

# KANSAS FARMER

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## Agricultural Matters.

### The Water Supply for the Farm.

In many sections of the country the fall has been so dry that shallow wells, creeks and surface ponds have gone dry, and unless copious rains are experienced before winter sets in, or we have an open wet winter, many farmers will be seriously inconvenienced by the lack of water to supply their live stock. It is evident to even a superficial observer that the sources for water supply which at an early day in the settlement in the West were ample, and which were the creeks draining marshes, surface ponds and shallow wells can no longer be relied upon. The prudent farmer will adopt measures for securing an unfailing water supply, and not take the risks of possible drouths liable to extend through months. The FARMER'S REVIEW has in the past not a few times called attention to this subject, but in view of its great importance and the present needs of many localities, brings it up again.

In considering this question three sources of relief present themselves. They are deep-bored wells, tapping the deeper and permanent veins of water and operated by a wind-mill pump, surface ponds to collect and hold the water from the melted snows and excessive rainfall, and cisterns for storing water falling upon the roofs of buildings or intercepting that running in tile drains where it can be stored up and held as a reserve supply till the ordinary sources of supply fail, when it becomes available to bridge over a time of drouth. Of these methods, the first named, viz., the deep bored-well with wind power pump and its necessary attachments is undoubtedly the best, and also the most expensive, costing for a good outfit from \$250 up, according to the depth bored and the nature of the material gone through. Well boring machinery and well outfits and appliances have in the past few years been brought to such perfection that wells made by parties who understand their business and supplied with a properly constructed mill and pump, will work for years without giving trouble to the owner unless the mill becomes disabled by violent storms. One great point in favor of such mills is that they can be located at such point as will best accommodate the requirements of the farm, either for household uses or the needs of live stock.

The second method mentioned, viz., surface ponds, is not appreciated as it deserves to be. They can be made by damming the outlet to a depression on the farm, care being taken to excavate to the solid clay for the foundation of the dam, and afterward scraping off the porous surface soil to deepen the pond and increase the height of the dam. In many sections of the South these surface ponds, called "tanks," are the main dependence for the stock water, and even to supply locomotives on railroads. Mention has more than once been made in the FARMER'S REVIEW of such a surface pond twenty miles west of Chicago on the C., B. & Q. railroad made some fifteen years ago, but without taking out the porous surface soil, which has never failed to supply an abundance of good stock water. One season, the great drouth of 1887, brought it down to the mud, but the fall and winter rains filled it up again, and it has since done efficient service. There is hardly a farm which will not somewhere furnish good natural conditions for making such a pond.

Where the ordinary sources of supply—wells or creeks—are usually adequate,

but fail in time of drouth, one of the best methods for tiding over such a time is the construction of cisterns of sufficient capacity to hold water enough to carry one through an emergency. Taking the entire country north of the Ohio river, and from the Alleghany mountains west to the Missouri river, its annual rainfall (including melted snow) will not average less than thirty-two inches per annum. Those who have never figured the matter will be surprised at the amount of water which the roof of an ordinary farm barn will supply during the year for storage in cisterns. A barn 40x60 feet covers an area of 2,400 square feet. Allowing that one-third of the annual precipitation is lost on such a barn by coming in the form of drifting snows which are swept off the roofs by the winds, there yet remains an equivalent of two feet in depth of water over the 2,400 square feet, or an equivalent of 4,800 cubic feet, 35,906 gallons, or over 1,100 barrels of water. This amount would furnish drink at the rate of four gallons per day to fifty head of farm stock for a period of nearly six months, so that a farmer who makes provision for saving and storing even a part of the rainfall upon the roofs of his farm buildings has a large measure of protection against scarcity of water in time of drouth.

Besides the water available from rainfall upon the roofs, there is, as already suggested, the water running in a wet time in tile drains, which can be used to fill cisterns constructed along their route to any extent that may be desirable. A dry time is a good time to construct cisterns, as it is desirable to excavate to the depth of ten or twelve feet, and one is often in ordinary times troubled with water coming in at the bottom, which makes it a difficult matter to get a good set to the cement, as the writer found to his cost last spring in constructing a house cistern when the ground was too full of water. Where there are no tile drains on the farm cisterns can be constructed and filled even on level ground, if it has a clay sub-soil, by running out lines of tile radiating from the cistern like the spokes of a wheel, the outer ends being laid, say two and a half feet deep, and deepening as they approach to cistern, so as to give a good fall—*Farmers' Review*.

### Rules for Building Barns.

Kansas farmers have not yet generally gone into the barn-building business in "manner and form," as our Eastern brethren do it. We have some good barns in Kansas, but there are few, comparatively, built as if they were the most important thing on the place. Our barns ought to be larger and more convenient every way. Here are some useful hints on the subject, given by a New York farmer under the heading—"Rules for Building Barns," and printed in *Country Gentleman*:

These buildings are often erected very much at random, and without a careful estimate of their needs, and with an imperfect knowledge of many useful details. The following twenty brief rules, if observed, would often save money, meet requirements and afford conveniences, although others might be added:

1. In the first place ascertain what will be wanted in the proposed barn.
2. Estimate the number of tons of hay to be stored, the loads of unthreshed grain, the required contents of the granary, and the number of cattle and horses to occupy the stables.
3. Calculate the room required for hay at 600 cubic feet on an average for a ton, and nearly the same for the unthreshed grain.
4. Determine granary room by allow-

ing one and a quarter cubic feet to the bushel in the bins.

5. For cattle and horse stables, allow for stalls at least three and a half or four feet wide for cattle, and five feet for horses and fourteen feet for entire length including passages and mangers.

6. Then provide room for hay and grain bays, space for straw, area of threshing floor, room for tools and horse power, size of granary, entire space for cow and horse stables, root cellar, silo, and manure sheds.

7. In arranging all these, place the threshing floor convenient to the grain bays, and the granary contiguous to or below them; the feed rooms, roots, meal or ensilage, on a level with and near the animals, and give heavy products the first place for convenient position.

8. Provide for good working space for horse forks and hay carriers.

9. Having thus laid the general plan, select, if practicable, gradually sloping ground for the barn, so as to give ready access to the stables, cellars, etc., below, on one side; and to the principal floor above, by a slight embankment, on the other side, for ready access of wagons.

10. Every barn should be at least a two-story one; the basement may include cattle stables, sheep pens, root cellar, cistern, water troughs, silo and area for manure.

11. The next story above may have central floor for drawing in crops, tool rooms, horse stalls, granary, harness room, and tool rooms including horse-power.

12. A three-story barn should have an upper bridge or causeway for entrance, and is particularly convenient for unloading hay and grain. It should have at least twenty feet posts.

13. Chutes should be provided for throwing down hay from the second or third story to the animals below.

14. All barns should have good eave-troughs, connected with spacious underground cisterns, if water is needed.

15. The basement walls should stand on small stones or coarse gravel in a broad deep trench, to effect drainage; and if on wide and heavy flag stones, projecting several inches within the walls, rats will not burrow under them.

16. A space of a foot between the basement wall and the earth outside, filled with broken stones or coarse gravel, will effect good drainage down to the drain below, and prevent heaving of the walls by frost.

17. Every granary should be graduated inside, so as to show at a glance the number of bushels it may happen to contain any time. This graduation may be quickly made at any time by multiplying the cubic feet by 45, and dividing by 56.

18. Petroleum makes inside floors last longer, and gives outside wood work the character and durability of cedar.

19. The value of a barn with its surrounding cattle yards is increased by evergreen screens, which are the most pleasant and cheapest shelter against winter storms.

20. The cost of barns will vary much with locality, price of lumber, and skill in the builder, but a tolerable approximation may be made beforehand by allowing \$1 for each two square feet of area if the barn is made of rough lumber, with stone wall basement; and when materials are very cheap, two and a half or three square feet may be had for \$1. For planed lumber and good finish, with paint outside, one-half more may be added.

One of the best absorbents of animal odors around the stable is dry dirt. Keep a supply on hand under cover ready for use when needed.

### Agricultural Notes.

Better to have a surplus of hay than not enough. You cannot foretell how severe the winter may be.

It's folly to put the small potatoes in the holes between the large ones that will sell better without them. Feed them to the stock or poultry.

With an improved condition of the farm comes the ability to carry more stock, and with this change there must be increased manure, so there is a sort of compensation extending through the entire system of farming, and the results correspond to the forces employed.

The farmer who thinks there can be nothing new in agriculture should remember that thirty or forty years ago his grandfather thought the same way. It is a fact agriculture has made more advancement during the past ten years than in any other ten years of the world's history.

Only a few years ago the Argentine Republic farmers did not raise enough wheat for their own use, now they export. Last year they sent out over 7,000,000 bushels, and as many acres of pasture have been converted into green fields; it is thought they will have a handsome surplus this year.

Salt is an absorbent. Thrown on the stable floor, after it is cleaned, it will absorb the ammonia. Thrown into the manure heap, it will kill the seeds of thousands of weeds. Thrown on the land, it kills the grass and noxious growth that takes up more of it than is good for them. Sown on lawns in the spring, it kills worms, bugs and weeds, and gives the grass a chance.

Of the results of dehorning, a correspondent of *Field and Farm* says: "Twelve of my thirty cows that were dehorned last winter aborted their calves in the spring, and five of the thirty died. Those that have lived are not worth more than two-thirds their former value. With as good and even better feed than they had last year, they do not give more than half their usual flow of milk."

Fattening hogs should always have access to salt. Coal ashes and screenings are excellent for them, and this sort of refuse should find a place in the hog yard or in the pens. The hogs will eat every bit. It is an excellent corrective for them, and helps to give them an appetite. Charcoal is a superior corrective, but it is comparatively costly, whereas coal ashes cost nothing. The fine ashes absorb the juices of the manure, and are rendered valuable in this way for a fertilizer.

An Indiana farmer keeps a green pole in his stable through the winter for his horses to gnaw at. For a bad cold, he keeps a white ash or cottonwood, but still better a poplar. To give appetite, he puts in a quaking ash pole. For worms or bots, he puts in slippery elm. He says that the slippery elm is the best remedy that he ever tried to expel worms, bots and all ascarides from the alimentary organ of the horse. Besides, it is excellent in urinary troubles. For coughs, he puts in a wild cherry pole. He says his horses prefer the elm, poplar, or cottonwood before all others.

A Providence (R. I.) inventor is now testing an organ with glass tubes, which, it is claimed, will be much superior to metal, both in purity and volume of tone, and cheaper into the bargain.

"Why should a man whose blood is warm within his veins sit like his grandsire carved in alabaster?" He shouldn't. He should stir around and make something of himself. One of the best ways of doing this is to engage with B. F. Johnsen & Co., Richmond, Va.

An electro-magnet with a carrying capacity of 800 pounds is attached to a crane in the Cleveland steel works, which readily picks up billets and other masses of iron without the aid of any other device. A boy is thus enabled to do the work of a dozen men.

### Insects on Fruit Trees.

Can be destroyed by the judicious and timely application of London purple dissolved in water. The Field Force Pump Co., of Lockport, N. Y., have recently issued a very instructive and complete treatise on this interesting subject, which they will send free on application.

## The Stock Interest.

### THE KANSAS TROTTER BREEDERS.

The fourth annual meeting of the Kansas Trotting Breeders' Association recently, was presided over by the veteran breeder, Geo. W. Greever, Tonganoxie, who has been engaged in the business in Kansas for thirty-four years and who has sent out and owned many of the best trotting horses in this country. He now owns Picco, by Parmenus. This is the stallion that took first premium at the Kansas State Fair in 1887 and again in 1888. Besides being among the oldest breeders he was one of the earliest to recognize the necessity of such an association, and has labored untiringly in the interests of the association.

Another, perhaps the most prominent breeder in the State, and the father of this association, is Mr. E. A. Smith, Lawrence. He has the largest farm devoted to fast stock breeding in the State, and a brief mention of what he has sold from it will give a faint idea of what is being done by him. He sent out Sister Wilkes, who was bought by Mr. W. C. France, of Kentucky, for \$12,000; Musette, to Ohio parties for \$5,000; Wilkomont, by Almont Pilot, to J. A. J. Shultz, St. Louis, \$2,500, and most noted of all, perhaps, though bringing less than the first on this list, Rosemont, with a record of 2:23½, to Mr. Rich, Frankfort-on-the-Main, Germany, \$6,500. This animal was selected after searching the country over and is considered a remarkable sale. He owns stallions, among which are Sealskin Wilkes, by George Wilkes, the only son of the latter in the State; Almont Pilot, Ravenwood and Wilmont, both sons of Almont Pilot, Ethan A. and Olney Wilkes, both sons of Sealskin Wilkes. He has mares from Wilkes, Mambrino Patchen, Casseno, M. Clay, Scott's Hitoga, Wood's Hambletonian and other ultra fashionable strains, in all sixty head. He has bred more of the 2:30 steppers than all the other breeders in the State. He knows his business and is making fast horses and the rearing of Jersey cattle his life work. Another intelligent and enthusiastic breeder was Mr. H. G. Toler, of the Toler stock farm, Wichita. He is somewhat later in Kansas than the most of the breeders present, but his experience and life-long association with fast stock and fast stock breeders qualifies him to advise in all matters relating to stock of this kind. He owns Ashland Wilkes, by Red Wilkes, time 2:24½. For this filly by Robert McGregor, two years old, he refused \$1,500 only a short time ago.

Electioneer is one of the most noted in the West. The many prizes he has won his owner in the speed rings all over the State prove the claims Mr. Campbell makes for his favorite.

Mr. C. E. Westbrook, Peabody, is so well known as the owner of Joe Young that it is hardly necessary to make extended reference. Any man might be proud to own such a peer of the track, but Mr. Westbrook has other horses that are coming in at the front on nearly every track. He gives his entire personal attention to his great breeding farm to training his stock. His personal knowledge and the care he gives his stock has much to do with his success, and their success as well.

Messrs. I. C. Webster & Son, Valley Falls, are a firm who are producing horses that will compare in speed and beauty with any in the West. They own the famous Evermont—a stallion that has won some noted prizes and whose offspring are maintaining the record of their sire on tracks both in and out of the State. They devote

themselves exclusively to breeding this class of horses and have been uniformly successful.

Coming to our Shawnee county breeders, I am proud to mention the Prairie Dell stock farm, four miles west of the city, owned by Mr. R. I. Lee. He has in his stables four stallions sired by representatives going in the the 2:30 class. His stallion, Robert McGregor, has more grandchildren in the 2:30 list than any other horse of his age or younger in the United States. Fergus McGregor, by Robert McGregor, is the sire of Lady Wonder, who attained a record of 2:30½. Fergus McGregor excels the old horse in speed. Another son, McCallummore, in-bred to the greatest star mare ever foaled, Nancy Whitman, who was the dam of Robert McGregor, record 2:17½, Madaline 2:23½, McLeod 2:34½. This horse traces in his pedigree more extreme speed lines than any stallion in the State. If the breeders of Topeka and Shawnee county do not find what will please them in Mr. Lee's stables they will be hard to please and may go further and fare worse.

Mr. J. R. Young, Junction City, is one of the later members of the association and is full of enthusiasm. He owns at his stables in Junction City a number of noted stallions and he is being heard from on the tracks of the State.

Messrs. Harris & Rogers, of Solomon City, have a large farm near that city on which they are producing stock that ranks among the best. Their horses and mares at Abilene, Wichita and on many other tracks won distinction in last year's races. Full details of their stock is not given as the time for an interview did not permit.

The secretary and treasurer of the association, Mr. J. Q. A. Sheldon, Manhattan, left before the close of the meeting and no opportunity was afforded to learn of his stock.

G. Dudley, another breeder of fine horses, has on his farm, just south of the city, some of the very best stock in the State, consisting of stallions and mares, and their progeny. He takes great interest in the breeders' association and is one of its most intelligent advisers. He breeds fine horses for the pleasure of it and his success is creditable to himself and this city. Not much has been said or written concerning his stock, but the visitor to his farm will be shown superior specimens in this line.

Mr. Campbell has on his extensive ranch near Kiowa, Kiowa county, some of the best bred stock. We have not the particulars at hand to give a detailed statement.

The meeting was one of the most enthusiastic meetings the trotters have ever held.

