpose in this communication to express any opinion as to what ought to be the final conclusion upon your application. The commission is not yet prepared to give its decision and the purpose of this answer to your telegram is merely to place before you some of the reasons which, up to this time, have precluded definite action. That injury results to parties interested in your road or to any other person, is sincerely regretted, and your belief that such is the case will be kept in mind as a reason for action as prompt as under the circumstances shall seem consistent with duty.

In these views the whole commission concurs. Very respectfully yours,
T. M. COOLEY, Chairman.

The Farmer a Reliable Man.

Mr. President Patterson, of the Kentucky Agricultural College, in an address to the Kentucky State Grange, recently, gave utterance to a truthful sentiment in the words following: "The farmer is the only true conservative in any community. His interests are indissolubly connected with the soil which he tills. Through all changes of government his lands remain. The capitalist, with his stocks and his bonds, has no such interest in the perpetuity and integrity of good government as have the agriculturists. He can transfer the contents of his vaults and money chests from continent to continent in ten days' notice. If revolution and anarchy impends, he dis-

cerns the coming storm and transports his movables to happier shores. But the barns and granaries, the flocks and herds and lands of the husbandman cannot so be converted and transferred. These remain to be burned and plundered and despoiled. Hence, the farmer has a stake in the existence of civil government which the mere capitalist and broker has not. And if there be one debt, one obligation, which you owe greater than all others, paramount to all others, it is that you educate your sons to maintain and conserve and transmit the institutions which you have inherited, the wealth which you have created, the heritage of freedom which you have defended."

American Hereford Record.

Through courtesy of Charles Gudgell, Secretary of the American Hereford Breeders' Association, the KANSAS FARMER library is increased to the extent of six volumes of the American Hereford Record, containing pedigrees from No. 1 to No. 24999. We value the books very highly and hereby tender thanks.

Volume 1, compiled by the Breeders' Live Stock Association, contains entries from No. 1 to No. 2915, tracing every animal entered, back through the entire ten volumes of the English Hereford Herd Book. This volume is graced by pictures of some of the most famous animals of this famous breed. This volume bears date 1880.

Volume 2, dated 1882, contains entries from No. 2916 to No. 6415, tracing every animal back through all the twelve volumes of the English Hereford Herd Book. This volume, like the first, was compiled by the Breeders' Live Stock Association.

Volume 3, bearing date 1884, was published by the American Hereford Cattle Breeders' Association, successors to the Breeders' Live Stock Association. This volume contains 4,004 entries (1,167 of males and 2,837 of females) from No. 6416 to No. 10419. It contains a copy of the rules under which entries were made. Some errors detected in previous volumes and a few, also, in this one, are noted in the last two pages of the book. A history of the organization of the American Hereford Cattle Breeders' Association, together with the constitution and by-laws are found in the back part of this volume.

Volume 4, under date of 1885, contains 4,080 entries, (1,313 of males and 2,767 of females) from No. 10420 to No. 14499. This volume, in addition to its own index, contains a complete index of all animals entered in all the volumes up to date. It also notes some errors of importance which will be found in the back part of the book.

Volume 5, dated 1886, contains entries from No. 14500 to No. 19999, together with such errors as had been discovered in former volumes and not already published.

Volume 6, also printed in 1886, contains 4,999 entries, from No. 2000 to 24999. A few errors are noted at the end of this volume.

The figures given in these six volumes make a grand showing for this excellent breed of cattle in America—24,999 entries. Persons interested in Hereford cattle, and in the pedigrees of particular animals, and in the printed records, may address the Secretary, Chas. Gudgell, at Independence, Mo.

A New England farmer says it is a waste of time to lay stone drains. A farmer cannot afford to lay them, even if some one will draw them for him, when he can buy tile at even three cents each. To put in stone will cost more in time than tile will in money. Therefore he thinks no man can afford stone drains unless he wants to get rid of the stone.

Horticulture.

Some Insect Enemies.

Kansas Farmer:

A great many persons here supposed that their grape vines were killed by the dry weather, but I think that time will show that only the tops were dead, they having been killed by the grape borer. Those that I cut out were about the size of large ants and looked some like them in color. One side of the canes in places were full of little holes, looking like pin holes, and the eggs in the inside of the vines were white and one-eighth of an inch in length. They killed part of our raspberries, gooseberries, rose bushes and limbs on apple trees. I send you a slip from the New York Tribune, by one of our best writers on such subjects, and I hope every one that has fruit will read it.

E. W. BROWN.

This is the Tribune article referred to:

Apple tree twigs during the winter months frequently contain a small brown cylindrical beetle, one that is exceedingly abundant in the Western States, where it is known by the common name of "apple twig borer," and to entomologists as *Anphicercus bicandatus*. Both sexes of this beetle live in the young twig, boring and eating the pith and wood, causing death to the infested branches and twigs. If the twig be cut off and thrown upon the ground the beetles will leave them during the ensuing spring months, and pass up into the trees again, where the females can find a suitable nidus for their eggs. Another apple tree pest which is becoming very abundant in the orchards of central New York is known as the apple leaf bucculatrix, and its small slender cocoons are often found almost covering the apple twigs in winter. If these be left undisturbed each will produce a small slender moth in spring. There is no more certain way of destroying this pest than cutting off the infested twigs and casting them into the fire. And the same is true of twigs infested with bark lice, or the eggs of the tent worm, basket worm, leaf crumpler, and many other similar pests found in our orchards.

If we carefully examine the canes of grape vines in winter we may find a small borer eating out the pith and wood in the same way as the apple twig borer works on the apple trees, but it is a smaller beetle and may be called the "grape vine borer," but its scientific name is *Sinocylon basilare*. Cutting off the canes or cutting them up into pieces will not seriously interfere with the breeding of this borer, for I have kept a pair for six months alive in a common glass tube with a piece of grape vine not four inches long. They devoured every particle of the wood, leaving only the thin bark. There are also similar borers infesting the canes of the raspberry, blackberry, currant and gooseberry, and I have not found any better nor more effective insecticide for such pests than a consuming fire.

The time to collect borer-infested canes and twigs is in the fall or early winter, but a fire will be found useful in consuming our enemies even in the summer months, for it is then that the fungus known under the common name of "red rust" appears on the leaves and canes of the raspberry and blackberry. When this fungus first appeared in my ground some ten years ago I adopted the cremation process of dealing with it, believing it to be the one most likely to stamp it out, by destroying the minute spores which are readily distributed by the vine. All affected plants were committed to the flames,

root and branch, and the disease has entirely disappeared from my grounds.