They decided to discontinue the publication of races of less than a mile. The association passed a resolution favoring the holding of the next races entirely separate from county and State organizations and recommending that the races of next season be held on a mile track. As there are but three in the State, viz.: Emporia, Wichita and Abilene, it will be seen that one of these cities will secure the races next season. Eleven purses will be offered and the classes will be announced in future issues of the of the FARMER.

A cow must not be hardy in the sense men talk of it, but she must have constitution, is the way a dairyman puts it. The book-keeper must have constitution to stand the confinement of his life, but he need not be hardy in the sense of bearing exposure. Constitution is endurance in a given line of action. I may not have half the endurance that John Sullivan has to stand up and be knocked down, and still I might excel John Sullivan twice over in sitting at the desk.

### About Fall Pigs

"One of the best paying animals on the farm is the pig. He can digest almost every kind of refuse produced from the farm; he works up leaves, straw, weeds and sods into fine manure, and when the animal is slaughtered every particle of it can be made use of. They are profitable, but they are so only when rightly fed and managed. Our usual plan is to allow them the run of the woods during the summer and fall months, as an immense amount of nutriment can always be found by these industrious animals, such as roots, grasses of various kinds, and the nuts from many varieties of trees. They are fed, in addition, good swill feed slop, night and morning. The slop is made by placing half a bushel of good feed into a barrel of water, and when slightly fermented fed as wanted. Nothing in all our experience will so scour, young pigs especially, and stunt older ones too, as old rancid slop, and the hog cholera is brought on by just such feed and feeding in filthy pens and yards. The man that cares not to feed his stock on decent food don't deserve to have any; and he rarely succeeds in getting a profit out of them, as some mysterious disease usually makes its appearance and sweeps his stock of hogs and pigs, and he calls it his luck, when most of the time it can be traced to bad food and worse surroundings."

So says the agricultural editor of the *Baltimore American*, and he adds some further equally practical remarks, as follows:

"Whilst hogs and half-grown pigs may run together in the woods and thrive by such treatment, the sows should be brought home some time before the pig, and put into separate and comfortable pens, and fed a variety of good, wholesome food, and made tame by daily going into their pens and rubbing them with straw. Charcoal or old burnt wood should be occasionally given, as it corrects the rancidity of their stomachs, and is a great help to them in other ways.

"We feed, in addition to what slop they may need, and only as much as can be eaten up clean, some sweet corn, stalks, and all, cut from the ground. The stalk has a goodly amount of sugar in it, and is as much relished as the ears of corn. When the sow is near pigging, care should be taken to have some fine-cut straw thrown into the pen, and only a little, so that the little fellows may not be lost in the straw and smothered or lain upon. Only a moderate quantity of food should be given the sow before and after pigging, and she should be watched to see that she cares for her young. Some, if they have not been fed properly, will eat their young, and if the pens are not built tight, and the little pigs get out among the other pigs, they will be eaten by them. An old German gave me a cure for sows eating their pigs, and it is to give them meat some days before they pig, though I find that it is much the best to fatten and slaughter all such wild ones.

"After the pigs are a few days old they should be allowed a little milk with oats ground fine and made into a thin slop. This is one of the best kinds of foods, as it contains all the materials that go to make up the pig, and we find that it is equally good for all animals, young and old, on the farm. In addition to this food we give a little oats whole, in a clean place on the floor, as it is a change, and, following the example of the mother, they will soon learn to eat them greedily.

"Small potatoes, pumpkins, sugar beets and mangels and turnips are boiled up in a large boiler, and after they are thoroughly cooked, these vegetables are mixed with several bushels

of a mixture of equal parts ground oats, corn and mill feed. This is a very good food, and fattens rapidly. This boiler is situated in the market-house, and we use it for a variety of purposes, for boiling feed and water, for scalding hogs, and for keeping the room warm when we are preparing vegetables for market. It consists of a large iron pot, holding some forty gallons, into which water can be pumped right from the well. It is bricked up, so that the hot air can circulate entirely around it before going out of the chimney, and by so doing the entire heat is pretty well used up before it escapes. There are many better methods than this, but they are much more expensive; though if I were going to buy, I would get one of the improved kind. For all practical purposes this suits, and several of these big iron pots can be picked up at the second-hand stores, and with a little ingenuity and some work, can be made to answer just as well as one costing \$50 or more.

"In the feeding of pigs, not so much depends upon fine buildings and appliances as in having plain, practical pens, and in the owner either attending to the feeding himself, or seeing that it is done with regularity three times a day, and the food given at the required time, and just enough and no more, and the pens kept clean. Thirty or forty pigs, well fed and kept abundantly supplied with litter, will make an immense amount of manure and of the best kind, suitable for all crops. They should be allowed the run of the barnyard, and at feeding time, if educated right, will go into their own pens without trouble."

### Revive Sheep Husbandry in Kansas.

In 1880 the number of sheep in Kansas was reported to be 426,492; in 1885 the number had increased to 875,193, an increase of 348,701 in three years; in 1888 the number is put at 402,744, a decrease in three years of 472,459. Sheep husbandry in Kansas was profitable up to 1884, when it began to decline. Without stopping now to discuss the cause of the decline, suffice it to say that many farmers attributed it to the change in tariff duties on foreign wool. The change of administration in March, 1885, brought into power a party inclined to remove all duties from wool, and that added gloom to the wool outlook, as seen by persons who charged the law with their misfortunes.

That is not the point we wish to present now. It is mentioned only to suggest that whatever trouble came to farmers in that way may now be considered as having spent its full force. There will not be any further decline on that account. The recent election shows plainly enough that a very large majority of American farmers want a reasonable duty kept on foreign wool, and there does not appear to be any reasonable ground for doubt that the policy of government during the next quarter of a century at least will be protective as to this article at any rate. There is nothing in the way, then. Kansas is well adapted to sheep raising. Every farmer ought to have a small flock of twenty-five to a hundred good wool-bearing sheep. There is no more profitable animal, no more free from disease if well cared for. A few dollars will start a poor man in sheep. He can get a dozen ewes for the price of a common cow, and a ram can be purchased proportionately low. Fifty dollars will lay the foundation. In five years the flock will number a hundred head, and the profits will have exceeded the original outlay 300 to 500 per cent.

Wool is always a cash article. Price may be low but the article is salable. Mutton is the best of meat. Farmers in western Kansas can supply themselves with sheep at little expense, and

no other animals will pay them better. There is no longer danger of unreasonable competition from abroad. Farmers may expect a healthy growth of American markets for American wool. We are not going to have free trade in wool, at any rate before our own farmers raise enough wool to supply the home demand, just as they now do wheat and corn. Let farmers take courage and revive sheep husbandry in Kansas.

#### Finishing Mutton for Market.

There is probably more half-made mutton (if we may give unfinished sheep such a name) in market than poorly-fed stock of any other kind intended for the shambles—although there are certainly a great many cattle which go to the block in a very unripe condition. It is no exaggeration to say that more than one-half the sheep sent to market have no business there, and sell at from one to two cents per pound less than they would command if decently finished. A half-fatted sheep is as mean a thing in live stock as is ever placed before the buyer. The grower thinks it is a little too good to sell at stock prices, while the butcher gives it attention simply because it is at his mercy as to price. The half fat sheep is responsible for the antipathy which so large a proportion of the American people have for mutton, and the producer of this meat is largely responsible for the disfavor in which his product is held. Finish your sheep before sending them to market, and thereby secure your own profit, while at the same time give the consumer a reason for claiming that mutton is the most appetizing, as it is conceded to be the most wholesome meat in the market.—*National Stockman*.

## In the Dairy.

#### SOME FEEDING EXPERIMENTS.

In Bulletin No. 3 of the Minnesota Experiment Station, Prof. Porter details some experiments with different kinds of feed:

March 9, 1888, six cows were selected from the dairy herd with a view to comparing ensilage with timothy hay as a feed, also to test the matter of warming water for dairy cows. It being the wrong time of the year to select from the herd cows all of one breed, fresh in milk and otherwise in similar conditions, three different kinds were chosen. Two of these were registered Holstein-Friesians, two were grade Ayrshires, and two were natives, probably having some Short-horn blood. They were paired off so as to have two groups of three each, alike as to weight, time since calving, daily milk yield, breeds, etc. In this way the individual and breed characteristics were more or less perfectly eliminated. These cows had been fed on ensilage, chaffed hay and a medium allowance of bran during the several previous winter months, and their water had been kept warm by means of a steam pipe extending into the tank from the barn engine. They were accustomed to standing in stanchions, and in pleasant weather were allowed liberty in the barn-yard, where some ensilage or hay was given them during the day.

A number of tables are given showing results from day to day. The experiments were concluded May 17, and the following are general conclusions:

2. The fact that ensilage made from the largest, "most watery" kind of Southern dent corn, grown thirty-five tons to the acre, can be compared with fine timothy hay, nearly in the proportion of 2½ to 1 for milch cows.

is most important. While we do not necessarily claim that more digestible food is taken out of the silo than is put into it, the results of these experiments would suggest that ensilage has the quality of making the grain feeds with which they are given, more digestible. The cows seemed to relish the ensilage with grain far better than the moistened hay with grain. If the succulency of the ensilage increases the palatability of the grains, it is reasonable to suppose that it may increase their digestibility also, since these two qualities of foods are so intimately associated.

3. The fact that these cows decreased in milk yield when changed from the ensilage, bran and a little hay fed the dairy herd during the winter, to the rich grain and hay ration given during the first period, very much strengthened our faith in the silo. This faith was made still stronger by the practical work of the experimental feeding as well as by the results. One prominent fact is that the timothy hay favored the production of fat on these cows, during both periods one and two, while ensilage favored the production of milk and butter.

4. Part bran, instead of all corn as a grain feed to supplement corn ensilage, proved the better for fattening steers. If confirmed upon further trial, this is a most important fact brought before those who produce beef, especially in the great wheat regions of the Northwest, where cattle and more diversified farming, to prevent lessened fertility, are much needed.

5. With a warm stable and little exposure to cold during the late winter and early spring, milk cows did somewhat better on ice-cold water than those for which the water was warmed to 70 deg. F. Doubtless water at 50 deg. would have given better results than either of these extremes under the conditions of the experiment. The point made is, that any benefit arising from warming water in cold weather (and we believe there is a benefit) must come from the combined ill effect of cold applied externally and internally at the same time, as the latter alone gave no bad results. Cold water in common practice, doubtless adds much in ill effects to the externally applied cold, recently strained through barbed wire fences, or even the silent unadulterated below zero weather of our northern winters. Cold water may be the last straw which breaks the back of profit.

6. Warming water for these beef cattle during the spring weather proved quite harmful, even when compared with results from ice-cold water. This still further illustrates the point, that warming water in any but very cold weather does not pay, and may even do harm.

#### How to Keep the Stables Pure.

A writer in the New York Tribune says that the strong cowy odor often noticed in milk may be greatly helped by giving the cows a good carding every morning. We have no doubt of the excellence of this advice, as it places the skin in a proper condition and thus enables it to throw off the odors that would otherwise be absorbed by the milk. But prevention is always better than cure. Many farmers keep their cow stables in a terribly filthy condition, obliging the cows to breathe over and over again the foul gases thus engendered.

A good sprinkling of common land plaster every night under the cows and in the gutters behind them will absorb these gases. What is more, the ammonia thus absorbed from the urine of the cattle will pay as a saved fertilizer four times over the cost of the plaster.

Unless an absorbent is used, the ammonia is nearly all wasted by evaporation. The plaster holds it rigidly until vegetation takes it up as a plant food. By a liberal use of land plaster in the stables you improve the health of your cows, prevent bad flavors in the milk and butter and more than double the real practical value of the manure. Try it the coming fall and winter.

#### Churning and Salting.

What makes the butter come? It is not known whether concussion or friction, or both, cause the separation of the butter from the buttermilk in churning. But we suspect that concussion is the real agent that produces the separation, as we have really seen no churn that did not in some way produce more or less concussion. All the churns we have seen used appeared to produce good results, and we find every dairyman is satisfied with the work of the churn he uses, whatever the kind, style or patent. We cannot, therefore, recommend any style of churn as superior to another, but we prefer the simple and less expensive forms, as not only costing less, but being easier to keep clean. The churning should be steady and not violent. A too rapid or sudden separation of the butter from the buttermilk is not desirable. It is no recommendation for a churn that it churns quick. Such a churn is apt to injure the so-called grain of the butter, and make it salvy and greasy. The least churning that will separate the butter from the buttermilk is the best.

When to stop churning.—The improved model method now in practice by the best butter-makers generally, is to stop the churn as soon as the butter is collected in particles the size of a wheat kernel. Just before this, when the first signs of the separation of the butter is seen, the sides of the churn are washed down with cold water—usually below 60 deg., or about 55 deg.—to not only prevent waste, but to harden the butter and make it easier to handle. When the granules are the size of wheat kernels, the butter is drawn off, or the butter taken out of the buttermilk, as the case may be. If the butter is left in the churn, water is poured in to float the butter, which is then gently agitated a moment and the water drawn off. This operation is repeated until the water runs clear. Sometimes one of the washings is in brine, which coagulates the caseine into a soluble form and prepares it to be washed out afterward. In this way, it is believed that purer, longer-keeping butter can be made. In some cases, however, butter-makers have customers who want a buttermilk flavor in their butter. They, therefore, do not wash the butter, or wash it very little. Such butter must be consumed at once, as it will not keep. By this method of retaining the butter in a granulated form, only sufficient working is required to evenly work in the salt. The less working the better.

Salting.—The salt, after the butter is properly drained, can be carefully mixed with the butter by stirring. When thoroughly incorporated, barely pressing the butter together in a solid mass, is all that is needed. If one does not want butter very salty to the taste, it can be even and nicely salted by completely wetting it with saturated brine, then carefully pressing the granulated butter together and leaving in it as much of the strong brine as will remain. We have seen butter salted in this way, and it was very evenly and completely salted, having in it no undissolved grains of salt, but it was not as salty to the taste as some like. About an ounce to the pound is good salting; but more or less salt must be used to

## Every Household

Should have Ayer's Cherry Pectoral. It saves thousands of lives annually, and is peculiarly efficacious in Croup, Whooping Cough, and Sore Throat.

"After an extensive practice of nearly one-third of a century, Ayer's Cherry Pectoral is my cure for recent colds and coughs. I prescribe it, and believe it to be the very best expectorant now offered to the people."—Dr. John C. Levis, Druggist, West Bridgewater, Pa.

"Some years ago Ayer's Cherry Pectoral cured me of asthma after the best medical skill had failed to give me relief. A few weeks since, being again a little troubled with the disease, I was promptly

#### Relieved By

the same remedy. I gladly offer this testimony for the benefit of all similarly afflicted."—F. H. Hassler, Editor *Argus*, Table Rock, Nebr.

"For children afflicted with colds, coughs, sore throat, or croup, I do not know of any remedy which will give more speedy relief than Ayer's Cherry Pectoral. I have found it, also, invaluable in cases of whooping cough."—Ann Lovejoy, 1251 Washington street, Boston, Mass.

"Ayer's Cherry Pectoral has proved remarkably effective in croup and is invaluable as a family medicine."—D. M. Bryant, Chicopee Falls, Mass.

## Ayer's Cherry Pectoral,

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass.

Sold by all Druggists. Price \$1; six bottles, \$5.

suit the taste of customers. None but refined salt should be put into butter. The principal office of the salt in butter is to impart an agreeable flavor, in connection with the natural aroma of fine butter; but it is a fact that too much salt injures good flavor, and it may, to some extent, be used to cover up or neutralize bad flavors. We do not recommend its use for this latter purpose, preferring that the natural flavor of butter from pure cream should be preserved.—*U. S. Dairyman*.

"Then let the moon usurp the rule of day,  
And winking tapers show the sun his way;  
For what my senses can perceive,  
I need no revelation to believe."

Ladies suffering from any of the weaknesses or ailments peculiar to their sex, and who will use Dr. Pierce's Favorite Prescription according to directions, will experience a genuine revelation in the benefit they will receive. It is a positive cure for the most complicated and obstinate cases of leucorrhea, excessive flowing, painful menstruation, unnatural suppressions, prolapsus, or falling of the womb, weak back, "female weakness," anteversion, retroversion, bearing-down sensations, chronic congestion, inflammation and ulceration of the womb, inflammation, pain and tenderness in ovaries, accompanied with "internal heat."