There is still another summer pest of the blackberry, and one that has been steadily increasing for the past decade wherever this fruit is cultivated. I refer to the three-spotted psylla, a small parasite resembling the common green fly (aphis) although it is a different insect and belongs to what is called the flea-lice family. These insects jump as briskly as a flea and are not readily destroyed by any of the ordinary insecticides. The presence of these insects among the blackberry plants may be known by the young leaves on the new canes of the season, or on those on the new growth of the old canes being twisted about or curled up, resulting in an entire check to the growth of the infested cane. The leaves on these infested shoots do not die and fall off, but merely curl up, sometimes assuming a deeper green color than the healthy leaves on the same stalk.

By a careful examination of these infested and distorted leaves, thousands of minute insects of a pale yellow color will be found sucking the juices of the succulent stems and leaves. The insects and their minute eggs are so thoroughly protected within the curled and twisted leaves that it is impossible to reach them with fluids or powders, and the only practicable method as yet discovered for checking the ravages of these insects is to cut off the ends of the infested canes and burn them. The plants should be examined at least once a week during the months of July and August, and all infested leaves and twigs carefully transferred to a basket carried for the purpose, and from this committed to that purifying element—a good hot fire.—A. S. Fuller.

Rubbing and Thinning.

Early in the season, or during some portion of the month of May in the Northern States, a very important operation in the nursery and fruit garden is the rubbing off of needless young shoots which are just springing up. Being green and soft, they are easily removed with thumb and finger, one movement of which may save a resort to the pruning knife later in the season, or to the saw in subsequent years. This operation is especially important on grape vines, which, if neglected, are apt to send up too many shoots and produce a mass of brush and foliage which prevent the full development of both leaves and fruit. A rule which will apply to different modifications of training is not to allow the fruit-bearing canes or shoots to be much nearer to each other on an average than a foot if strong and rank growers like the Concord, or eight or nine inches apart if smaller in growth like the Delaware. Young or newly-set fruit trees may be made to assume a regular and symmetrical shape to their heads by a careful and timely application of the rubbing process.

A very important advantage in thus giving shape in time to trees and vines, is in preventing the waste of limbs and branches, which must be cut and cast away in pruning off large and distorted portions in after years. But if the growth is properly directed on the start, the whole is utilized and none wasted.

When young trees have been grafted, it is necessary to keep an eye to the new growth, that it may not be retarded or choked by shoots springing up all around them from the stocks just below. This work must be very promptly performed, as a positive harm is done to the whole tree and a serious check given to it by taking off a quantity of leaves and fresh growth when under full headway. Some kinds will bear this delayed treatment better than others, the cherry least of all, young trees of which are not infre-

quently killed by rubbing off the sprirous shoots below the graft after they were some inches long.

As this will probably be an abundant fruit season in some localities, the same treatment must be applied in preventing overloaded crops. Crowded fruit is small and poor in quality; well-thinned, it becomes large, handsome and delicious, and if for market will often bring double prices. A crowded crop exhausts a tree, if it is not broken down under the load. Large varieties of fruit should not be allowed nearer than six or eight inches on the branches; small sorts may be nearer. A second thinning towards midsummer will enable the owner to get rid of wormy and scabby specimens, and to leave only fine and fair ones. It is easier to do the thinning when the fruit is small and readily stripped off, than to hand-pick a large crop when mature and to assort the whole afterwards.—Ex.

About Spraying Apple Trees.

Prof. Popenoe, Kansas State Agricultural College, referring to the use of Paris green and London purple in spraying apple trees to protect the fruit from the larvæ of the codling, says his experience is in favor of the London purple on account of its greater cheapness and finer divisibility. He says: "The danger of scalding the leaves of plants seems to us no greater in one case than in the other, provided that the mixture be made not too strong with the powder. We are using this year a mixture in the proportion of one ounce London purple to eight gallons of water. With a one-half larger proportion of the powder, we last year injured the foliage on some varieties of apples. Some insist upon a still day for the application of the poisoned water. A Kansas orchardist will do well to take the first moderately quiet day, after the flowers are off, and not wait for an absolutely quiet day, as a few days delay in the application will often render the trouble of no avail, the fruit soon growing too large, and, especially in some varieties, the calyx soon drawing together so as to shed the poison from the point of attack of the worm."



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The Poultry Yard.

Keep Fowls and Good Ones.

The *Prairie Farmer* very properly says that a moderate sized flock of chickens on any farm pays a great per cent. of profit and gives very quick returns. Those men who have hindered instead of encouraged this business, should pursue a different course. They need not take an interest in the more fancy breeds, but all encouragement should be given to raising the business purpose fowl. Good fowls, consistent quarters and care are just as important, in their way, as is any part of the farm business. Coops for young broods should be provided in spring just as surely as should the corn be planted or the pasture fence repaired. New blood should be infused every year or two by buying setting eggs or cocks just as certainly as new seed potatoes or new seed corn should be introduced occasionally. The women and children usually make the poultry profitable, if encouraged instead of hindered. On too many farms the poultry business is run in the old way, because the man of the house will not favor an outlay for papers or books on poultry raising, or money with which to purchase lumber for new poultry buildings and coops. This stinginess and lack of appreciation of a business the wife should have opportunity to develop, keeps the enterprise cramped.

Poultry Notes.

Ducks, after commencing to lay, drop one egg regularly every twenty-four hours, almost invariably after night.

Coarse bones in fowls indicate coarse meat. A coarse-meated fowl is a poor thing side of a fine juicy-meated one.

At Fresno, Cal., large numbers of turkeys are raised annually, and some farmers raise large flocks which they send out on ranches as insect exterminators.

A force pump throwing a spray, is used by some poultry men in throwing whitewash and other lice-killing liquid into the cracks and crevices of the poultry quarters.

As a rule, the long, pointed eggs, commonly called rooster eggs, do not hatch as uniformly as those more oval in shape. No more than half of them are fertilized.

Sudden changes of the weather cause disease among fowls much sooner than long-continued cold or warm weather. Roup, a very contagious disease, is usually due to dampness.

No doubt some enterprising person could do a fair business advertising cross-bred eggs. It is done in England with good results. A person desiring a cross of Leghorns and Brahmas, for instance, would prefer such eggs rather than wait a year or two for producing the same.

Eggs are used largely in the arts. Albumen is made from the white and egg oil from the yolks. The egg oil is used for oiling egg leather and wool in the woolen mills. Then there are egg pomade, desiccated eggs and preserved eggs (for tanners' use). Egg albumen sells in France at the rate of 75 cents per pound.