In breeding and feeding cattle the first legitimate purpose is to make the animal do the very best that it will. The saving of food—in the direction of depriving the stock of all that it will eat—has no place in the calculation at all. It is true that in some cases the animal will eat its head off, though that will occur only with scrub stock. But in such cases the animal should be got rid of. It does not destroy the rule that profitable meat production and profitable dairying demands abundant food and good food.

A dairy paper that recently had an editorial in defense of oleomargarine, notices the criticisms that have been made upon its position, and says that its purpose is to encourage making better butter. It is a good way around to get at that purpose to defend Armour in making what is sold whenever any one dares do it, for pure creamery butter. Give Armour a free field, and it will require a mighty deal of encouragement to induce anybody to make butter of any kind, good or bad.

"I use Ayer's Cherry Pectoral freely in my practice, and recommend it in cases of Whooping Cough among children, having found it more certain to cure that troublesome disease than any other medicine I know of."—So says Dr. Bartlett, of Concord, Mass.

## Correspondence.

### Something For Nothing.

EDITOR KANSAS FARMER:—In human nature there is a spice of the gambler, a desire to get something for nothing, a longing for the possession of wealth without giving an equivalent either in money, labor or other value. Unrestrained nature crops out in the thief or murderer, as was the case in the celebrated "first family." It is the duty of governments to curb this propensity. For the prevention of wrongs and the encouragement of rights we have the decalogue and other codes of laws, but no human power has driven, or ever will drive, the impulses of covetousness from the instincts and practices of man. The prowling thief, the bold robber, the audacious murderer, all in their own vile ways seek wealth at the expense of their victims. In more civilized walks of life intrigue and deception come to the aid of the avaricious speculator, and even the professional man measures his fees by the length of his victim's purse. In a word, governments are established for the restraint of vice and the protection of virtue; but no sooner does the greed of man reach the ear of power than vile systems are urged upon it, schemes for personal aggrandizement and wealth are brought to the front with all the sophistry and effrontery of the skilled logician, of unblushing selfishness, although a measure may contain in its core the seeds of ruin and dissolution, and those seeds in taking root destroy our freedom; still the danger is hidden by the hope of gain, and a law may obtain through fraud as false and fatal as the doom of the damned, the ultimate outcome of the false theory and governmental protection to trade. The very word protection implies exclusiveness, privilege and monopoly, and should be excluded from the laws of "a government for the people" and banished to the realms of despotism and monarchy. Is free trade or freedom in any form like—

"Vice, a monster of such frightful mien,  
That to be dreaded need but to be seen?"

We are so perverse and hidebound though an angel should come on wings of love and mercy to warn us of dangers and pitfalls in our path, if those dangers were linked to our partisan creeds, his words would fall like pearls before swine, and we would bid him go his way for we prefer ruin in the party to safety outside, we are joined to our idols let us alone.

We have but to glance over the nations of the world and note the conditions of the people, enquire the cause of their poverty and degradation, we come to the conclusion that protection of the rich by laying heavy burdens on the backs of the poor has been the chief cause of misery.

Forty-two years ago England threw off the tentacles which had been for years crushing life from the populace and soon starvation was followed by peace and plenty, and she became the mistress of the commercial world. Rays of light are breaking in upon the untold miseries of Ireland. The chain of the oppressor is beginning to relax its grasp. Noble men are engaged in the work of her liberation from the rule of lordly tyrants. In the contemplation of her fate may we not see our own doom written upon the walls of her dungeons if we do not throw off the tentacles of this devil fish of protection? The immense resources of our great country may avert the fate for many years but ultimately the same road will lead to the same end.

H. Z. FRIZBIE.  
Grantville, Jefferson Co., Kas.

### Interest Rates in Western Kansas.

EDITOR KANSAS FARMER:—Permit me to say that I think Mr. Clinton's statement of rates of interests in western Kansas is incorrect. I am personally acquainted in western Kansas, and quite conversant with the loan business in several counties, and do not know of a farm loan or a long time loan from any loan agent at a less rate than 7 per cent. and a commission, which is 3 per cent., making 10 per cent., the borrower paying all charges, drawing papers, recording and abstract, which sometimes reaches the extravagant figures of \$50. For all short loans 2 to 5 per cent. is charged per month, and that in advance. All these mortgages must be amply secured. If he wishes ref-

erences and names of parties borrowing and paying the above rates he will only have to send to me, and a stamp for postage, and I will send him all the names he wants. This high rate of interest is what is the matter with Kansas. It has reduced the people to such a low state of finance that they are unable to develop the natural resources of the country. Capital demands and receives too good a rate of interest to invest in any other enterprise, consequently the real wealth of the country lies hidden in the bowels of the earth and will remain there until the money grinders get possession of the soil, and there is no one left to borrow their money; then we will have coal mines and salt wells, oil and gas and all sorts of wealthy deposits.

The absolute poverty of the people in money matters was one and probably the only reason of the success of the banking party in our last election. Hundreds were bound by mortgages, and thousands bought for small amounts in money and other considerations, and we need not look for any better times as long as the present system exists. Good crops will only enable the farmers to be a little more independent in the provision and feed line; the better the crops the less will be the price and higher will be the goods he feels obliged to purchase, because wealthy corporations must be made more wealthy, and the producer must be made more dependent to fulfill the laws of Congress and the greed of the money grinders.

Splendid Kansas weather still prevails. All stock are fat and fine. Prices gradually declining. Fall grain promises well, and a good deal of late seeding has been done. Several of our merchants are closing out. Farmers generally are on bed rock, which is a good foundation if they can stay there, but bankers and loan agents are crowding for their money that is due, and there is very little to be had. Coal and flour has advanced, and how a good many are to get through will be better known in the spring.

W. J. COLVIN.

Larned, Pawnee Co. Kas.

### Cheap Sugar.

EDITOR KANSAS FARMER:—Several articles appeared in the KANSAS FARMER urging the striking off of the duties on sugar. It is claimed that this will cheapen sugar to the consumers by the amount of the duty remitted, or say two cents. But can we be at all sure that such would be the result? Nine-tenths of all the sugar we use is produced in Cuba, which is a colony of Spain. It now pays a small export duty to Spain before leaving Cuba. There is not sugar enough produced elsewhere to meet our wants. For some time, that is, till we either develop a home production to meet our wants, or till some other sugar-producing country can offer such an enormous quantity as we use, we must buy our sugar from Cuba. Spain knows this perfectly well, and knows that the United States will continue to buy sugar at the present price if she has to pay it. If we strike off the two cents per pound from sugar, what is to hinder Spain from putting on additional two cents export duty on sugar? The treasury of Spain is never troubled with a surplus. The transfer of fifty-six millions of dollars from our national treasury to the coffers of Spain is a tariff reform that probably no American would urge.

We might as well recognize that it is not in our power to regulate the cost of sugar till we can produce nearly all we can use, or until some other country, such as Mexico, can produce enough to rival Cuba for our market. It might be profitable to secure, if we can, a treaty with the Republic of Mexico granting free entrance of Mexican sugar to our country in exchange for the free entrance of our flour into Mexico. At present there is an enormous tariff on flour going into Mexico, about six cents per pound. This is of course completely prohibitive, and as there is a very limited area in Mexico capable of producing wheat, the ten millions of people in our neighboring Republic are nearly all at present living on corn pan-cakes, (*tortillas*.) It is not unlikely that Mexico would be willing to make such an exchange of commercial privileges with us, and the development of a new and rival source of supply for sugar would at least help to cheapen it as well as open up a valuable market for our flour. If, however, it is settled that we can profitably

produce our own sugar, let us hasten toward that goal with all convenient speed.

MAXWELL PHILLIPS.  
Assaria, Saline Co., Kas., Nov. 27, 1888.

### Let Us Do Our Own Work.

EDITOR KANSAS FARMER:—I have pursued with interest your recent correspondence pertaining to prices in England and America. I think a discussion on this or any other subject where all are interested or affected is not out of place, even in the KANSAS FARMER. I have great confidence in our law-makers, as much now as I did before the recent election; if the duties are not just what they should be, they will be revised; still, I should not be in favor of any radical changes, for the manufacturing business is in operation under the present rates, and if we change the rates we injure the business. It would be far better for some of those men that claim that the rates are making the manufacturer rich to start an "infant industry" of the same kind. This is one object of the system. There is plenty of room here; let us do our own work and keep the money this side of the ocean.

E. D. MOSHER.

Hartford, Lyon Co., Kas.

### Practical Letters Wanted.

A correspondent, in the letter below, strikes a good note. We agree with him that farmers need discussion of farm methods more than anything else just now. How to farm successfully is the great question now. So far as tariff is concerned the people have determined to retain the protective principle. All we need on that subject now is to urge Congress on to an early reduction of duties to a reasonable standard, leaving such an adjustment of rates as will afford the most protection to our own industries. The Senate bill, now pending is, in the main, a good bill, and we doubt not it will be pushed forward with diligence. Taxes and interest need some further airing as time shall seem appropriate. But first, as our correspondent suggests, is the great question of how to grow big crops certainly. Let us have letters of experience on the subjects named in the letter and on all other farm matters. Here is the letter:

EDITOR KANSAS FARMER:—Now that we have tariff, taxes and interest discussed in your columns for the last three months, is it not time for you to call a halt and get some practical facts from some of your correspondents who have been trying to raise crops for the last three years under difficulties? It cannot be denied, notwithstanding Prof. Blake and others, that for the last three years parts of Kansas which hitherto raised abundance of crops has not raised one-half of a crop with the exception of wheat this year. I would suggest to you to invite correspondence from practical farmers as to how listed corn stood the drouth compared with planted corn, also the mode of cultivating, time of planting, best way to get rid of suckers, distance to plant, kind of corn to plant—yellow or white, early or late; best way to sow oats, what has been the experience of farmers feeding hogs, whether feeding corn in the ear, soaking shelled corn, or feeding shelled corn dry. Is alfalfa clover a good pasture for hogs, what time to sow it and how much seed to the acre; what has been the experience of farmers whose joint stock creameries have been started by interested parties.

I hope you will give the above subjects a fair amount of discussion in your valuable paper.

OBSERVER.

Haven, Reno Co., Kas.

Apropos to the discussion regarding use of warm water for live stock during winter, a circular descriptive of the Decatur Tank Heater sold by Fairbanks, Morse & Co., Chicago, contains matter of interest. The direct benefits derived from giving heated water to cattle have been long since established by experimental test. Practice seems to have fully corroborated these conclusions, as indicated by the hearty endorsements of those who have used the heaters during the past two winters. There is no room for doubting that a good heater is a profitable investment for farmers and feeders of live stock.

Conviction is in itself a power. The man who is sure of what he says, gives assurance to those who hear him.

### Book Notices.

ALBUM OF TOPEKA.—This is a very pretty thing, indeed, a series of fine pictures of buildings and scenes in Topeka. The best public and private buildings in the city are well represented, with the name inscribed below. The new KANSAS FARMER building is among them. Price 50 cents. May be ordered through this office.

WOMAN SUFFRAGE IN KANSAS.—This is the title of a pamphlet of 112 pages just issued from the press of the Geo. W. Crane Publishing Co., Topeka. It has been prepared by F. G. Adams, Secretary of the State Historical Society, and Prof. W. H. Carruth, of the State University, and consists mainly of extracts from Kansas newspapers, bearing upon the Kansas municipal suffrage canvass in the spring of 1887. The extracts show the discussions in the canvass in the various cities in the State preceding the election, the course pursued in securing votes and the comments respecting the result. Tables are given of the vote at the election of 1887 in nearly all of the towns, and in most of the towns in 1888. A brief sketch of the Women Suffrage movement in Kansas is also given. The pamphlet contains data which will be of great use to all persons interested in the Kansas municipal suffrage experiment. It will be mailed on receipt of 50 cents.

CRITICAL PERIOD OF AMERICAN HISTORY.—It is not saying too much, probably, to assert that nine of every ten adult citizens of the United States do not know there ever was such a period in our history as that which this book treats. The Revolutionary war was fought out under the leadership of General Washington with such assistance as the different States gave on the advice of the Continental Congress. There was no general government, nothing to bind the States together except the necessities of the war. The war was closed by the treaty of 1783 but there was no other or better government after that, and there was nothing to hold the States together, though there were local prejudices and conflicting interests to drive them apart. The thirteen States were so many separate sovereignties. The Articles of Confederation were utterly useless as a guide in government. There were thirteen of the United States of America, but there was no such nation as the United States. Though there was a Congress in session occasionally, it had no authority beyond offering advice, and was absolutely powerless. It could not pass a law, make a contract or pay a debt. So chaotic was the political condition that, as General Washington had foreseen and often foretold, "a more perfect union" was necessary to the general welfare, and a convention was called to form a constitution for a federal government. The constitution was adopted and went into force by the inauguration of President Washington, April 30, 1789. The period between the end of the Revolutionary war in 1783 and the beginning of the government of the United States in 1789, was the most critical period in our history, and it is of that period that this book treats. It contains facts which every student of American history ought to know, for our subsequent history cannot be perfectly understood without them. A great many of our political speakers and writers of the present day, knowing little or nothing of that "critical period," make dangerous mistakes. The book is well written, clear and entertaining in style, and covers a field to which no other one book is devoted, so far as we know. It is published by Houghton, Mifflin & Co., Boston, Mass. Price \$2.

### Inquiries Answered.

SECRETARY J. Q. A. Sheldon, Manhattan, is the person inquired about by J. E., of Glen Elder.

SUGAR REPORT.—Prof. Cowgill's report on Kansas sugar industry for 1888 will be published, we think, about January 1. It will be reprinted in the KANSAS FARMER, the most interesting parts, at any rate. The Professor's postoffice address is Sterling, Rice county, Kas.

MORTGAGES.—An Indiana friend inquires about "the law governing mortgages on real estate." We do not know just what particular point the inquirer has in mind. Mortgages on real estate are governed by laws very much alike in all the States. State the point you wish to know about; we have not room to copy all the law says about mortgages.

## WEATHER PREDICTIONS.

By Prof. C. O. Blake, Topeka.

[Correspondence on account of this Weather Department should be directed to C. O. Blake, Topeka, Kas. See advertisement of Blake's Weather Tables on another page.]

## TEMPERATURE FOR 1889.

DETROIT, MICH., November 13, 1888.  
C. O. BLAKE:—At hand your "Weather Tables" for 1889. Permit me to ask why, on pages 26 and 27, you omit in "Tables of Temperature" the States of Minnesota and Nebraska and Territory of Dakota? These three districts are important factors in making or unmaking prices of our cereals; and the temperature in each is important to the philosophical reader of your esteemed writings. D. B.

A brief answer to the above pointed and important question will be found on page 19 of said book, where we say, "It is impossible to judge closely what the rainfall will be in one State by knowing what it will be in an adjoining State. Therefore we have worked out an equation for each State; but the temperature is more uniform, and by knowing what it will be each month in a chain of the most northern States and a few of the Southern States, a close estimate can be made as to what it will be in all others. Accordingly we did not take the trouble to work it out for each State." It will be seen by the "Tables" that we worked out an equation as to the rainfall for each of eighty separate districts; but as to the temperature, we worked out an equation for only eighteen States including the Provinces of Quebec and Manitoba. It is not generally known how much labor is required to work out the temperature for even one district for 365 days. The great labor is to obtain correct answers for the third column; that is, to find what the mean temperature will be for each month. To do this we cannot strike an average between the maximum and minimum; that will not give the mean. But we have to work out separate equations for at least four points situated in different parts of each State for each day in the month; and there must be at least two equations for each day for each of said points. Take the State of Iowa as an illustration. In order to find the mean temperature for each of the twelve months, it took 2,920 separate equations to find the maximum and minimum for each day for four separate points in that State. But after this was done a great deal of adding and dividing had to be done to obtain the mean for each month. It will thus be seen that if we had calculated the temperature for each of the eighty districts as exactly as we have done for eighteen States, it would have required at least 233,600 distinct equations besides a large amount of other work. This would have compelled us to postpone the publication of the book till about the 1st of June, 1888.