No product of the farm pays a better profit than eggs, and from a commercial point this interest is much larger than many suppose. New York city handled 50,000,000 dozen during the year, the value of which amounted to \$10,000,000. In addition to the home product the States imported 2,000,000 dozen from Canada. It costs about 15 cents per dozen to place them in New York from

foreign countries. As there is no duty on eggs, Canada has a good outlook in our markets for her surplus.

For the present condition of depression in British agriculture, leading statesmen like Gladstone, and leading agriculturists like Leed and Pell, are earnestly urging the people to turn their attention in a greater degree to the rearing and marketing of poultry, believing it will be more remunerative than wheat farming, etc.

At a late farmers' institute an opinion was expressed by a poultry grower that there was no "best breed" of fowls, that is, no breed which was good as a whole. He thought the Leghorns best for layers. His light Brahmas, too, had given good results, the hens laying 325 eggs each before they showed a disposition to set.

Let your sitting hen come off the nest daily. Allow her to roll in a dust box near by. Give her food and drink regularly. In cold weather see that she goes back before the eggs chill. Cover her sitting box with coarse bagging if she seems inclined to give up her work. Mix a little powdered charcoal with the soft feed and it will assist digestion and prevent disease.

An American syndicate has obtained the exclusive privilege of using the telephone in China for thirty years.

Scales are now made so delicate that a signature on a piece of paper with a soft lead pencil can be weighed.

The first letter the new postmaster at Kempton, Ill., has received for six years was the one containing his commission.

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.

An East Galway, N. Y., farmer had some hay drawn to his barn during the winter. One day, while taking out the hay, a hen that had been buried by the hay, was found. She was flattened out and apparently dead, but soon began to show signs of life, and in a few hours was able to eat and walk. She had been buried in the hay forty-seven days.

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.

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Gen. Sheridan has a sunny corner room in the new war department building fitted up with furniture of his own choosing. Several cabinets are filled with Indian pottery and curios, and the walls are covered with paintings of western scenery with buffaloes and Indians in the foreground. Black Kettle's war belt is as dear to him as a peachblow vase, and a Sioux war club is the chief treasure in the collection.

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The Busy Bee.

Raising Comb Honey.

Nearly all comb honey is now stored in sections, varying in size from one-half pound to two pounds in weight, when filled with honey. Many bee-keepers have asserted that the larger the section, the more surplus honey would be secured; and, with some systems of management, this may be true; but when hives of such a size are used that the queen keeps the brood apartment full of brood, the honey of necessity is stored in the surplus apartment, and the bees will not bring in less honey simply because the sections are small, even if they do prefer large ones. Quite a number of extensive honey-producers have proved that with the proper management just as much honey can be secured in small as in large sections. One producer, who has raised comb honey by the carload, upon being asked how small a section bees would store honey in to advantage, replied: "About the size of a thimble." Half pound sections have never come into general use, and the indications are that they never will. When used, the cost of sections, foundations, and manipulation is twice what it would be, were pound sections used, while the extra price for which they will sell is not sufficient, in most markets, to meet the extra expense.

The pound section is, at present, the most desirable size to use. They are nearly all 4 1/2 by 4 1/2 inches square, being first made this size so that eight of them would exactly fill a Langstroth frame. Although this method of placing sections upon the hive is being rapidly superseded by the case method, this size of section has been retained, and has become the standard size for pound sections. When used with separators the 4 1/2 by 4 1/2 should be about 1 1/2 inches wide, in order to have them weigh a pound each when filled with honey. When no separators are used, the sections can be about one-fourth inch narrower. It is better that sections when filled should weigh a scant pound each, rather than overrun, as dealers are often asked to "throw in" the ounce or two that a section weighs more than a pound, while if it falls short, a reduction can be made that invariably pleases the customer.

There are two styles of sections made—the "one piece" and the dovetailed. The former is made of a single piece of wood, and has transverse grooves, cut with a saw upon the inside, at the points where the piece is bent. The grooves are cut nearly through, which enables the wood to be bent at the corners of the box without breaking. If the wood is very dry, it is necessary to dampen it at the places where it is to be bent. One way of doing this is to lay the sections over a kettle of boiling water, allowing the steam to moisten the wood. The inside ends of the sections are usually dovetailed, but are sometimes nailed together. The dovetailed sections are in four pieces, one piece for each side, the ends of each being dovetailed together. The one piece sections can be bought cheaper than the dovetailed, and can be put together a trifle quicker, but, aside from this, they are inferior to the latter.

If separators are used, "starters" of natural comb will answer, but there is scarcely an apiarist who now uses anything except comb foundations in sections. One pound of foundation will fill about 75 pound sections. Its use is a very great aid in securing straight, even combs, and, when honey is coming in very rapidly, it enables the bees to build comb fast enough to store all the

honey that can be gathered, which, without foundation, is not always possible. The foundation ought not to be heavier than seven feet to the pound, and can be used as light as even ten or eleven. That made upon the Given press has no superior; the base or septums can be made even thinner than that of the natural comb, while the side walls, receiving no pressure, are very soft, and easily drawn out. Not only this, but foundation made upon roller machines is much more likely to bend, curl or warp than that made upon a press. The pieces of foundation should be cut of such a size that when fastened into the sections, there will be a space of one-eighth of an inch between the sides of the sections and the foundation, and a space of a quarter of an inch between the bottom bars of the section and the foundation. Unless the foundation nearly fills the section, the bees will shorten the cells as they approach the wood, and the comb will be fastened to the wood by brace combs merely. The writer knows of one bee-keeper who cuts his foundation so long that it can be fastened to the bottom bar as well as to the top bar, which secures the comb into the section very substantially; but it would seem that the foundation would give trouble by bulging, when fastened in this manner. The bee-keeper who uses this method has, however, exhibited very fine sections of honey, secured by this method. There is a vast difference, however, in wax, and in the different makes of foundation, as regards ductility. If any of your readers should give this method a trial, and trouble should arise from the stretching of the foundation, there is still another plan that will secure the fastening of the comb to the bottom bar, and that is putting two pieces of foundation in each section. The piece that is attached to the bottom bar is only about half an inch wide, and when in place, stands in an upright position along the center of the upper side of the bottom bar; if taller than this, it would not remain in an upright position in the warm hive. The piece that is attached to the top bar extends downward to within about one-fourth of an inch of the piece of foundation attached to the bottom bar, and, as the work of comb-building progresses, the bees connect the two pieces of foundation, and the comb is thus strongly attached to both top and bottom bar.—*Cor. Country Gentleman.*

James Hubbardt, of Indianapolis, is 102 years old. He is a member of the Tippecanoe club, which expected to give him a banquet, but he is too feeble to attend. His father lived 98, his grandfather 102, and his great grandfather 105 years.

The Victoria breed of swine, in many points, bears a strong resemblance to the Yorkshire and Chester White. Hitherto they have been classed generally with the Chester White at fairs, but now, in some cases arrangements have been made to give them a separate class.

Holstein-Friesian cattle are being distributed throughout the southwest in prodigious numbers, hundreds of them changing hands every week. Such is their popularity people cannot get them fast enough and they are rapidly becoming the dairy stock of the great southwest.

TIBBEE, MISS., Oct. 16, 1886.
MESSRS. A. T. SHALLENBERGER & Co., Rochester, Pa.—*Gents:* The bottle of Shal- lenberger's Pills sent me in February last I gave to W. G. Anderson, of this place; a long standing case of chills and fever. He had tried everything known without any permanent good. In less than ten days after taking your Antidote he was sound and well, and has gone through the entire season without any return. It seems to have effectively driven the malarious poison from his system.
Yours truly,
V. A. ANDERSON.

Some very good shepherds, indeed most keepers of stud flocks, give their sheep a little hay all summer. It is only a little, and that of very sweet hay.

Many successful sheep-breeders feed Hungarian hay with good results. If cut early enough and properly cured, sheep prefer it to almost any hay that can be furnished them.

It is not good policy to dry hay to brittleness before drawing it from the meadow, for that causes waste in handling and reduces quality. Grass is well cured when it will rattle lightly in the handling, and then is the time to store it.

C. M. Hamilton, 803 W. Madison St., Chicago, will mail, post-paid, a fine nickel clock, on receipt of \$1.50, guaranteed first-class or money refunded. Over one thousand sold, with perfect satisfaction.

The heifer should be trained from her birth, says the *Stockman*, to stand, lead or allow any one to handle her. A calf treated in this manner will make a gentle and valuable cow, one that will not kick, and which will be easily and more conveniently milked.

Give pigs water to drink if they are weaned. They need it nearly as much as any other animal and it adds greatly to their health and to the purity of their flesh. Skimmed milk and salt slops from the kitchen do not answer the purpose. They want pure water.

A common mistake in strawberry culture is to attempt to carry an old bed along on the same plot of ground for too many years without replanting. It is better to replant as often as every second or third year than to try and clean out the old bed, particularly if one has plenty of land.

An excellent thing to feed to poultry, especially hens and pullets, is parched corn. It makes but little difference how black it is so the grains retain their shape. The best plan is to crush it and mix with other meal, as by this means they are sure to pick up a sufficient quantity to do them good.

There is more wool grown on each sheep than formerly, the average having doubled in twenty-five years. In 1860 the product was two and one-half pounds per sheep, while in 1885 it had risen to five pounds. This is due to the grading up of the common flocks and improving them with the use of Merino rams.

Mrs. Haddock, of Iowa, in her paper on "Women as Landlords," read at the Women's Congress in Louisville, estimates that 1,000 women own and manage farms in her own State, while in Oregon women farmers are so numerous that they excite no comment. The number of women land-owners is increasing all over the Union.

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Powers' Block, Rochester, N. Y.

A PHOTOGRAPH OF YOUR FUTURE HUSBAND OR WIFE—FREE post-paid, by mail, to all who send 15 cents in stamps for our story paper three months. Address SOCIAL CO., Box 3139, BOSTON, Mass.

THE MARKETS.

By Telegraph, May 30, 1887.

[This being Memorial Day, market reports are not full.—EDITOR.]

LIVE STOCK MARKETS.

St. Louis.

CATTLE—Receipts 200, shipments 1,100. Market steady. Choice heavy native steers 4 20a 40, fair to good shipping steers 3 90a 15, common to choice butchers steers 3 80a 25, fair to good feeders 3 00a 00, fair to good stockers 2 30a 30.

HOGS—Receipts 600, shipments 1,800. Market firm and steady. Choice heavy and butchers selections 4 75a 90, fair to good packing 4 65a 80, medium to fancy Yorkers 4 55a 70, common to good pigs 3 75a 50.

SHEEP—Receipts 100, shipments 2,400. Market firm. Clipped 2 50a 80, lambs 2 00a 50 per head.

Chicago.

The Drovers' Journal reports:

CATTLE—Receipts 6,600. Market stronger. Choice steers 4 45a 65, good 4 20a 40, medium 4 00a 05, common 3 75a 00, stockers 2 80a 30, feeders 3 40a 10, bulls 2 00a 30, cows 1 75a 65.

HOGS—Receipts 25,000. Market 5a10c lower. Rough and mixed 4 50a 80, packing and shipping 4 80a 05, light 4 40a 75, skips 2 75a 50.

SHEEP—Receipts 2,000. Market strong. Natives 3 50a 45, Western 3 50a . . . , Texans 2 75a 4 10, lambs 2 00a 75 per head.

Kansas City.

Received from 5 p. m. Saturday to 12 m. today, 936 cattle, 6,143 hogs and 200 sheep. Held over, 391 cattle, 1,670 hogs and 115 sheep. Total, 1,327 cattle, 7,813 hogs and 315 sheep. May receipts show an increase of 7,000 cattle and a decrease of 6,000 hogs and 2,000 sheep, compared with 1886. Receipts for the year show 44,179 cattle, 108,221 hogs and 8,506 sheep increase compared with 1886. Receipts were moderate to-day all around. Cattle sold steady to stronger, hogs lower and sheep higher.

CATTLE—Shipping and butchers steers 3 25 a 15.

HOGS—Light hogs were plenty, and the bulk of the hogs sold on the low figures at 4 40a 50, with good to choice medium and heavy weights at 4 50a 65.

SHEEP—The fresh receipts were but two loads, which was not enough to supply the local demand. Some 86-lb. muttons sold at 3 75, the highest paid for such quality for some time. Prices quoted 5a10c higher than Saturday.

PRODUCE MARKETS.

Kansas City.

WHEAT—On call board: No. 2 soft winter, cash, no bids nor offerings; May, no bids, 80c asked. No. 2 red winter, cash, no bids, 73c asked; May, 71c bid, no offerings.

CORN—No. 2 cash, no bids, 32 1/2c asked.

OATS—No. 2 cash, no bids, 28 1/2c asked.

RYE—No bids nor offerings.

HAY—Receipts 7 cars. Market weak. Loose from wagons, prairie, 60a50c per 100 lbs.; timothy, 70c. Consignments in car lots: Fancy, small, new, 8 00a 50 per ton; large, 6 00 7 00.

THE COOLEY CREAMER



The first invented, never yet equalled, and the only one that uses the patented submerged process, which gives it its great value over all others.