We might have made averages, and thus have included all the States in our temperature tables with but little more work; but what we did do we desired to do as thoroughly as possible, and therefore worked out separate equations for each district, knowing that if our system of calculating is scientifically correct, the separate answers for the various States cannot be very discordant. We were pleased to find that the discordance is much less than we had expected. But if we had made separate calculations for a few points and then made averages for the surrounding districts, we would have been in the same boat as a book-keeper who "forces a balance." Instead of doing this we left it for each of our readers to do, as it can be done easily; and taking the eighteen States, for each of which we have worked equations scientifically, as a base, each reader can strike an average for intermediate States, and thus find very closely what the temperature will be in the intermediate State. For instance, our book gives the temperature in Iowa and also in Manitoba for each month. An average between the two will give the temperature for Minnesota sufficiently close for all practical purposes, and the temperature of Dakota will be similar to that of Minnesota. So, too, an average between Iowa and the eastern half of Kansas gives the temperature of the eastern half of Nebraska; and an average between the eastern half of Kansas and the southern half of Illinois will give that of Missouri. Thus averages can be made for all the Northern States for which we have not calculated. In the Southern States we calculated for only Tennessee and Georgia, as it is not difficult for any one to approximate what the temperature will be

there when that of a chain of Northern States is known in addition to that of Tennessee and Georgia. It is well known that the temperature must be high during the summer months where there is to be very little rain, with occasional exceptions as to mountain regions; and that it cannot be very hot where the rainfall is to be excessive. As our tables show the rainfall for each month in every part of the country, ample data is given for telling what the temperature will be in each locality. We purposely calculated the temperature for both east and west Colorado, as that takes both sides of the Rocky mountain chain, where exceptions and freaks are liable to occur. Also by knowing the temperature in the east half of Colorado, a close estimate can be made as to when northerners will sweep south along the eastern base of the Rockies into Texas. The temperature in Colorado will also be a guide as to the temperature upon the highlands of New Mexico.

ONEIDA, KAS., November 29, 1888.

C. O. BLAKE:—Have watched your predictions for the last four years and find them a safe guide. Put in all the wheat we could this fall and at present it looks fine.

G. C. S.

WYCKOFF, LYON CO., KAS.

The verification of your predictions in this part of the State have not fallen below 90 per cent.

F. M. C.

FALL LEAF, KAS.

I think one copy of your Tables is worth many times the price you ask for two, so I will take two and send one to my friends in the East, that they may see the great and good work you are doing for mankind.

J. C. M.

CLARENCE, IOWA.

Having read your predictions for years past as they have appeared from time to time, I have been more interested in the same than in all the political and tariff debates that have been published. Your predictions have been substantially correct; and having solved the problem as to what the weather will be and what crops to plant and when, should secure the support of every agriculturist.

S. M.

CLEARFIELD, DOUGLAS CO., KAS.

I was so well pleased with your Almanac for 1888 that I cannot afford to be without your predictions. I think you have the right key to the future. I have been keeping a strict record of the weather and I know what I am talking about. The verification of your predictions has averaged 98 per cent. per month for the past six months in this locality.

C. A. H.

A few years ago the people supposed our predictions must be absolutely infallible in every minute detail or they were worthless; but now the farmers have learned that notwithstanding our minor errors the predictions enable them to know when and what to plant so as to reap the greatest harvest. As they no longer expect infallibility in detail, they use them in a practical, common-sense way, overlooking small errors, knowing that in the main they will be correct. All our correspondence shows that the farmers are making money by so doing.

## JOURNAL OF MAN.

One of the most interesting publications among our exchanges is *Buchanan's Journal of Man*, published monthly at 6 James St., Boston, Mass., by Dr. J. R. Buchanan. Price \$1 per year; single copies 10 cents.

Probably Dr. Buchanan has carried the science of Phrenology farther than any man who has ever lived. His explanation of the functions of the various parts of the brain, and his discussions of the relations between mind and its organ, the brain, are highly interesting to those who have studied such questions. We read his works nearly forty years ago and therefrom obtained many ideas which have been of great value to us in our life-work among the stars, for all sciences are but links in one great chain. The Doctor is now quite an old man; but his writings are more interesting than ever before. Added to natural ability of a high order, age and experience have given to his present writings a richness, ripeness and solidity not to be found in ordinary journals. He discusses all of the live topics of an advanced nature and easily pricks the bubbles which hold thin air. While his writings are a rich treat to advanced thinkers, they would not be fully appreciated by those who have not looked beneath the surface. On the title page he truly says: "As the *Journal of Man* is designed to occupy the highest realm of knowledge attainable by man, it cannot be a magazine for the millions who have no aspiration toward such knowledge. Its pages will not be devoted to the elementary lessons that such persons need to attract them to the science of the soul and the

brain, and the philosophy of reform. They must be given to the illustration of science that is essentially new which would be instructive to those who already have some elementary knowledge of the subject."

## Gossip About Stock.

The American Fat Stock Show at Chicago last month came out ahead fully \$5,000.

Get your Breeders' Card in the FARMER now ready for a prosperous year in 1889.

For special bargains of every description read the advs. in our celebrated "Two Cent Column." This cheap column is doing big business for our subscribers. Try it.

See the new ad. of Towhead Stock Farm, owned by Leonard Helsel, Carbondale, Kas. He has stock of excellent quality, at least the pedigrees at the last Kansas State Fair so decided.

Notice the ad. of Stericker Bros., Springfield, Ill. They have one of the finest lot prize winning Cleveland Bay Horses in America. Send for their catalogue and mention this paper.

Breeders who want the KANSAS FARMER, *Breeders Gazette* and Blake's Weather Tables for 1889 can secure them all by ordering at once for \$3.25. The total single price amounts to \$4.75. Save \$1.50 by ordering now, as this is a limited offer.

Attention is directed to the new card of the old time Kansas breeder of Chester White swine, W. W. Waltmire, Carbondale, Kas., who informs us that he now has the finest lot of pigs that he has ever bred. Last week he sold a sow, three years old, weighing 665 pounds. His brood sows last spring averaged eleven pigs to the litter. This fall the average is still better.

## Patents to Kansas People.

The following list is prepared from the official records (through Washington office) by J. C. Higdon, solicitor of patents, Hall Building, Kansas City, Mo., from whom information relating to patents may be obtained. A printed copy of any patent here named can be had for 25 cents:

Cultivator—Carl M. Saldberg, McPherson. Grain-cleaner—Joab C. Fischer, Beloit. Grapple—William H. Wiley, Stockton. Fence—Richard W. Fuller, Little River. Illuminated flying target—Joseph H. Jacobs, Atchison. Stalk cutter—Lawis M. Reed, Burrton. Folding desk—Eden & Gutherie, of Eskridge.

## Nice Jewelry Presents.

The holidays are not far distant, and of course everybody will give and receive presents. It makes us all the happier for these little acts of kind remembrance. Good reliable jewelry is considered one of the most appropriate articles for presents, and our readers need have no hesitation in patronizing the well-known fine jewelry house of C. E. Buhre, at 623 Kansas Ave., Topeka. See adv. elsewhere.

## Topeka Weather Report.

For week ending Saturday, December 1, 1888: Temperature.—Highest at 2 p. m., 58 deg. on Sunday, November 25; lowest at same hour, 29 deg. on Thursday, the 27th.

Rainfall.—Trace of snow on Friday, November 30.

Scriven's Patent Elastic Seam Drawers, the most perfect fitting drawer ever devised; for sale at the Golden Eagle clothing house, Topeka.

Among the many curious and interesting works of the largest library in the world, at Paris, is a Chinese chart of the heavens, made about 600 B. C. In this chart 1,460 stars are correctly inserted, as corroborated by the observations of modern astronomers.

The Ohmer Bros., who have been conducting the eating house of the Rock Island here, will soon remove to McFarland, where they have constructed an elegant hotel. They have houses at Pawnee, Liberal and Smith Center, and this year will erect an elegant hotel at Colorado Springs.

A curious geological phenomenon exists in the vicinity of Behring's Strait. At Elephant Point, Kotzebue Sound, a ridge two miles wide and 250 feet high seems to be a vast mass of ice, thinly covered with clay and vegetable mould. In this soil birches, alders and berry-bearing plants grow luxuriantly, with the stratum of perpetual ice as the underlying rock within less than a foot from their roots.

## Wintering Sweet Potatoes.

Some kinds are much better keepers than others. Of course these should be stored for winter use, even if not quite as good as those whose keeping qualities are poor. An exchange says these latter should be the first after digging to be eaten, and the former kept to the last. The best range of atmosphere when stored, is from 60 to 70 deg. It is desirable not to have the thermometer range higher than this, but if it fall to 50 deg. no harm will probably be experienced, provided the air be kept dry, which is very essential, let the atmosphere be as it may. The cellar is an excellent place to store sweet potatoes when well ventilated and kept dry. The packages holding the potatoes ought not to rest on the ground, and ought not to touch each other or the sides of the room. Straw or a couple of joists can be laid down one foot apart or so for the boxes or barrels holding the potatoes to rest on, and they should not be placed nearer than four to six inches to the wall or each other; then the air can circulate all around and assist in keeping the moisture from them. See that rats and mice are kept away. This may easily be done if the cellar floor is cemented, a tight wall of brick or stone all around the sides, and mouse traps are set in the windows.

## Special Opportunity at the State Agricultural College.

The college will organize at the beginning of the winter term—January 7—classes in common branches of various grades of advancement suited to the wants of students at district schools who want the advantages of the college training. The requirements for admission will be the same as at the beginning of the year in September. Students over 18 years of age may be received upon special conditions, where for lack of opportunity they are deficient in one or more of the branches named. The examination will be held on Monday, January 7, but admission will be possible at any time upon showing sufficient advancement to enter classes already in progress.

The education offered at the college is of the best for all ordinary purposes of life. *Farmer's sons and daughters* have special consideration of their wants in the sciences directly related to agriculture; household economy and mechanic arts are also provided for. An able corps of teachers and excellent equipments make the teaching in every way superior. *Tuition is free.* For further information address

PRES. GEO. T. FAIRCHILD,  
Manhattan, Kas.

## Vandalia and Pennsylvania Route--St. Louis to New York.

Three daily trains as follows:

No. 20.	No. 6.	No. 8.
Lv. St. Louis, 8:10 a. m.	8:00 p. m.	7:25 a. m.
Ar. New York, 4:00 p. m.	8:00 a. m.	9:35 p. m.

No. 20 and No. 6 have through Pullman Vestibule Buffet cars, St. Louis to New York without change. And only one change for coach passengers, either first or second class. Through Sleepers to Washington and Baltimore without change. For full information address, Chas. Conklin, North Western Passenger Agent, Kansas City, Mo.; or E. A. Ford, General Passenger Agent, St. Louis, Mo.

## The President's Message.

The inaugural address of the Great Rock Island Route, the Chicago, Kansas and Nebraska railway, is to announce that on November 18 solid vestibule trains will be run between Chicago and Denver, Colorado Springs and Pueblo without change, making close connections at the above points with all trains for Salt Lake, Los Angeles, San Francisco, Portland, Oregon and all points west, and at Kansas City and St. Joseph eastward for Chicago, St. Louis and all points east, north and south.

These royal trains consisting of Pullman sleeping cars, restful reclining chair cars magnificently furnished day coaches, were built expressly for this service by the Pullman company and are without question the handsomest ever turned out by that famous establishment. The reclining chair cars spoken of are free to all holders of first-class tickets, and a courteous attendant will be found with every car to care for the wants of our patrons. Ask your nearest ticket agent for a ticket via "THE GREAT ROCK ISLAND ROUTE" or write to

JOHN SEBASTIAN,  
Gen'l. Ticket and Pass. Agent,  
Topeka, Kas.

## The Home Circle.

### To Correspondents.

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

### The Queen of All.

She's the soul of goodness, loved so well  
It's impossible her praise to tell!  
Sweetest metaphors fond poets use,  
I as common flowers for her would choose,  
Helping faintly fairly to express  
Perfect charms of form and face and dress;  
Subtle winsomeness of heart and mind,  
I as heaven in this sweet lady find;  
Charms defying skill of Shakespeare's pen,  
Boldly picturing noblest heroine!  
Rapt am I, with ardent worship stilled,  
Dream of mother, wife and friend fulfilled!  
No, I cannot sing at all as I  
In my heart of hearts would wish to try,  
Useless it on every muse to call  
To portray the queen of women all!

Queen for me to rule my heart's domain,  
Shedding sunshine April-like thro' rain;  
Queen for me as harvest moon on high,  
Silvering all the deep and gladdened sky?  
Quiet goes she on her pleasant ways,  
Redolent of happiness and praise;  
Keeping house in royal order due,  
Crowning years of grace with something new;

Minds our needs, provides Olympian board,  
Sees the summer ripened gifts are stored;  
Has angelic touch in sickness drear,  
Smiles and spells to stay the falling tear;  
Whispers words to thrill like light the heart  
With sweet memories that ne'er depart,  
Bringing blessing where soft footsteps fall,  
So I claim her queen and best of all!

Queen and best of all that I have known,  
Sitting regnant on affection's throne,  
Sending forth her wise and just decrees,  
Knowing nothing else than how to please!  
Seems she like the word of peace in war,  
Like for night the faithful Northern star;  
Like for day the all-pervading sun,  
By whose aid the world's reward is won;  
Stronger than the morning's dewy prime,  
When endeavor's heights swift feet can climb;  
Wondrous wisdom has to feel and know,  
How the white-heart flowers of loving grow;  
Like great river speeding to the sea,  
Is her mighty flow of love for me,  
While beyond rise chains of mountains tall,  
Making her in sooth the queen of all!

You, my friend, may claim the same, of course,  
For the one within your honored house,  
Seeing clear as I can see in mine,  
Lines of beauty, grace, and truth divine,  
Worth and splendor known to you alone,  
Richer far than gems of monarch's throne;  
Very well, this truth confessed, I see  
God so crowns each soul's felicity;  
Each possessing true and faithful wife,  
Finds heaven-sent companionship for life,  
Finds the paradise when lost of yore,  
Wanders there in peace forevermore,  
Shut in bowers of bliss that cease to know  
How the stormy winds of winter blow!  
Yes, I say the sovereign gift must fall  
Where the husband vows—she's queen of all.

—Good Housekeeping.

### HOW WE MAY OVERCOME OUR FAULTS.

While looking over a recent number of the *Pacific States* my eye was caught by an article in the "Woman's Sphere," which calls women petty and narrow-minded. To this accusation a bright woman is credited with making a very apt response which accuses men of like or worse failings. The writer, who gives voice to both views, herself claims neutrality, and thinks we all—regardless of sex—need to grow broader and more liberal in our views and more noble in word and deed.

Now of course this view cannot be disputed. The approximation of poor humanity to "sweetness and light" and ideal nobility of character is very remote indeed. But apart from this fact, is it not true that women are more petty and narrow-minded, more difficult to deal with in business matters, than are men? We are of the gentler sex, and would gladly champion it when it attacked ungallantly. Yet experience and observation have forced us to the conclusion that women fall far short of what they should be and can be in business relations, and as workers in the world of industry and intellectual activity. They are governed more by feeling than reason, and their strong affections, centered in a narrow circle, prevent them from seeing the justice and fairness of many things which work against the real or apparent disadvantage of their loved ones. Their lack of prudence and self-control causes them to say and do that which prejudices their own cause; while their ignorance of business formalities and general haziness of mental atmosphere make it a difficult matter to deal with them. It is just such faults as these that men and women of real business ability object to in the weaker sex. These are the

real stumbling blocks to the greater advance of women in the fields of labor and reform which they would choose for themselves.

But in laying these faults at our doors we do not mean to imply that the blame lies entirely with us. To the entire structure of society much of it is due. Our inherited sensitive nervous organization, our narrow routine of employment and interest, our insufficient education, so far as the solid and practical are concerned—all these are causes and defects for which we, as women, are not responsible. Despite them our sex has advanced greatly and become a factor of an importance which demands consideration in questions of economics, society and politics. We have attained a development which makes us conscious of our strength, and, to some extent, of our weakness. With this knowledge we are prepared to overcome our defects and make yet more rapid advancement toward the position we would hold. But in order to attain great success we must consider and apply remedies which will strengthen our weak points. What, then, are these?

One would be a sounder physical organization—a state of health making nerves less easily irritated, and fretfulness and a certain intenseness of emotion less common. This desideratum is to be obtained through various means. We must have more outdoor life, more sunshine; must understand physiology and apply the principles of hygiene in our daily life. Then there must be a diversion from the petty trials of house-keeping and every-day life, and recreation of a higher sort than is furnished in gossip with a neighbor or chats about servants. Our mental horizon needs to be widened. This can be accomplished through an acquaintance with history and literature and association with the cultured. As for the first, what better course of reading could be suggested than that of the C. L. S. C.? Pursuing some particular line of study as a science, or taking up some one art and making a specialty of it, is highly advantageous in lifting us out of self and feeding our minds with high and noble subjects of thought. Then we need a wider knowledge of the life of the world to-day, of important national questions, of the great needs of the time, of projected reforms—all information to be obtained through newspaper, magazine and lecture, and all helping us to see things in their entirety, rather than from a petty point of view.

But again, we must strive for clearness of mental vision, and not be contented with hazy ideas. It is necessary for women to get out of and above that sentimental and passive state of mind which is content to take thoughts (they don't always merit that name, though) from wiser man without weighing their truth or considering where statements apply. We shall never really succeed in any business we may undertake until we are capable of thinking and managing for ourselves—until we are determined to win through merit alone. We have no right to ask for a place and expect to get it because we need it, because we are women, or because we must do something. This claim for place and consideration on account of our sex, and the thought that this is a sufficient excuse for any inefficiency, is one of the mistakes of many women, and one which injures not only themselves but every one of us. We must be womanly, not weakly feminine. If we are to take a place in the world, we need to be fit for it in body, mind, and special skill. Then, when we come in contact with the sterner sex we may not only expect but command a respect and deference which is rendered because merited.

So far the means by which women may help themselves out of pettiness, narrowness and inefficiency have been touched upon. Something may still be said in regard to the girls. Parents, mothers especially, may so direct the education of their daughters that they will be fitted for some useful employment. The woman, whatever her station in life, knows not when she may be thrown upon her own resources for support, or when the management of important affairs may devolve upon her. That she may be capable of bearing whatever burden falls upon her, she must have some practical knowledge, some insight into business methods, and a certain reasoning power and judgment. This information and mental discipline can be obtained. Let its importance be insisted upon. As a part of

it we advocate a certain amount of mathematics. A professor was once heard to say that a girl who had taken a thorough course in geometry would be cured of flirting if she had ever been addicted to it. In this statement is a certain truth. There is nothing like good, solid thinking to take nonsense out of either masculine or feminine brains. Earnest, thorough work is to be insisted upon in the girl's life. Let us have it, together with some attention to the laws of health and less to frivolous employment, and our girls will develop sound practical sense and an ability which will serve them through life. Then cultivate noble interests and sympathies, and the coming woman will scarcely be dubbed, even by the cynical old bachelor, as petty and narrow-minded and an unpleasant creature to deal with.—*Inol, in California Patron.*

### Good Food.

There is more truth than we often think in the saying. "The way to a man's heart is through his stomach." Not that this is the only way, but mankind in general—the whole human family, is very largely influenced by the kind of food eaten. Much of the earth is inhabited by people who take no special thought as to the kind of food they eat; and the most highly-cultivated nations the world over are those where the preparation of food is of importance.

The families wherein are found the most intelligent minds—where intellect rules—are those where food is prepared in digestible shape, and where the proper nourishment is given to both brain and body. The one goes with the other always. Tell me what a nation eats, and I can tell you where that nation stands in regard to intellect.

One of the potent factors in the work of decreasing crime in the great cities will be, in years to come more than it is at present, the providing of the poorer classes with suitable food. A well-fed child cannot be an ugly child; a well-fed man cannot be a revengeful, wicked villain. "Well-fed" means just what the words say. Well-fed people need not have expensive food; they may live plainly, poorly, in point of expense; but they will have nourishment for all the system, and have it in digestible form.

Many a man has taken to evil ways, many a woman has become irritable and driven her family from her, because of improper food; many a case of confirmed dyspepsia may have come from poor bread—and dyspepsia are often made by over-eating of good food.

It is not always pie, cake or hot bread that ruins stomachs, but because such foods are not properly made. A strong, healthy body ought to have, and generally does have, a stomach that will digest any wholesome food; and most stomachs are able to digest a moderate amount of any well-made food, no matter how rich. The great cry against pie, cake, dainty desserts, and all the usual line of the richer foods is almost always made by the miserable dyspeptic, who has ruined his stomach by eating too much, or has lived on food improperly cooked till his digestive apparatus has been worn out.

If the hand that rocks the cradle is the hand that rules the world, that hand must be a strong one or the world will go astray. No question can be raised as to the vital importance of the training of the dispositions of the youth of a country; and no person, old or young, will easily keep his temper or be trained in strength of character when the stomach is irritable or out of order.

If the young women of the land are to be given but one weapon with which to battle against all the evil in their path, and to build up good for all time to come, the best one possible is a knowledge of cooking. With that, all enemies can be subdued, friends be made better, and one's own household be made the stronghold from whence can come power of many kinds.

A poor cook may scatter evil that no one can calculate; and a woman who can cater to the actual needs of the stomach and at the same delight the palate is a power in her circle of life.

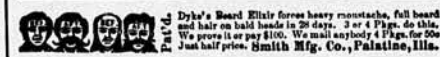
Good cooking will have a large place when the millennium comes. There will be no poor cooks then, but every woman will make good food, and it will be easily digested.

The day has come when this nation is waking up to the importance of teaching the young people practical things; and our girls are learning, among other good things, to

## Silk and Satin Ribbons FREE!



For a little over twenty-five thousand dollars in cash we have purchased splendid ribbon remnants, which at such prices as have usually been charged for the same goods would figure up to ten times that amount, or over two hundred and fifty thousand dollars. We took the cash with us, went right to the great importing houses of New York and purchased all the remnants of first class fine goods that the owners were willing to close out at a but one-tenth of the prices that such goods had been retailing for. We now possess millions of yards which we offer absolutely free, as follows: Our great well-known periodical, *Good Housekeeping*, is published monthly for \$1 a year; good judges say it is equal to the \$4 a year magazines. We have concluded to take 100,000 trial year subscribers for almost nothing, and also send free a box of these splendid ribbon remnants to each. Send \$5 also send free a box of the ribbons. 2 subscriptions and 2 boxes, \$5. 4 subscriptions and 4 boxes, \$10. Get three friends to join you, thereby getting 4 subscriptions and 4 boxes of ribbons for \$1. Postage stamps taken. We lose money on these trial year subscribers, but our profit is in the future, for people like our magazine so well that the majority willingly pay the moderate regular price of \$1 a year, after having read it a year. This is the greatest ever known. Save much money and secure the best. Elegant ribbons and charming styles. Every lady has a thousand uses for such a grand assortment of ribbons, and to purchase what is wanted, at a store, would cost a large sum; here is just what you want, free. Many of these remnants are three yards and upwards in length. Depend on these remnants as superior to anything to be found, except at the best stores—Beautiful, Elegant, Choice, Rich, Refined, Fashionable. Assortment immensely varied and complete, in every conceivable shade and width, adapted for neck wear, bonnet strings, but trimmings, bows, scarfs, dress trimmings, silk quilt work, etc. Large value for almost nothing. Money refunded if not satisfied. Better cut this out for probability it won't appear again. Address: **TRUE & CO., Publishers, Box 101, Augusta, Maine.**



cook. May the day soon come when every woman will make of herself a good cook,—an intelligent cook,—knowing what effect each food she prepares will have upon her family, understanding when people need certain foods, seeing what is wholesome and appetizing, learning to combine judiciously the necessary elements so that all people will have strong stomachs and healthy bodies. Then, indeed, will the world be well fed; and a well-fed man is a good man.—*Mrs. Kedzie, in Industrialist.*

### Notes and Recipes.

Keep butter and lard in stoneware and earthenware jars, never in tin; and great care is requisite to keep the jars closely covered and always set in a cool place.

For cleaning marble there is nothing better than sapollo. Rub the surface hard with it; wash it off with clean, warm water, and it will have the polish of new marble.

Baked potatoes should be served as soon as they are done. At once squeeze them a little to allow the escape of steam, which is apt to condense and make them watery.

**Sugar-drop Cakes.**—One pound of flour, three-fourths pound of sugar, one-half pound of butter, four eggs and one gill of rose-water; bake on paper. This will make sixty drops.

**Stewed Potatoes.**—Cut in small pieces enough cold boiled potatoes to fill a vegetable dish, put with them one pint of milk; half a cup of butter, salt and pepper to taste; thicken with one teaspoonful of flour; stew five minutes and serve.

**Paste for Apple Dumplings.**—Boil three large potatoes, mash and work in a lump of butter or of suet chopped fine, the size of an egg, one cup of milk, stir in with a spoon flour enough to work up with the hand. Then cut this mixture into pieces and wrap it around the apples, and tie your dumplings in cloths and boil them hard for an hour.

From the *Herald of Faith*, St. Louis, Missouri, August 10, 1887: "Referring to Shallenberger's Antidote for Malaria, the business manager of the *Herald of Faith* would say, that he gave this medicine a personal trial, and was speedily cured of an unpleasant intermittent fever. He then recommended it to F. J. Tiefenbraun, 1815 Papin street, and to Police Officer Meidenberger, at the Union Depot, both of whom were cured by it of chills and fever of several years standing. Recently his wife, after a fever of several day's duration, took a single dose and was perfectly cured. In view of these remarkable cures and remembering how much money is spent for quinine, so little to be depended upon, and often so injurious we can only wish that Shallenberger's Antidote would come into general use.

## The Young Folks.

### In Darkness.

I will be still;  
The terror drawing nigh  
Shall startle from my lips no coward cry;  
Nay, though the night my deadliest dread fulfill,  
I will be still.

For oh! I know,  
Though suffering hours delay,  
Yet to eternity they pass away,  
Carrying something onward as they flow,  
Outlasting woe!

Yes, something won;  
The harvest of our tears—  
Something unfading plucked from fading years;  
Something to blossom on beyond the sun,  
From sorrow won.

The agony,  
So hopeless now of balm,  
Shall sleep at last, in light as pure and calm  
As that wherewith the stars look down on thee,  
Gethsemane.

—Florence Earle Coates, in Harper's Magazine.

### "Poveri! Poveri!"

Come, let us ponder; it is fit—  
Born of the poor, born to the poor,  
The poor of purse, the poor of wit,  
Were first to find God's opened door—  
Were first to climb the ladder round by round  
That fell from heaven's door unto the ground.

God's poor came first, the very first!  
God's poor were first to see, to hear,  
To feel the light of heaven burst  
Full on their faces. Far or near,  
His poor were first to follow, first to fall!  
What if at last his poor stand first of all?

—Joaquin Miller, in the Century.

Beyond the smiling and the weeping  
I shall be soon;  
Beyond the waking and the sleeping  
Beyond the sowing and the reaping,  
I shall be soon.  
Love, rest, and home!  
Sweet hope!  
Lord, tarry not, but come.

—Bonar.

Love, hope and joy, fair pleasure's smiling train;  
Hate, fear and grief, the family of pain;  
These mixed with art, and to due bounds confined,  
Make and maintain the balance of the mind.

—Pope.

What honor that,  
But tedious waste of time, to sit and hear  
So many hollow compliments and lies,  
Outlandish flatteries?

—Milton.

## THE ESCAPE OF UNION PRISONERS BY LIBBY TUNNEL.

The following narrative, written by General Thomas E. Rose, of Pittsburg, and published in the *National Tribune*, of Washington, D. C., is in answer to earnest demands made upon him by men who shared with him the trials of Libby prison, and who assisted him to dig the tunnel. Colonel Streight, who succeeded in escaping through the tunnel, has, at various times claimed to be the leading spirit in the hazardous enterprise.

I see in your issue of April 9 that I am called upon by Colonel I. B. Dodge, Thirtieth Indiana, to give a full and complete history of the Libby prison tunnel. He says that he knows well that I am reluctant to do this, but he assigns a reason therefor which I hardly think just. It is not false modesty that makes me reluctant to do this, but it is because I am not accustomed to writing articles for publication. Besides, I cannot write a correct history of the Libby prison tunnel without dwelling on my own connection with its entire construction. In this case, however, Colonel Dodge says that it is a duty that I owe to my comrades to write this history for publication.

Captain A. G. Hamilton, Twelfth Kentucky Cavalry (afterwards promoted), and myself began the tunnel scheme in the eastern cellar of the prison shortly after my arrival there, October 1, 1863. We continued our work for a few days when we were compelled to suspend it by reason of the shifting of the prisoners to different rooms; also, the tearing down of the stairways, walling up doors, etc., which continued for two or three weeks. During this time Hamilton and myself cut our way down into the carpenter shop, out of which we prepared to make a dash for liberty.

A party of us then went down into the shop for this purpose on more than one occasion, but the unexpected shifting of the prison guard prevented the attempt. This party at that time consisted of Hamilton, Fitzsimmons, McDonald, Lucas and myself. The shop continued to be a reconnoitring ground for some time, and a large party, consisting of seventy men, was organized to operate from this place; the object being

to overpower the guard and break away whenever the near approach of raiding parties of our own troops or other circumstance would render this plan of escape practicable. At length the shifting of the prisoners ceased, and the work of the prison officials seemed finished. Then Hamilton and myself again turned our attention to the tunnel project; but we were now cut off from the eastern cellar, the only place from which a tunnel could be made with success, for the reason that it was the only place where we could conceal the dirt, and where we could work without interruption for several hours at a time. The hospital and the hospital office were alongside of it. We had access to the dining-room, which, fortunately, was seldom visited by any one at night. It was from this place that we cut into the carpenter shop directly underneath, and we could cut through the carpenter shop wall into the cellar, but the hole in the wall could not be concealed. We could cut through the dining-room wall into the hospital, then through the hospital floor into the cellar, but this plan would not do, for many reasons.

We therefore resorted to a device, the execution of which has never been surpassed for care and skill, when it is considered that instruments little better than pocket-knives were used. We went to the chimney, between the dining-room and hospital, close to the dining-room door, where the rebel sentinel stood. In the fireplace of this chimney was a large amount of soot and ashes. In front of the fireplace were some stoves. We shifted the stove a little, removed the soot and ashes from the fireplace and placed them in a gum blanket. A hole was then cut in the back wall just far enough not to make an opening into the hospital; then straight down through the wall to below the hospital floor, and just wide enough not to make an opening into the carpenter shop; then straight out under the hospital floor into the cellar, making a hole through the entire wall—somewhat in form of the letter S—from the dining-room into the cellar, large enough to admit the passage of a man. The material was so cut that after the hole was completed it could be replaced and removed at will, and not a vestige of the work be seen when the material was replaced and the soot thrown back. For the careful execution of this ingenious work the credit is due entirely to Hamilton.

We now went down into the cellar by means of a strong rope, which was afterwards made into a rope-ladder, and recommenced the work which we had begun several weeks before. There was no more very ingenious work to be done after we made our way back again into the eastern cellar, but there was a great deal of hard work before us. Three holes were cut through the heavy foundation wall on the eastern side of the cellar before a place was found where the dirt was firm enough to support the tunnel. We were now so much more secure from interruption and discovery that I determined to organize a party of workmen. The great readiness that has been shown by the prisoners to engage in the other adventures led me to suppose that there would be but little difficulty in organizing a party that would push the work through in a very few days. Four men could be on duty at one time—one to dig, one to fan fresh air into the tunnel, one to draw the dirt back and deposit it, and one to stand guard near the rebel sentinel and give the danger signal. A party of fifteen was therefore sufficient to be divided into three reliefs, each to work one night and have two nights' rest, and still have supernumeraries in case of sickness or accident.

Fifteen men, therefore, including Hamilton and myself, were selected to compose this party. I found more difficulties with this arrangement than I had anticipated. The men were totally unused to the circumstances. The profound darkness of the place caused some of them to become bewildered when they attempted to move about, and as absolute silence had to be observed, they could not find their way to places where they were needed, or even find their way out of the cellar, and, what was worse, as the cellar was very large and no one must speak above a whisper, it was a matter of great difficulty to find them. I sometimes had to feel all over the cellar to gather up the men that were lost. The indescribably

bad odor and impure atmosphere of the cellar made some of them sick. The uncomfortable positions in which they had to work amid crawling rats—the cellar was called the rat h—ll—was unendurable to some. To the unreflecting the scheme seemed impracticable as soon as the first burst of enthusiasm was over. The work did not progress as I thought it should. In a very short time this party was disbanded and Hamilton and myself continued our dreary work alone, as before, for many nights. Every day added to our experience, and I resolved to organize the working party anew. The same men that composed the first working party, as nearly as practicable, were assembled, and, taking advantage of acquired experience, the party was reorganized with great care. A few of those who composed the first party, from sickness or other cause, were not available, and new men were selected to fill their places. The party was divided into three permanent reliefs, as before and no man was permitted to do but one kind of work. If he was not an expert at the kind of work assigned to him, he was enjoined upon to become so as quickly as possible. This party now worked with energy and system, and, although their work progressed very slowly at first, it increased every night, and in seventeen nights the tunnel was completed from the cellar to the shed in the yard on the west side of the warehouse, from which the escape of the prisoners was easily made.