Where there are no agents, will sell one at wholesale price. Send for circular.

JOHN BOYD, Mfr.,
199 Lake St., CHICAGO.

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.

How to save re-shingling, stop leaks, or lay new roofs. Particulars free if you write at once and mention KANSAS FARMER.

WE ARE SELLING

ROOFING - COMPLETE

—AT—
\$2.00 PER 100 SQUARE FEET.

Indiana Paint & Roofing Co.,

SEND STAMP FOR SAMPLE.] 42 So. Pa. St., Indianapolis, Ind.

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, 1866, 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 name and residence of the taker-up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice.

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 falls 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 a stray, 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 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 28, 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.

FOR WEEK ENDING MAY 26, 1887.

Comanche county—Chas. P. Overman, clerk.

MARE—Taken up by A. D. Lee, in Coldwater tp., (P. O. Coldwater), April 26, 1887, one sorrel mare, roach mane, branded L on left shoulder; valued at \$30.

Nemaha county—R. S. Robbins, clerk.

HEIFER—Taken up by Nicholas Helnegar, in Washington tp., March 24, 1887, one red heifer, 2 years old, all in left ear; valued at \$15.

Pawnee county—Jas. F. Whitney, clerk.

BULL—Taken up by Omer N. Hittle, in Garfield tp., (P. O. Garfield), May 3, 1887, one red and white bull, 2 years old, crop off right ear above and below; valued at \$15.

Butler county—James Fisher, clerk.

PONY—Taken up by J. B. Templeton, in Sycamore tp., May 6, 1887, one black mare pony, 3 years old, scar on left shoulder, some harness marks.

Wichita county—W. R. Groff, clerk.

MARE—Taken up by William H. Vetter, one brown mare, supposed to be 10 years old, weight about 1,100 pounds, white forehead, white stripe across the nose and white on left hind foot, no brands; valued at \$100.

Cherokee county—L. R. McNutt, clerk.

MARE—Taken up by G. C. Wallace, in Garden tp., (posted May 20, 1887), one chestnut sorrel mare, about 14 hands high, about 8 years old, blaze face, left hind foot white, branded J. S. on left shoulder and 81 on left side of neck, scars on outside of both hind legs.

Rush county—L. K. Hain, clerk.

MARE—Taken up by James E. Rowland, in Brookdale tp., (West Point P. O.), one dark bay mare, 9 years old, black mane and tall, white blaze in face, 15 hands high, branded C. R. Y. on left thigh and F. D. F. on left shoulder; valued at \$25.

FOR WEEK ENDING JUNE 2, 1887.

Barber county—Robt. J. Talloferro, clerk.

PONY—Taken up by W. P. Anglin, in Hazelton tp., (P. O. Hazelton), April 7, 1887, one light dun and white horse pony, 14 hands high, split in left ear, M and S on left shoulder; valued at \$16.

Rice county—Wm. Lowrey, clerk.

PONY—Taken up by James A. Underwood, in Eureka tp., (P. O. Alliance), May 7, 1887, one gray mare pony, 4 hands high, branded Y with diamond in fork of the letter on left hip and R on left jaw; valued at \$30.

Comanche county—Thos. P. Overman, clerk.

HORSE—Taken up by Edward Koho, in Nescatunga tp., (P. O. Nescatunga), April 25, 1887, one gray horse; valued at \$15.

HORSE—By same, one bay horse; valued at \$10.

HORSE—By same, one sorrel horse; valued at \$15.

Hamilton county—J. M. Hicks, clerk.

MARE—Taken up by J. W. Phillips, in Coolidge tp., (P. O. Coolidge), April 18, 1887, one light roan mare, 3 years old, over-bit in right ear; valued at \$35.

MARE—By same, one dark roan mare, 2 years old, over-bit in right ear; valued at \$35.

Leavenworth county—J. W. Niehaus, clerk.

HORSE—Taken up by C. F. Huddleston, in Alexandria tp., April 30, 1887, one dark brown horse, about 15½ hands high, scars on left hip, about 15 years old; valued at \$30.

MARE—By same, one brown mare, about 15 hands high, white hind feet, about 12 years old; valued at \$30.

MARE—By same, one sorrel mare, about 14½ hands high, blaze face, three white feet, branded S on left shoulder, about 10 years old; valued at \$30.

Allen county—R. W. Duffy, clerk.

COW—Taken up by J. A. Smith, in Elmistown tp., May 10, 1887, one brindle cow, end of horns sawed off, crop off right ear; valued at \$14.

Brown county—G. I. Prewitt, clerk.

BROOD SOW—Taken up by Joseph Stager, in Mission tp., May 14, 1887, one large brood sow, weight about 500 pounds, ring in nose.

Johnson county—Henry V. Chase, clerk.

HORSE—Taken up by Henry E. Peachey, near Shawnee, one white horse, black ears, right eye out, saddle marks, had on bridle with curb-bit, about 12 years old, 14½ hands high.

STOLEN!

PARSONS, KAN., April 18, 1887. Stolen last night, from Parsons, one Bright Bay Horse, 6 years old past, 15½ hands high, weighs about 1,000 pounds, in splendid condition, ratched mane, heavy tail, had been burnt on both legs by a rope under fetlocks, one leg being marked palmer than other; has clean head and prominent eyes, and is a horse that will attract attention anywhere. \$50 Reward for the recovery of the horse, and \$100 for the arrest and conviction of the thief. Address M. B. MASON, Dep'ty Sheriff, Parsons, Kas.

\$15 Buys a Rake that takes from the swath and hauls to Rick or Wagon 15 Tons a day.

\$60 Buys a Ricker or Loader and two Rakes that puts up 30 Tons in a day. Full particulars Free. All machines warranted. A. J. NICHOLSON & CO., Springfield, Ohio.

C. E. JEWELL & CO. Chattel Mortgage Loans

A SPECIALTY.

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

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 dealers in hardware, or address, SEDGWICK BROS., RICHMOND, IND.

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.

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. Sweepstake 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 choicest Herefords from all the best strains in England and America. The herd is headed by famous first-prize and sweepstake 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 3d 2490; Dewsbury 2d, 18977, by the celebrated Delley 9495.

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.

TOPEKA 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, Manager. C. E. CURRAN, Secretary.

G. A. FOWLER, ST. MARYS, KAS. 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.

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 yards are 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.

CHICAGO. 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.

SPORTSMEN! Buy the AUTOMATIC FISHER. SAMPLE BY MAIL. 30 CTS. For brook, river or sea fishing. Made of brass, full nickel plated. Will not rust. Takes the place of a sinker on a fishing line. Has a strong spring and trigger so arranged that the bite of the fish jerks the hook into its jaws, catches him every time. Worth its weight in gold to every sportsman. Sample by mail, 30 cents, 5 for \$1. Send stamp and catalogue of Sporting Goods. G. H. W. BATES & CO. Boston Mass.