To this band of men, and to no other person or persons, is the credit of the Libby prison tunnel due. It was this band of men, headed by myself, which first escaped on February 9, 1864, and was long gone from Richmond, Va., before any other prisoners escaped. Their names are as follows: Colonel Thomas E. Rose, Seventy-seventh Pennsylvania; Captain A. G. Hamilton, Twelfth Kentucky Cavalry; Captain Terrence Clarke, Seventy-ninth Illinois; Major George H. Fitzsimmons, Thirtieth Indiana; Captain John F. Gallagher, Second Ohio; Captain W. S. B. Randall, Second Ohio; Captain John Lucas, Fifth Kentucky; Captain I. N. Johnson, Sixth Kentucky; Major B. B. McDonald, One Hundred and First Ohio; Lieutenant N. S. McKean, Twenty-first Illinois; Lieutenant David Garbett, Seventy-seventh Pennsylvania; Lieutenant J. G. Fislar, Seventh Indiana Artillery; Lieutenant John D. Simpson, Tenth Indiana; Lieutenant John Mitchell, Seventy-ninth Illinois; and Lieutenant Eli Foster, Thirtieth Indiana. There are two of the above-named men, I am informed, who have "sold their birthright for a mess of pottage," and whose names do not deserve to appear in connection with those of honorable men; but this statement would not be true if their names were omitted, and the publication of truth is the object of this article. There are, besides the above, two men whose names it would be proper to mention in this letter. Lieutenant F. F. Bennett, Eighteenth Infantry, on one occasion assisted Hamilton in rescuing me from a perilous position while at this work. Captain John Sterling, Thirtieth, frequently furnished the party with ropes and candles, which we used in the tunnel, he having money to procure these things. Both these men belonged to the first party of workmen, but did not

belong to the second. To A. G. Hamilton belongs the credit of having done all the work that required great care and mechanical ingenuity. It was he who cut the hole from the dining-room to the celebrated eastern cellar; it was he who made the rope ladder—in fact, he executed little ingenious devices too numerous to mention here. His work was altogether indispensable to the success of the scheme. For the organizing of the bands for work or any other adventure; for the assignment of the details and the instruction of the men, I am obliged to take the credit to myself. There was no other leader in the whole affair.

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## Farmers' Alliance Convention.

All members of the National Farmers' Alliance and Co-operative Union of America within Kansas are hereby notified that a delegate convention will be held at Augusta, Butler county, Kansas, on Saturday, December 22, at 10 o'clock a. m. Each sub-alliance will receive due notice as to representation, etc.  
W. P. BRUSH,  
State Organizer.

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## KEEP THE POWER APPLIED.

Most of our subscribers begin their terms of subscription with the calendar year; hence, the time for which a large majority of our subscriptions are paid, expires with 1888. This is to remind them that the end of the year is within a few weeks. The letter and figures "d52" affixed to the address on your paper means the subscription expires with No. 52, the last issue of the year.

We urge upon all our friends to renew and to do it before rather than after the time has expired. All the names of subscribers with their postoffice address and time are in type on our mailing lists. It will save us trouble and mistakes if we do not have to change any part of this except the time. But there is a much more important reason than this for our request. The KANSAS FARMER has grown to be a recognized power in public affairs, just what farmers need, and it would be suicidal on farmers' part to do anything or omit to do anything which will weaken its influence. No other paper of its class has one-fourth the circulation in Kansas which the KANSAS FARMER has, and it is the only one of them which has any influence with the Kansas Legislature or with Kansas Senators and Representatives in Congress. We ought to grow stronger, not weaker.

Our interests are mutual; makers of the paper and its readers are alike to be benefited by its growth. The larger its circulation the wider its field of usefulness, paying its way at both ends of the line. We call attention specially to the fact that the KANSAS FARMER, with its present size and price, is the cheapest farm paper published in America.

Just a moment ago, as these words were running off the pencil point a well-dressed gentleman called in the office to subscribe for the paper, and upon retiring said—"I get the next number next month, do I?" "Next week, sir," the manager answered, "the KANSAS FARMER goes out every week." "Great God!" said the stranger, "a paper like this every week for a dollar a year!" and he walked away turning over the leaves. The price is, indeed, very low—made so because times were close with our patrons. We have done all that is possible for us to do in that direction now; but as fast as the increase in our subscription will justify improvement and enlargement, our readers will see the effect. We propose to hold the position already gained and to go ahead as fast as possible. Let every subscriber get one new name if he cannot raise a club.

John McDonald, one of the most competent educators in Kansas, just completing his second term as Superintendent of Public Instruction for Shawnee county, purchased the *Western School Journal* last week. Mr. Turner, who conducted the *Journal* since Mr. Speer's retirement, maintained a high standard of excellence in this best of Kansas educational periodicals, and we know of no one in the State better qualified than Mr. McDonald to continue the work which the *Western School Journal* has to do. He is a gentleman of culture, with clear ideas, and

strong, well-grounded convictions, a fit man in every respect to teach by example as well as by precept—a clean, pure-minded gentleman of unblemished character and reputation. The KANSAS FARMER welcomes the new editor of the *Western School Journal* to the field of journalism, and wishes for him a large measure of success.

## THE PRESIDENT'S MESSAGE.

Congress convened at 12 o'clock Monday and the President's message was received at 1:30. It is a long document, and altogether unlike that of last December. Then the President considered only the surplus and the tariff. Now he follows the usual course and refers to the condition of affairs generally, and mentions in detail our relations with foreign countries. The message first refers to the simple habits of our patriot fathers and the frugal operations of their government; then attention is called to rapid accumulation of wealth in these times, the growth of powerful combinations of men and capital, opulence in cities with its companion poverty, discontent of labor and general depression of agriculture, and the protection afforded manufactures by tariff laws which the President again asserts is only making rich people richer and poor people poorer. His opinions on the surplus and tariff as expressed a year ago, are repeated here briefly but positively.

It is evident, from the tone and temper of the message, that the President believes his time of usefulness has been cut short, for his language, referring to what he regards as abuses in government, is pathetic as well as vehement.

The existing situation is injurious to the health of our entire body politic. It stifles, in those for whose benefit it is permitted, all patriotic love of country and substitutes in its place selfish greed and grasping avarice. Devotion to American citizenship for its own sake and for what it should accomplish as a motive to our nation's advancement and the happiness of our people, is displaced by the assumption that the government instead of being the embodiment of equality is but an instrumentality through which special and individual advantages are to be gained. The arrogance of this assumption is unacknowledged. It appears in the sordid disregard for all personal interests; in the refusal to abate for the benefit of others one iota of selfish advantage, and in combinations to perpetuate such advantages through efforts to control legislation and improperly influence the suffrage of the people. The grievances of those not included within the circle of these benefits, when realized will surely arouse irritation and discontent. Our farmers, long-suffering and patient, struggling in the race of life with the hardest and most unremitting toil will not fail to see, in spite of misrepresentations and misleading fallacies, that they are obliged to accept such prices for their products as are fixed in foreign markets where they compete with the farmers of the world; that their lands are declining in value while their debts are increasing; and that, without compensating favor, they are forced by the action of the government to pay for the benefit of others such enhanced prices for the things they need, that the scant returns of their labor fail to furnish their support or leave no margin for accumulation. Even workmen, enfranchised from all delusions and no longer frightened by the cry that their wages are endangered by unjust revision of our tariff laws, will reasonably demand through revision, steadier employment, cheaper means of living in their homes, freedom for themselves and their children from the doom of perpetual servitude and an open door to their advancement beyond the limits of a laboring class. Others of our citizens, whose comforts and expenditures are measured by moderate salaries and fixed incomes, will insist upon the fairness and justice of cheapening the cost of necessities for themselves and their families. When, to the selfishness of the beneficiaries of unjust discriminations under our laws, there shall be added the discontent of those who suffer from such discrimination, we will realize the fact that the beneficent purposes of our government, dependent upon the patriotism and contentment of our people, are endangered. Communism is a hateful thing, and a menace to peace and organized government. But the communism of combined wealth and capital, the outgrowth of overweening capacity and selfishness, which insidiously undermines the justice and integrity of free institutions, is not less dangerous than the communism of oppressed poverty and toil, which, exasperated by injustice and discontent, attacks with wild disorder the citadel of life. He mocks the people, who proposes that the government shall protect the rich and that they, in turn, will take care for the laboring poor. Any intermediary between the people and their government, or the least delegation of their care and protection to the government owes to the humblest citizen in the land, makes the best of free institutions a glittering delusion and the pretended boon of American citizenship a shameless imposition.

The rest of the message is but statements of fact concerning different de-

partments of the government, touching on the Indian question, public lands, etc., and giving our relations with other countries. We suppose our readers are most interested in what the President says on the great question—tariff, and the extract above quoted shows that.

## CAPITAL WANTED IN SUGAR-MAKING.

Interest in sugar-making increases among Kansas people daily. We have a letter from a friend at Medicine Lodge, submitting inquiries concerning the manufacture of sugar, and stating that a company has been organized there, with a capital of \$100,000 "to put in a sugar plant." The citizens have subscribed \$50,000 "mostly taken to be paid in cane at \$2 per ton." They want some one or more persons with money to join them in the work.

This is unquestionably a good opportunity for profitable investment. Sugar-making in Kansas is an established industry. By following methods already tried and found good there is no risk greater than in any making iron or lead. Kansas produces cane certainly every year. Sorghum grows when corn fails. The crop may be shortened, but it does not fail, and sugar is now extracted from its juice with as much certainty as soap is made from a union of fat and lye. An acre of ground produces ten tons of cane, a ton of cane produces 100 to 125 pounds of sugar and fifteen gallons of molasses. Work already done justifies Prof. Cowgill, State Inspector, in putting the figures this way: Sugar 100 pounds at 6½ cents per pound, \$6.25; molasses fifteen gallons, at 15 cents per gallon, \$2.25; total, \$8.50 per ton of cane, at a cost of \$4 per ton. This gives a net profit of \$4.50 per ton. If 150 tons are worked up in a day the total profit would be \$675 daily, and this continued over seventy days would give a total profit for the season \$47,250. Continued three years the profits would amount to \$141,750 a sum large enough to build a factory with a daily capacity of 250 tons.

This is not all. One hundred pounds of sugar to the ton of cane is a very low estimate. That much is certain and may be relied upon under ordinary conditions. Cane grown this year for the factories at Conway Springs and at Douglass contained 225 pounds of sugar, but it was not all extracted. Experience will soon suggest successful methods of more complete extraction. The industry is in its infancy, only four factories operated this year, and three of them new ones. The Fort Scott works, which was started three years ago, turned out 450,000 pounds of sugar this year, with the usual proportion of molasses. Everything points to improvement in methods with increased profits resulting. In the present state of the sugar market, investments in sorghum sugar-making will prove profitable, better than 6 per cent. money loans.

The KANSAS FARMER confidently expects a vast development of the sugar industry in Kansas. The pioneer period is passed, the industry is established. Sugar is now made profitably as a commercial business. Further experiments will be made only to simplify methods and increase profits. Hon. W. L. Parkinson, Topeka, the most active man now in the business, a gentleman in every way reliable, having had half a dozen years experience, is able to counsel prospectors wisely. We understand he proposes to erect several new factories next year. Prof. E. B. Cowgill, State Sugar Inspector, Sterling, Kansas, will do all he can to assist inquirers to a proper understanding of what is needed in setting up a

plant and in manufacturing sugar. His report of this year's work will be an interesting document, containing accurate information on all these points; it will be ready probably about January first, though it may be delayed to await the publication of the Biennial report of the State Board of Agriculture.

Farmers ought to study this subject. The Medicine Lodge movement is in the right direction. It ought to succeed, and similar companies ought to be organized in every county in the State. There is money in it to all parties interested if the work is begun and carried forward judiciously.

#### ONE GREAT NEED OF FARMERS.

Kansas farmers need some help from the legislature in a matter which is very important to them, help which will be worth many times its cost, though it will add not one cent to the people's taxes. Before stating directly the particular kind of help to which reference is here made, we desire to call attention to a few facts concerning farmers of some other States.

The law of Wisconsin, amended March, 1887, provides that the Board of Regents of the State University shall "hold institutes for the instruction of citizens of this State in the various branches of agriculture." The institutes are to be held at such times and places as the board may direct, and under such "rules and regulations as it may deem proper for organizing and conducting such institutes, and may employ an agent or agents to perform such work in connection therewith as they deem best." It is further provided that "the course of instruction at such institutes shall be so arranged as to present to those in attendance the results of the most recent investigations in theoretical and practical agriculture." Twelve thousand dollars a year are appropriated to pay expenses of the institutes.

Under the provisions of that law eighty-one institutes were held during the winter of '87-'88, the last of which is reported in a book entitled *WISCONSIN FARMERS' INSTITUTES*, a copy of which lies on the table where this is written. The book contains 346 pages, of which the institute proceedings occupy 267, covering a wide range of subjects—field culture, horticulture, stock raising, dairying, etc. The scope of the Wisconsin Farmers' Institutes is thus expressed in the preface to this book:

Organized and carried on to increase the agricultural wealth of the State, they have had a phenomenal success. The money-making and economical methods of the farm have been plainly pictured before tens of thousands. In every neighbourhood, and in almost every farm home, these methods and practices have been discussed. They have brought not only material advantages, but mental stimulus; they have had a tendency to make not only workers, but thinkers; not only successful farmers, but broadminded men. Incidentally they have taught the lessons of good citizenship, duties to children, to neighbors, to other classes, to the State. A great work has been done, but the agricultural revolution which is to take place in Wisconsin, has only just begun. The knowledge contained in this volume utilized on every farm in the State would double the average of every farm product.

The institutes are conducted under the general direction of a superintendent, who arranges programs in advance, enlisting the interest of as many farmers as possible in the particular locality, so that while the State provides organizers and special instructors, the farmers themselves and their wives and children do most of the work at every institute, in discussing matters pertaining to farms and farm life.

We have a card issued and signed by J. S. Woodward, showing that "appointments of Farmers' Institutes have been made by the Committee of the State Agricultural Society (of the State of New York) and will be held"—at thirty-seven different places in the

State, names and dates given, ranging from November 19-20 (1888) to March 15-16 (1889).

At the last meeting of the Missouri State Board of Agriculture, a resolution was adopted asking the Legislature to appropriate \$10,000 to defray expenses of holding Farmers' Institutes within the State every year. A few institutes had been held by the Board with encouraging success, and there as in Wisconsin and other States, they were found to be excellent educating agencies which farmers welcome warmly.

Without further reference to what has been done and is being done in other States in the direction above indicated, the reader sees the objective point—farmers' institutes in Kansas. Under the excellent management of Mr. President Fairchild, of Kansas State Agricultural College, several institutes have been held in Kansas every one of the last few years, and they have borne good fruit. The writer of this attended some of them, and if other persons there were as much pleased and benefited as he was the aggregate of pleasure and profit was very great indeed. There is no question about the good done or about the good that can be accomplished by increasing the number of institutes to at least fifty during the cold months every year. And that is what this article is written about. Such meetings are of incalculable benefit to farmers, and the Legislature must provide the necessary machinery to organize and conduct them. It is too late to organize for the coming winter, but there will be plenty of time to get ready for work next year. In another article we will offer suggestions touching the legislation. Shall we reorganize the State Board of Agriculture, curtailing its powers in one direction and enlarging them in another, or shall we have a State department of agriculture with a commissioner in charge, as we now have departments of labor and of insurance, or shall we place the whole matter in charge of the Regents of the State Agricultural college?

#### KANSAS AND LOUISIANA.

An excellent suggestion is made by Prof. C. A. Crampton, Government Chemist, in a communication to the *New Orleans Daily Item*, last month. Prof. Crampton was assisting in making experiments in the manufacture of sugar in Louisiana under authority of an act of Congress. He had just returned to Louisiana from a brief visit to the Kansas factories. Referring to the work done in Kansas, he says: "Speaking in general terms, it may be said that the results of the season's work are very favorable on many accounts and tend to establish the fact that Louisiana has in Kansas a most efficient ally in the continuance and development of our national sugar industry. There seems to be a disposition on the part of many Louisiana planters to look somewhat askance upon this new recruit in the ranks of sugar producers; to criticize the quality of the product rather severely; to discount the statements of progress made pretty heavily, and while professing great interest in the growth of the industry, and a great desire for its success, the temperature of their friendship is a long ways below the boiling point."

Then he goes on to show the richness of Kansas cane as shown by analyses at Douglass and Conway Springs. "The results have not yet been tabulated and averaged," he says, "but I think I am safe in stating that at neither station will the average polarization of the juice from the first chips as they enter the battery fall below 12 per cent. of sucrose, with a content of glucose but little above 1 per cent. These facts,

taken in connection with the promise which is held out by many of the results obtained at Sterling that the plant is capable of great improvement by selection and cultivation, justify the conclusion that it will not require nearly the time for the development of the raw material as was the case in the beet industry. These two factories are located in the Arkansas Valley, where this year all other crops were at least a half, and in many places a total failure. The farmers in central and western Kansas are hungry for sugar factories. Any quantity of cane could be cultivated for next year at \$1.25 to \$1.50 per ton. It would seem to be almost a necessity that the industry should be established in that country, even if the profits of manufacture only paid the interest of the capital, just to afford a market for the crop. With the sugar selling at 7 cents a pound, 9 with the bounty, and the molasses at 15 or 20 cents a gallon, and with the seed and refuse besides, there should be plenty of margin for the manufacturer as well, under present conditions. I have read in the sugar journals this fall of Louisiana planters turning their attention to the growing of Southern cane in Arizona; of talk of establishing a station there, and of the favorable report of the Sugar Planters' Association on the plan. Why not look into the merits of Kansas as a sugar State? Why not send up a little of the surplus Southern sugar skill and experience to help out the development of the sorghum industry? The only way the Southern planter seems to have thought of regarding sorghum is in the light of an adjunct to his own plant, to lengthen the season. Whether this attractive idea of a double crop is possible or not, is still an open question; but why not operate upon each plant in its own habitat? Why not have a sorghum factory in Kansas and a Southern sugar cane plantation in Louisiana? The two seasons dovetail in together very nicely, and nearly half the year could be employed in actual manufacture, the entire force of skilled labor, sugar makers, engineers, clerks, chemists, etc., could be transferred at small cost. It seems to me such a plan is worthy of attention by sugar capitalists. Many Louisiana planters will doubtless read with surprise the figures I give above as the average polarization of the sorghum juice at Douglas and Conway. Very few Louisiana plantations show so high an average polarization for their juices. Neither is the content of "glucose," sorghum's great bugbear, any higher in these crops of central Kansas. The plantation I am on now, in the famous Teche country, shows 1½ per cent. of glucose in the cane juices."

Certain gummy substances in our cane prevent the complete extraction of sugar; that is to say, because of the presence of this gummy matter, chemists have not yet been able to get out of the cane juice all the sugar there is in it, the average extraction being about 100 pounds, leaving a good deal of sugar in the sirup. Prof. Crampton refers to this fact and suggests four different lines of experimentation to get rid of this last obstacle, and closes his long and instructive letter by asking—"Who will be bold enough to award the crown of supremacy between California sugar beets with 20 per cent. sucrose, at \$7 per ton, Louisiana cane with 12 per cent. at \$3, and Kansas sorghum with 12 per cent. at \$1.50, and with two bushels of seed and any quantity of gummy molasses thrown in?"

The word "sucrose," as used above, means available sugar; that is to say, sugar that can be extracted.

Blake's Weather Tables for 1889 and this paper one year for \$1.50.

#### THE NEW FORT RILEY.

The government is rebuilding Fort Riley. It is intended to make it headquarters of the Western army. The first appropriation, \$40,000, was made some three years ago to rebuild and increase the quarters at the Fort. This was followed by a direct appropriation of \$200,000, and the session which just closed gave them \$150,000 more. In addition to this they have had \$50,000 or \$75,000 out of special funds, for waterworks, hospital, repairs, etc. Capt. Geo. E. Pond, a skillful engineer, has charge of the work.

When it was proposed, some years ago, to dispose of the Fort Riley Reservation and open it to settlement, General Sherman opposed it, because he said the army would need it in time to come. General Sheridan was of like mind, and General Schofield believes the same way. Army officers of the higher grades, as we are informed, are agreed that Riley is to be made the most important military fort in the country. Plans already agreed upon indicate the expenditure of a million and a half dollars.

"The law, authorizing this work designates Fort Riley as a cavalry and artillery school, and also makes it the main recruiting station of the United States army. Accommodations must be made for twelve companies of cavalry, and the extent of the artillery post will be five batteries. It is estimated that provision must also be made for twelve hundred recruits.

The new Fort Riley will be something for Kansas to be proud of independently of all advantages which farmers will derive from it and they will be many. It will afford a market for large quantities of farm products, and that will directly aid the farmers in Davis, Riley, Dickinson and adjoining counties. But, as suggested by an exchange, "an establishment requiring the maintenance in almost the heart of the State of from two or three thousand men and twelve or fifteen hundred horses, is not the only feature of value to our people. Riley will be the main point for all purchases of horses for the army. The idea of the government raising its own horses is held by many military men. Sheridan believed that by crossing certain breeds a perfect cavalry horse can be obtained, and this is one of the hopes entertained concerning Riley by army folks. We predict that in ten years central Kansas will be one of the most valuable horse regions in the world, and that Riley will be the heart that will furnish the pulse-beats to a great interest."

It is doubtful whether the government will ever breed its own horses, but it is not at all improbable that a series of experiments in horse-breeding will be undertaken at Riley for the purpose of establishing a standard breed or grade for army horses, and that would open a profitable field for farmers in Kansas. The location of a cavalry school in any community stimulates the breeding of horses, and when the government takes the lead in experimenting on the line of improvement, the idea becomes contagious and every farmer feels its influence. Our Senators and Representatives at Washington, and especially Messrs. Plumb, Anderson, and Ryan, have exercised a watchful guardianship over legislation in aid of the work, and they will doubtless feel encouraged to further exertions in the same direction as the magnitude of the work begins to appear and the people of Kansas get a glimpse of what is coming to them.

For \$1.50 we will send Blake's Weather Tables for 1889 and the KANSAS FARMER one year.

## Horticulture.

### Training the Grapes.

In no department of horticulture has more ingenuity been employed than in training the grape. So many modes have been employed that there appears to be no conceivable plan but that has been followed, and each particular mode has strong adherents, who believe each special plan, if not the best, has special advantages. To describe them all would be a difficult undertaking. We shall content ourselves by giving the general requirements of the grape in training, leaving all the fine points, in which the general reader has no special interest, to the amateur, who trains each one to suit his own particular fancy.

The trellis in most general use now, consists of posts and wire. The posts are firmly set at a distance of from ten to twenty feet apart, according to the size of the wire and posts, and the vigor of the variety trained on them. Strong growers require firm supports. These posts are firmly set in line of the row, and to them are securely fastened good, stout wires, to which the vines are securely tied. The use of the trellis is to keep the grapes from the soil and free from dirt, and to give them air, which increases the health of the vine and the flavor of the grapes. A stout stake set to each vine is much used, and where wood is plenty, does well; but the wires are the most usually employed, as they are neater in appearance, more easily set, and are far more durable.

The trellis may be high or low. If low, where there are winds, it is of advantage, for the vines are not so much swayed by wind, and are safer from damage. Low trellis often makes dampness and then mildew will be a serious objection. Others make a high trellis and give the air a free circulation under the vines. Whatever plan that gives freedom from moisture and consequent rot, should be adopted, and each locality must decide which is for that section the more preferable plan. Some use an overhead arbor trellis. This will answer if there is only a single row, but if there are several rows of them side by side, the circulation of air is impeded, and rot will be a serious objection.

The vines should be tied securely to the wires of the trellis; and, during the summer, if the growth of the vine is too luxuriant, and impedes the free circulation of the air, it would be of advantage to summer-prune by cutting off a few inches of the most luxuriant canes. Summer-pruning can be carried too far, and the vigor of the vine weakened by an excess of this practice. The leaf is a vital part of the plant, and gains from the air a great part of the food on which it thrives, and if cut away too liberally seriously affects the health of the plant. Very vigorous vines, closely pruned, will send out a less number of canes, but far more vigorous, and will grow beyond all just proportion, robbing the vine and grapes of their due proportion of sap, and makes a large growth of vine and set only a fair crop of fruit. We prefer, especially with varieties of undoubted vigor, to leave more buds to grow, making smaller growths of canes, and then thin out the poorest clusters of grapes, leaving only the finest to grow, and we are rewarded with finer fruit, equaling in weight that of any plan we have seen practiced. We advise all to try experiments in pruning for themselves in the various plans so often advised, and as the experiment is so easily tried, the information gained by a thorough trial will more than repay all the time and labor employed in the trial.—*Exchange.*

### Successful Co-operation Among Farmers.

The Fruit-Growers Union and Co-operative Society, of Hammonton, New Jersey, affords a striking instance of successful co-operation among farmers. It was started in 1887 upon a very limited basis, but the business did not succeed very well until February, 1884, when the Union was reorganized and incorporated. Cash dividends were at first declared, but it was afterward decided to issue shares of stock, retaining the cash as capital for the business. With this money the Union purchased a piece of ground and built a large store building. Here, groceries, dry goods and general merchandise were kept. The first year's trade amounted to \$28,000, and a dividend of 2½ per cent. was declared. The second year, a business of \$45,000 was reached, and a 5 per cent. dividend declared. Last year \$63,000 was received and 7 per cent. declared. So far this year the business has been larger than ever before. Thus a large trade has been established, and merchandise of various kinds secured at prices lower than the market rates.

In addition to the merchandise business, the enterprise has proved a God-send to the farmers in way of shipments. In the town of Hammonton, twenty years ago, farmers had to avoid raising a too large crop of berries, or a large part would perish for want of a market. When the Union started a market was created and the business grew. The present year 2,269,239 quarts of blackberries were marketed. In one week 387,000 quarts of strawberries and in two weeks 287,000 quarts of raspberries were shipped. One farmer from forty acres of blackberries marketed about 60,000 quarts. If the farmers in the South and other sections of our country would form similar co-operative societies they could secure low rates and be guaranteed better accommodations by railroad and steamship lines, and find a ready sale for their produce. The fruit crop is one that is specially adapted to being handled through co-operative exchanges.—*American Agriculturist.*

### Cider Vinegar.

Good cider vinegar can be made only from good cider. Cider made from ripe apples is stronger than that made earlier, when the apples are yet green. Put the barrel on its side and fill it with good cider to the bung, that the pomace may be thrown out as the cider ferments. Fill up the barrel twice a day while fermentation is in progress. At the close of fermentation the cider should be racked off carefully and put into another clean barrel, or the same one after it has been well washed out. If there are enough barrels, it is better to fill them only half full after fermentation is finished, as this exposes a greater surface to the air. The more air the better the vinegar will make. Hence, a darkened, airy out-house is better than a close cellar for the storage of barrels. Cider vinegar is not weakened by exposure to the air or injured by freezing; and if the barrels are only half full there will be no overflow from freezing. It is not necessary to add anything to the cider; nor is it desirable to add anything, except, perhaps, some old vinegar after the cider has fermented. The cider will be converted into vinegar in about twelve months, but will steadily increase in strength.

The tightness required of a cider vinegar barrel has become proverbial. Leakage is what haunts the nights of the vinegar-maker. The staves of the vinegar barrel must be free of sap-wood, and twice the usual thickness. Wooden hoops are better than iron ones, as the cider will cut through iron hoops in

short order when once it gets to them. Worms, the larvæ of a fly which usually deposits her eggs in the chime, make much bother, and must be carefully guarded against. Naturally enough they prefer sap-wood, and on this account as well as the cider's soaking through sap-wood, it should be avoided. It is said that occasionally painting the barrel with coal oil will kill the larvæ. But it is best to prevent the deposit of the eggs, which may be done by keeping the barrels in a dark place from the middle of October.—*American Agriculturist.*

### Preparation to Kill Borers.

A Missouri farmer gives the following prescription for killing borers and for preventing their attack on trees: Get a pint of crude carbolic acid, costing twenty-five cents, and is sufficient for twenty gallons of the wash. Take a tight barrel and put in four or five gallons of soap, with as much hot water to thin it; then stir in the pint of carbolic acid and let it stand over night, or longer, to combine. Now add twelve gallons of rainwater and stir well; then apply to the base of the tree with a short broom or old paint brush, taking pains to wet inside of all crevices. This will prevent both peach and apple borers. It should be applied the latter part of June or early in July, in the climate of Missouri, when moths and beetles usually appear. The odor is so pungent and lasting that no eggs will be deposited where it has been applied, and the effects will continue till after the insects are done flying. If the crude acid cannot be obtained, one-third of the pure will answer, but it more expensive. The mixture is practically the kerosene emulsion.

### The Age of Trees.

Where the zone test can be applied, we know that the age imputed to the tree will not err in the way of excess. A clearly-marked ring infallibly denotes a season's growth. Assuming an unfavorable season to have resulted in an unusually thin, or perhaps an indistinguishable layer, one year's credit will remain unentered in the tree's automatic ledger. On this basis of computation the following ages have been strictly verified in Germany. In that country, as in Finland and Sweden, the pine and fir have attained to from 500 to 700 years. The greatest ascertained age of the larch (in Bavaria) is 274 years, while the silver fir has reached 428. The oldest known specimen of the holm oak (near Aschaffenburg) numbered 410 years, while in all the common oaks above 320 years old the heart was beginning to decay. The maximum ages of other German trees—as found by counting the rings—is as follows: Red beech 245, ash 170, elm 130, birch 200, aspen 210 and alder 145 years. The lime, beloved of the Fatherland, generally evades this test. Probably one of the longest-standing of all, it is seldom found in a sound condition at an advanced age. At the Edinburgh forestry exhibition, four years ago, much interest was shown in the sections of two Scotch firs, one 25 feet in circumference, distinctly vouching its own age to be 217 years, the other 18 feet in circumference, showing a clear record of year-circles to the number of 270. As the site of both was known, as well as the dates of the felling of the one and the blowing down of the other, it might have been possible to ascertain why the larger tree was so much younger than its companion. As an excellent example of what can be effected by such investigation, the following incident is especially worthy of notice: A few years since, an American engineer had occasion to

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clear a plantation of hemlock trees, in which species the marking of the annual zones is peculiarly distinct. He found that the layers were of very unequal breadth, indicating a growth five or six times fuller in some years than in others. The trees were of various ages, but every tree told exactly the same tale. "If you begin on the outer layer of two trees, one young and the other old, and counted back twenty years, when the young tree indicated a growing season by the full layer, the older tree indicated the same." A similar concurrence happened with the meagre seasons, though there was nothing like periodicity in the return of either. By such a comparison as this we are enabled to identify particular years as those of unusual increase, or the contrary; and by turning to the meteorological records for these years, to ascertain the nature of the weather which has been favorable to the growth of the wood.—*London Standard.*

The fountain of perpetual youth was one of the dreams of antiquity. It has been well-nigh realized in Ayer's Sarsaparilla, which purifies the blood, gives vitality to all the bodily functions, and thus restores to age much of the vigor and freshness of youth.

A late Japanese invention is said to be a process of making from seaweed a sort of paper almost as transparent as glass and as tough as parchment.

## The Poultry Yard.

### Diseases in Ducks--Poultry Tonic.

W. F. B., Charlotte, N. C., wishes advice regarding the condition of his Pekin ducks, and fowls, which he describes as follows:

1. My Pekin ducks get very stupid and weak, cannot walk, nor make any noise scarcely, one dead, two now sick.
2. My young chicks get droopy in a few days after being taken from the nest, then wings fall low to the ground, and they stand in one place until they die.
3. My grown chickens have very sore mouths, tongues are swollen and covered with sores, smell offensively, and the eyes are swollen, and there is a rattling sound in the throat when breathing.