DANA'S WHITE METALLIC EAR MARKING LABEL. stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted. C. H. DANA, West Lebanon, N. H.

The Veterinarian.

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

RELAXED JOINTS.—I have two young colts, eight and nine months old, that have been lame in one stifle of each colt for three or four months. There is a small bunch on the front side of the joints, and when they walk or run their joints slip or crack in some way so they can be heard for four or five rods. [There is a relaxed condition of the structures which bind the joints together—sometimes it is looked upon as being of a rheumatic nature. Give good shelter, nutritious food, and apply a small quantity of a liniment composed of equal parts of turpentine and linseed oil. Rub well in, but if the parts get sore discontinue it for a few days.]

CHOREA.—I have a three-year-old three-fourths Clydesdale horse that has not got the right use of his hind legs. When he stands a while his leg appears stiff; he will swing it around and something appears to give way, and then he will step high as in string-halt; then he will go all right all day until he stands still a while. I first noticed it last winter a year ago for a short spell only and has troubled very little since until this spring. I broke him this spring and have been working him all spring. He appears to be getting worse. He has not run out any this spring on account of being so breachy. I can't tell whether it is in his stifle or hock; no swelling anywhere. Something will knuckle when standing. [Your colt has an affection called chorea, a nervous disease which is generally regarded as incurable. Give every night for a month 1 drachm of pulverized nux vomica mixed in a bran mash.]

DROPSICAL SHEATH.—A three-year-old colt of mine has a swollen sheath; it was swollen two years ago and got well itself; it swelled again last year, and got better, although not entirely well; it swelled worse about two months ago since I used it for light driving. I lanced it and it discharged about one pint of clear water, but the swelling did not fall off, so I lanced it again, with the same result; it is swollen much now, although I do not use it at all. The sheath is now about ten inches long and six inches in diameter. It had been swollen once before it was castrated, so it cannot be from that cause. People call it water farcy, but nobody knows what to do for it. I have looked for the cause and cleaned the sheath, but found not much dirt in it. How can you find the so-called bean of which people talk so much? [From the symptoms described we think your horse is affected with a simple dropsical condition of the sheath. An examination, however, might reveal that the swollen sheath resulted from some irritation in the scrotum, such as sometimes follows when colts are improperly castrated. Put on a suspensory bandage, passing it upwards and tying it over the loins, so that the sheath may not hang pendant, but be rather compressed against the belly. Rub into the sheath every night and morning equal parts of alcohol, fluid extract of witch hazel and water. Let the horse run in a box-stall and give daily outdoor exercise, or put him to light work. Should he not urinate freely give a teaspoonful of salt-petre every night for a week. Do not feed corn. The so-called bean is a collection of sabaceous matter in a cavity immediately under the urinary orifice.]

It has been suggested that farm horses be sold by weight, in addition to their qualities, so as to induce farmers to raise larger and better horses.

A jury in New York city fined a house-owner 25 cents for entering a tenant's house with muddy boots to collect the rent.

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

A German man of science has taken four heads of hair of equal weight, and then proceeded to count the individual hairs. One was of the red variety, and it was found to contain 90,000 hairs; next comes the black with 103,000 hairs to its credit. The brown had 109,000 and the blonde 140,000.

TOWHEAD STOCK FARM

LEONARD HEISEL, CARBONDALE, (OSAGE CO.), KANSAS, Importer and Breeder of



Prince of the Times \$650.

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.

OAK GROVE FARM

To the front for

CLYDESDALES



I have a choice collection of pure-bred registered imported 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.

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. **DEGEN BROS.**

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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

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



Monitor (3232).

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.**

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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

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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.

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Send stamp for Circular and Price List.

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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

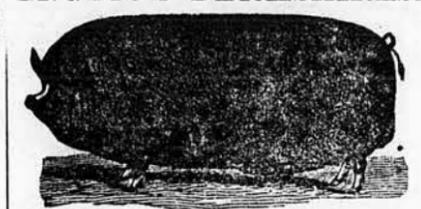
Berkshire and Small Yorkshire

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, Winchester, Kas.**

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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. **F. W. TRUESDELL, Lyons, Kas.**

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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 4889**, 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.**

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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 prize-winner 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.**

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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 Copy of Breeders' Book. Come and see our stock. We have special rates by express. If not as represented we will pay your expenses.



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.**

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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.**

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This institution was Established Fourteen Year. Ago, and is incorporated under the State laws of Kansas. During this time it has done a flourishing business and made many remarkable cures. The Institute is provided with the very best facilities for treating every kind of physical deformity, such as Hip-Joint Disease, Club Foot, Wry Neck and Spinal Curvature, having a skilled workman who makes every appliance required in arthro-pod surgery. Incipient Cancer cured, and all kinds of Tumors removed. Private Diseases and Diseases of the Blood and Nervous System successfully treated. Nose, Throat and Lung Diseases, if curable, yield readily to specific treatment as here employed. All diseases of the Anus and Rectum, including Piles, Fissure, Fistula, Prolapsus and Ulceration, cured by a new and painless method. All forms of Female Weakness relieved. Tape-Worm removed in from one to four hours. All Chronic and Surgical Diseases scientifically and successfully treated.

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Cures Nervous Debility, Male and Female Weakness, and Dizziness. Price, \$1 per package; 3 packages \$2. Address **A. C. Lonergan, M. D., Louisiana, Mo.**

Brooklyn bridge is to be painted to preserve the metal, and 40,000 pounds of paint will be required to do it in the most economical manner.

Fruit-growers are gradually becoming convinced that it is not overproduction so much as fruit of poor quality that tends to reduce prices.

Orchard and Garden calls the fruit jellies of commerce "horticultural oleomargarine," because they are such a compound of adulterations.

There are thirty Philadelphians who carry \$100,000 or over of life insurance. John Wannamaker is insured for \$600,000; J. B. Stetson \$515,000, and Hamilton Disston \$500,000. Six carry insurances between \$200,000 and \$300,000.

Brood sows should be moderately fed before they drop their litters. But when parturition is fairly over and all is going well, the sow should be liberally fed, as the growing demand of the nurselings makes a heavy drought on the dam.

In the treatment of domestic animals remember three essential points—kindness, quietness and cleanliness. Study the disposition of all, treat them kindly and quietly, keep them clean, and then you can do almost anything with them you like.

In Italy and Spain, and along the shores of the Mediterranean, the onion assumes the place of an important and stable article of food. Black bread and onions are the leading articles of food. And the people are the strongest in the world. It is fair to assume that part of that vigor is due to the strength of the onion.

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"The first thing we do, let's kill all the lawyers." This is rather a bloodthirsty proposition, which we modify by offering to cure this worthy class of people. Most of them suffer (in common with nearly all others of sedentary habits) from the injurious effects of dyspepsia, indigestion, piles, loss of appetite, and other ailments caused by a constipated habit of the body. Dr. Pierce's "Pleasant Purgative Pellets" eradicate all these disorders in promptly removing the cause thereof, and induce a rare degree of comfort and health.

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Advertisement for Newark Machine Co. featuring an image of a grain fan and text: '\$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. NEWARK MACHINE CO. Columbus, Ohio.'

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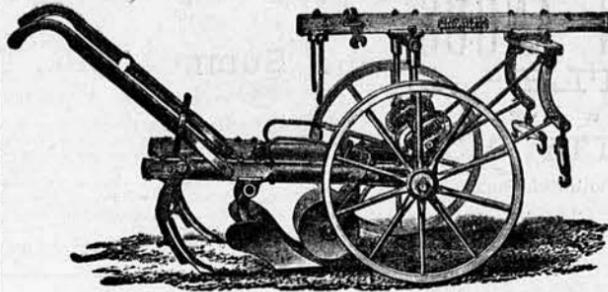
Advertisement for David Bradley Mfg. Co. featuring an image of a plow and text: 'DAVID BRADLEY MFG. CO. SUCCESSORS TO FURST & BRADLEY MFG. CO. MAKERS OF RELIABLE PLOWS CULTIVATORS RAKES ETC. CHICAGO ILL. U.S.A.'

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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 HAMILTON Adjustable - Arch Bar - Share CULTIVATOR.

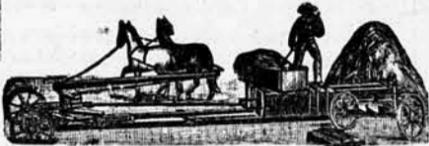
Easily Handled. Direct Hitch. Equal Draft. Plows Deep, Runs Steady.



With the Bar-Shares and Coulters used only on this Cultivator, the farmer can plow six to ten days earlier, and deep, thorough work can be done very close to young plants without injury. The Adjustable-Arch enables the operator to change the distance between the Beams, so that the Coulters, Bar-Shares, Shovels or Bull-Tongues on the front standards will run as close to the row of corn as desired, and the beams be kept in line of draft. The Improved adjustable Standard Castings enable the shovels on each gang to be placed closer together when narrow shovels are used, so 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."

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The Best and Cheapest Automatic Watering Trough Ever Presented to the Public.

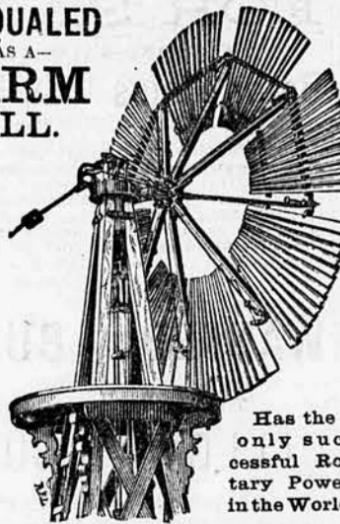
No patent ever issued has taken so favorably with the stockmen. Endorsed by PROF. SHELTON, of the Kansas State Agricultural College, Manhattan; JOHN WHITE, Live Stock Sanitary Commissioner, and hundreds of other prominent live stock breeders.

Now is the Time to Secure Territory, as the Troughs sell on sight, and when once introduced become a necessity to all parties raising stock. Troughs sent on trial to responsible parties giving references.

For price of territory, terms and information, address GOODWIN & BISHOP, DELPHOS, KANSAS.

THE VANELESS MONITOR.

—IS— UNEQUALED —AS A— FARM MILL.

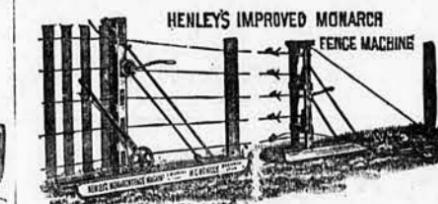


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THE only Practical Machine in use which makes the Fence in the field wherever wanted. It has no equal, and makes the best, strongest, and most durable Fence for general use, and especially for farm and stock purposes. Weaves any length of picket, slat 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.

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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.

Through Pullman Buffet Sleeping Cars to Memphis, Mobile, Malvern, Houston, Galveston, and all principal Southern points.

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

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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.

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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—A good Jersey Bull, cheap, if taken at once. For price and particulars, address T. Young, Warrensburg, Mo.

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.

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

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, \$1 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.

Morton Co., Kansas!

THE SOUTHWEST CORNER COUNTY and BEST County in Kansas. Fertile soil, fine climate, pure and never-failing 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.

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!

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 Rothlemay, 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.**

FOR SALE!

THE GRAND BATES BULL, **Baron Bates 13th, 54616,** (Vol 26, A. S. H. H. Book.)

Baron Bates, as his pedigree shows, is one of the best bred Bates bulls in the land. He is a beautiful red, an easy keeper, good disposition, a sure getter, and in fair working order weighs about 2,200 pounds. Is sold only because we can't use him longer on our herd. Price \$400 on cars. He cost us as a yearling \$1,000. **G. W. GLICK & SON, ATCHISON, KAS.**

WANTED -- BULLS!

THREE THOROUGHbred **GALLOWAY BULLS,**

with good pedigree, sixteen months to two years old. Address subscriber, naming price. Also some Cows, same breed.

S. J. GILMORE,

2758 Champa street, DENVER, COL.

GO SOUTH Young Man and **BUY A HOME** Stamp for particulars. **E. C. LINDSEY & CO., Norfolk, Va.**

POWELLS & BENNETTS' Sale of Short-horn Cattle!

AT Lee's Summit, Mo., Thursday, June 9, 1887,

On the farm of W. A. POWELL, three miles east of Lee's Summit.

The offerings will consist of 32 females and 8 bulls from the herds of W. A. Powell, Powell Bros., and U. P. Bennett & Son, and will include ROSE OF SHARONS, LADY JANES, BONNYFACES, YOUNG MARYS, etc., all bred by us and all are registered or eligible to record.

Cattle sold will be kept and put aboard cars, where desired. TERMS:—Cash, or acceptable notes at 10 per cent. Regular trains on Missouri Pacific pass, morning and evening, at convenient hours to attend the sale. Parties will be met at the depot and will be conveyed to and from the sale.

For Catalogues address either **W. A. POWELL, POWELL BROS., or U. P. BENNETT & SON.**

JOINT PUBLIC SALE OF Short-horn and Hereford Cattle

AT TOPEKA, KAS., WEDNESDAY, JUNE 15, 1887.

The undersigned will offer at public sale, Wednesday, June 15, 1887, at 11 o'clock a. m., at Ridgeview Stock Farm, four miles southwest of Topeka, one-half mile west of the Burlingame road,

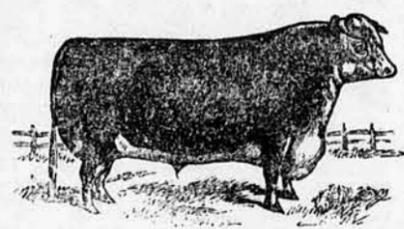
THIRTY HEAD OF CHOICE THOROUGHbred SHORT-HORN AND HEREFORD CATTLE,

Consisting of Bulls, Heifers one and two years old, and Cows (some with calves); also twenty-five High-Grade Cows and Heifers.

TERMS:—Cash, or six months at 8 per cent. for acceptable paper.

For Catalogues, address at Topeka, **MARTIN I. LEE, CAPT. JACK HUNGATE, Auctioneer.]**

PUBLIC SALE OF PURE-BRED HEREFORDS



AT PLEASANT HILL, MO.,

Thirty-three miles east of Kansas City, on Missouri Pacific R. R.

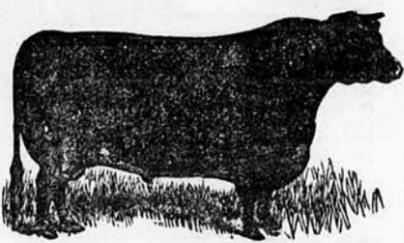
On Thursday, June 23, 1887,

We will sell our entire herd, consisting of 20 Cows and Heifers and 10 Bulls, including the fine bull, ANXIOUS 11026, by Anxiety 4th 9004. The Anxiety blood predominates in our herd, and there is a number of young animals of good individual merit among them.

For Catalogues, etc., address **COL. L. P. MUIR, Auctioneer.**

WHALEY & YOUNG, Pleasant Hill, Mo.

Public Sale of SHORT-HORN CATTLE!



AT SABETHA, KANSAS,

ON Tuesday, June 21, 1887,

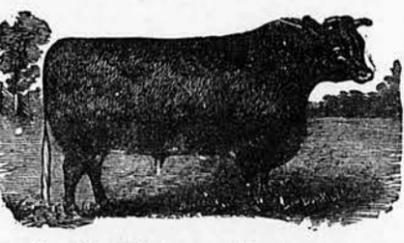
(1 o'clock, sharp.)

I will offer for sale a draft of 40 HEAD from Oakland Stock Farm Herd, Sabetha, Nemaha county, Kansas, 10 Bulls and 30 Females, mostly young and a desirable lot to select from for the foundation of a herd, or to add new blood to your herd. Several fine show heifers are included in the sale. This herd is so well and favorably known that it needs no further notice, than to call your attention to the time and place of sale. The premiums they have taken at State and District fairs in the West, and at the World's Exposition, New Orleans, are sufficient to show that they are a class of desirable cattle. Mazurka Duke and the late imported young bull Lord Haddo, directly from Scotland, now head the Oakland Stock Farm Herd. Most of the cows and heifers old enough, will be in calf by one of these noted bulls.

For further information and for Catalogue, apply to **COL. S. A. SAWYER, Auctioneer.**

W. S. WHITE, Sabetha, Kansas.

JOINT PUBLIC SALE! Well-Bred Short-horns and High-Grade Cattle,



ON THURSDAY, JUNE 23, 1887,

We will offer for sale, one mile west of **CLEMENTS, Chase Co., KANSAS,**

49 HEAD OF COWS AND HEIFERS, all registered or eligible to record, consisting of the well-known families of Young Marys, Floras, Duchesses of Goodness, Adelaides and other standard families. Females mostly in calf, or calf at foot. 4 BULLS, from 9 to 13 months old. This is no culling-out sale, but the entire herd, without reserve, will be sold.

We will also offer about 70 HEAD OF HIGH-GRADE COWS, HEIFERS AND STEERS. All cordially invited.

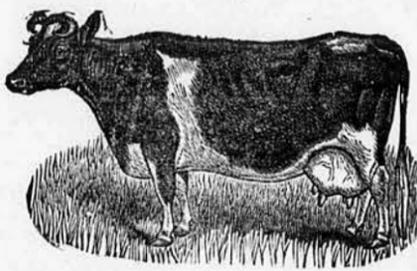
CLEMENT—Is located on the A., T. & S. F. R. R., thirty miles west of Emporia. Free transportation to and from trains.

TERMS:—Six months time on bankable paper at 10 per cent. interest. Sale to commence at 10 o'clock a. m. Catalogues ready June 10th.

W. C. BANCROFT, Cedar Point, Kas., A. R. ICE, Clements, Kas.,

COL. S. A. SAWYER, Auctioneer.

PUBLIC SALE.



I will sell at **LAWRENCE, KAS.,**

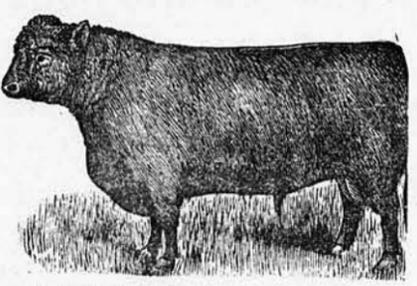
On Friday, June 17, 1887,

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, 26 Thoroughbred Holstein-Friesian cows and bulls, 14 Thoroughbred A.J.C.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.

COL. S. A. SAWYER, Auctioneer.

GALLOWAYS AT AUCTION



Thursday, June 16, '87,

AT RIVERVIEW PARK, KANSAS CITY, MO.,

I will sell to the highest bidder, my entire herd of

Registered Galloway Cattle!

And about sixty head of High-Grade Angus and Galloway Bulls, one and two years old.

Owing to declining health of my family, I propose to retire from the breeding business, and everything offered will be sold, if there are any buyers.

TERMS:—Cash, or bankable paper at four months. For Catalogue of the Thoroughbreds, address **W. C. WEEDON & CO., Kansas City, Mo., or THOS. F. HOUSTON,**

COL. L. P. MUIR, Auctioneer.]

HOUSTONIA, PETTIS CO., MO.

TOWER'S FISH BRAND 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.**