I will endeavor to give your correspondent such information as he desires in as brief a manner as possible:

1. In reference to his ducks, their trouble has probably resulted either from overfeeding—which often produces the conditions he describes—or what is more likely they are being eaten up with lice. If the former is the trouble, reduce the amount of food furnished them, and tone them up generally by the administration of Douglas' mixture, which is a fit tonic and alterative, and is described below. Let him also mix with their food regularly each day a certain quantity of pulverized bone, or ground oyster shells. If troubled with lice, which may be ascertained by examination, dust liberally with Persian insect powder and feed in manner described above, also using the tonic. It would also be well in this event to grease the top of each one's head with lard in which flowers of sulphur has been mixed—and a little might be rubbed under the wings in the case of adults.

2. This may be due either to lice, which is most probable, or to feeding too much soft food, and especially having it too watery. In this latter case, however, it would probably be attended with diarrhoea. Thousands of young chicks die each year from lice, and manifest just such symptoms as our correspondent describes. The best remedy is prevention. When you set a hen, thoroughly dust her with insect powder. Make a clean, dry nest and sprinkle the powder in it. Before taking the hen and chicks from the nest thoroughly dust them all with the same powder. It is likely then they will never be troubled; but if you see your chicks weaken and die, you may know the vermin are at work. Grease the heads of the chicks with lard and sulphur, as in the case of the ducks described above, but do not put any under their wings. Feed dry food, such as cracked corn, wheat or buckwheat, and put Douglas' mixture in the drinking water each day. If diarrhoea is present, put ten drops of camphorated spirits to a pint of drinking water, in addition to the tonic.

3. The third disease described is without doubt the very contagious one of roup, which annually destroys more fowls than all others combined—unless it be cholera. It usually begins with a cold and slight inflammation of the air passages, and when taken in this stage may be easily cured. But, if neglected, it rapidly develops into a species of diphtheria, attended by swollen throat, head and eyes, and offensive discharges from the air passages, until it rapidly destroys the patient. There is no certain cure for the roup, but we have known of many being saved by the following treatment: Separate the

fowl and put it in a warm dry place. Provide two water-vessels, and in one put ten drops of the tincture of aconite to a gill of water, and in the other the same quantity of the tincture of belladonna. Feed only soft food, and in it sprinkle a powder made of equal parts of pulverized iron, chlorate of potash, powdered rhubarb and assafetida. If the bird is too sick to eat, make pills of this powder, using castor oil as an emollient, and force down the fowl's throat. Wash the head and face with castile soap and warm water, forcing it into the nostrils and throat; then fill a small glass syringe with kerosene containing about five drops of carbolic acid, and inject a portion into the nostrils each day, finally greasing the head and face with a mild mixture of glycerine and carbolic acid. If taken in time only the first measures mentioned are necessary. The disease is very contagious, and will spread rapidly unless the sick fowls are isolated.

I judge from the letter of your correspondent that the houses in which he keeps his fowls are very damp, or situated in a low, wet place. If this be so, he ought to change them at once. Also, if vermin infest them, let him close the houses tightly, and fumigate thoroughly by burning sulphur in them. Follow with whitewash in which carbolic acid has been mixed, and put kerosene on the roosts and nest-boxes. Also powder the fowl with insect powder, if very bad, by distributing it at the roots of the feathers.

For the benefit of your readers, I give the recipe for making that splendid and economical poultry tonic known as Douglas' mixture: Take of sulphate of iron (common copperas), eight ounces; sulphuric acid, half a fluid ounce. Put one gallon of water into a bottle or jug; into this put the sulphate of iron. As soon as the iron is dissolved add the acid, and when the mixture is clear it is ready to use. Put a gill every other day in the drinking water to every twenty-five fowls, and you will seldom be troubled with disease, and will have fine healthy fowls. In case of disease it can be used every day. Smaller quantities may be poured into smaller vessels of water. Besides being a fine tonic and alterative, it possesses valuable antiseptic properties, which make it a remedy as well as a tonic.—C. K. Westbrook, in Country Gentleman.

Sugar maple is a fine tree. Chestnut will grow on any well-drained soil. Locust will grow in a comparatively thin soil, catalpa is one of the best trees for durability, elms grow slow but make a handsome shade tree, walnut is a fine tree along the roadside, butternut will make a good growth, but

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## Inter-State Commerce Commissioners' Report.

From the synopsis of the report sent out by telegraph we gather the following:

From the best information now available the railroad mileage of the country on the thirtieth day of June, 1888, is estimated at 152,781, of which 2,312 miles had been completed and brought into operation within the next six months preceding that day.

The number of corporations represented is 1,251, but by reason of leases or other contract arrangements, many corporations hold, control and operate one or more roads owned by other corporations, and the whole number making reports or operated at the time named was 665.

A summary of the formal complaints is as follows: Of a total of 107 cases submitted, the record is: Heard and decided 50; not yet decided 6; hearing not completed 9; withdrawn or settled 23; suspended by request 10; assigned for hearing 9.

It is reasonable to expect that carriers of the country will, where practicable, make such joint arrangements, so that the public shall find an arrangement with one adequate for the purposes of any single transaction. There should be some means of enforcing among carriers the obligations, moral or legal, that grow out of such arrangements. The only effectual means by which good faith could be enforced was the pooling of freight or earnings, but pooling is now out of their power, being forbidden by law. The tendency among railroads seems likely to be in the direction of consolidation as the only means of mutual protection against rate wars. But anything equivalent to the creation of what is now, technically denominated a trust, could hardly be supposed possible, even if the parties were at liberty to form it at pleasure. If the parties could come into harmony on the subject, an arrangement of the sort would be so powerful in its control over the business interests of the country, and so susceptible to uses for mischievous purposes, that public policy could not for a moment sanction it, at least, unless by statute it were held in close legal restraints and under public control. Like arrangements in other lines of business are already sufficiently threatening to the public interest and the most ardent advocate of the concentration of railway authority can hardly expect that it will control the transportation of the country. Lacking concentration of authority, railroads can do much towards better relations among themselves. The need of this is very imperative. In all the cutting of rates the party beginning it makes insinuations against its competitors. Carriers cutting rates have proclaimed that the reduced rates were all that could be justly demanded when persons having experience knew that persistence in such rates would lead directly to bankruptcy. An impartial observer is compelled to say that such methods do not belong to the present age. To make the adversary feel and fear the power to inflict injury is often the first and principal thought, and a rate is cut, when in a ruder age it would have been a threat. The motive is to obtain a right, or extort a privilege, or punish a wrong and irrespective of any question whether there are not legal remedies which are adequate for all purposes of substantial justice. While this commission is not at this time prepared to recommend general legislation towards the establishment and promotions of relations between the carriers that shall better subserve the public interest than those which are now common, but must

nevertheless look forward to the possibility of something of that nature becoming imperative unless a great improvement in the existing conditions is voluntarily inaugurated.

IMMIGRANT TRANSPORTATION is next considered, and various facts stated which were developed upon two investigations held in New York City. In view of all the circumstances the commission recommends a reception place larger than Castle Garden from which those not legitimately connected with the immigration transportation shall be excluded. Interior lines should have agents there on equal footing. Payments of commission for procuring the shipment of immigrants from foreign countries, should be declared illegal and made punishable. The commission should have power to fix immigrant fares. These objects can not be fully accomplished except by the federal government taking complete control of the whole subject. The subject of the payment of commission is treated extensively. The commission believes that the evils of the system exceed its advantages. The subject is brought to the attention of Congress.

## November Weather.

The following extracts are copied from Prof. Snow's weather report from observations taken at the State University, Lawrence.

The temperature was normal. The rainfall was more than double the average. The wind velocity was very low and the mean cloudiness reached a high percentage. The first killing frost of the season occurred on the 9th—twenty-one days later than the average date. The first snow of the season fell on the 9th, which is just its average date; its amount, however, was extraordinary, reaching an average depth of twelve inches.

Mean Temperature.—39.20 deg., which is 0.20 deg. below the November average. The highest temperature was 79 deg., on the 1st; the lowest was 21 deg., on the 10th and 22d, giving a range of 58 deg. Mean temperature at 7 a. m., 34.82 deg.; at 2 p. m., 46.95 deg.; at 9 p. m., 37.53 deg.

Rainfall.—4.54 inches, which is 2.69 inches above the November average. Rain or snow, in measurable quantities, fell on six days. There were no thunder showers. The entire rainfall for the eleven months of 1888 now completed has been 42.39 inches, which is 9.36 inches above the average for the same months in the preceding twenty years.

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BECAUSE THE CENTURY is above everything a leader. It led the development of wood-engraving in America. It has fostered the development of American authors. It is alive to the issues of to-day. What it prints, sets people to thinking and talking.

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BECAUSE THE CENTURY is printing those remarkable articles on the Exile System by George Kennan, which are attracting universal attention and are being reprinted in hundreds of foreign newspapers, but are not allowed to enter Russia. The "Chicago Tribune" says that "no other magazine articles printed in the English language just now touch upon a subject which so vitally interests all thoughtful people in Europe and America and Asia." They are "as judicious as the opinion of a Supreme Court tribunal,—as thrilling as the most sensational drama."

BECAUSE—but we have not space here to announce the new features of THE CENTURY for 1889. Any person, mentioning this paper, can have the prospectus, with our "Catalogue of Special Publications" (with original illustrations), mailed FREE of charge. This advertisement will not appear again.

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The subscription price of THE CENTURY is \$4.00 a year,—35c. a number. All dealers and postmasters take subscriptions, or you can remit directly to the publishers. Begin with November.

## The Inter Ocean

Is Published Every Day of the Year, and is the

LEADING REPUBLICAN PAPER OF THE NORTHWEST.

Price, exclusive of Sunday, by mail, postpaid .....\$8.00 per year  
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## THE SEMI-WEEKLY INTER OCEAN.

Is published on MONDAYS and THURSDAYS, and besides the news condensed from the Daily, it contains many special features of great value to those so situated that they can not secure the Daily every day. The Monday issue contains the sermons printed in The Daily Inter Ocean of the same date.

## THE WEEKLY INTER OCEAN.

Is the Most Popular Family Newspaper published West of the Alleghany Mountains. It owes its popularity to the fact that it is the BEST EDITED and has the HIGHEST LITERARY CHARACTER of any Western Publication. It is CLEAN and BRIGHT, and is the able exponent of IDEAS and PRINCIPLES dear to the American people. While it is broad in its philanthropy, it is FOR AMERICA AGAINST THE WORLD, and broadly claims that the best service that can be done FOR MANKIND IS TO INCREASE AND MAKE PERMANENT THE PROSPERITY OF OUR GREAT REPUBLIC. Conscientious service in this patriotic line of duty has given it an unusual hold upon the American people. Besides, no paper excels it as a disseminator of news.

THE MARKET REPORTS ARE RELIABLE AND COMPLETE. THE NEWS OF THE WORLD is found condensed in its columns, and the very best stories and literary productions THAT MONEY CAN PURCHASE are regularly found in its columns. Among the special family features are the departments—THE FARM AND HOME, WOMAN'S KINGDOM, and OUR CURIOSITY SHOP. On the whole, it is A MODEL AMERICAN NEWSPAPER, and richly deserves what it has, THE LARGEST CIRCULATION of any publication of the kind in America. It is the best paper for the home and for the workshop.

The price of The Weekly is.....\$1.00 per year  
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For the accommodation of its patrons the management of THE INTER OCEAN has made arrangements to club both these editions with THAT BRILLIANT AND SUCCESSFUL PUBLICATION,

## SCRIBNER'S MAGAZINE,

One of the best Literary Monthlies in America, and which compares favorably with any of the older Magazines in illustrations and literary matter. THE PRICE OF THE MAGAZINE IS \$3. but we will send THE WEEKLY INTER OCEAN and SCRIBNER'S MAGAZINE, both one year, for THREE DOLLARS. Both publications for the price of one. THE SEMI-WEEKLY INTER OCEAN and SCRIBNER'S MAGAZINE, both one year, for FOUR DOLLARS.

In the political campaign that ended in the election of HARRISON and MORTON and THE TRIUMPH OF PROTECTION PRINCIPLES, no paper had more influence than THE INTER OCEAN. It has been first, last, and always Republican, and during the campaign came to be recognized as the LEADING REPUBLICAN PAPER OF THE WEST. It will maintain this position, and will give special attention to governmental and political affairs.

Remittances may be made at our risk, either by draft, express, postoffice order, express orders, or registered letter. Address

THE INTER OCEAN, Chicago.

## A LOST HUSBAND!

To secure a new list of agents, and introduce our goods in every home, we make the following offer: To the first 200 persons telling us where in the Bible the word "Husband" is first found—book, chapter and verse—we will give \$500 in cash and goods, as follows: To the first person giving correct answer we will give \$50 in cash; to the second, \$30 in cash; to the third, \$10 in cash; to the fourth and fifth, \$5 in cash, each. To the next 195 [if there are as many] we will give each a SOLID ROLLED GOLD, HALF ROUND WEDDING RING. With your answer you must send 25 cents [Silver, Postal Note or 1 cent stamps] to help pay postage and advertising, for which we will send A HANDSOME FOLDING CASE, containing 119 Useful Articles for domestic use, beautifully embellished in colors. Your chance is good for the FIRST PRIZE if you send TO-DAY. DO NOT DELAY AND LET SOME ONE GET AHEAD OF YOU. Remember, you get more than double your money worth in the folding case [as everybody receives one]. All answers must be received previous to February 1st, 1889, when contest closes. FOR AN OUTLAY OF 25 CENTS YOU MAY RECEIVE \$50. Write at once, send silver or 1 cent stamps, and address

501 Queen Street, Alexandria, Va. THE E. H. HAMMOND NOVELTY CO.

## The Veterinarian.

[This department of the KANSAS FARMER is in charge of Dr. F. H. Armstrong, V.S., Topeka, a graduate of Toronto Veterinary college, who will answer all inquiries addressed to the KANSAS FARMER concerning diseases or accidents to horses and cattle. For this there is no charge. Persons wishing to address him privately by mail on professional business will please enclose one dollar, to insure attention. Address F. H. Armstrong, V.S., No. 114 Fifth St. West, Topeka, Kas.]

### The Veterinary Profession.

The Veterinary Profession was practically unknown in America sixty years ago. The health and life of domestic animals being intrusted to the care of the blacksmith, horse-trainer, or stable groom. But the increasing value of live-stock presented a field for usefulness and reward to a few, and so we note the occasional migrations of educated veterinarians from the old world. But while these few worthy ones were establishing themselves, their success gave increased verility to empiricism, a most pernicious influence, and which still holds sway in many parts of the country. Men whose chief capital was boasting, ever anxious to obtain a dollar regardless of the means, conceived the idea of becoming veterinary surgeons and announced their suddenly assumed title of veterinary surgeon in flaming colors. They apparently have prospered. They have multiplied and their number is without limit, frequently exceeding demand. With them came the popularly known diseases, "wolf in tail," "hollow horn," "loss of cud," "hooks," "chest founder," etc. At a later date, as the demand for qualified veterinarians became partially recognized, colleges began to appear, at first it is true rather tottering affairs, but became settled institutions, and their influence in moulding the then shapeless veterinary profession is apparent in the colleges and profession of to-day.

The national and State government through their efforts to stamp out and prevent the spread of contagious diseases has done much to advance the profession by employing qualified and scholarly men who, by their honor, integrity and value to stock owners, has favorably influenced the sentiment of the general public. No country in the world can boast of a longer or more complete list of contagious diseases of animals than ours. In cattle we have pleuropneumonia, tuberculosis, anthrax, Texas fever; in horses, glanders, epizootic fevers and of late a malignant venereal disease equine syphilis; in sheep, scab, root-rot; in pigs, cholera, trichina, anthrax; dogs, rabies; chickens, cholera. Most of these diseases must eventually be referred to the veterinary profession for control or extirpation.

The veterinarian of the future is destined to be a useful servant in guarding the public health in the way of meat and milk inspection. Skilled men will be employed to prevent the transmission of serious and contagious diseases from animals to the human family. One of the most loathesome and terrible diseases when conveyed to man is that of glanders. Of late years it has become widely spread. We often hear of some unfortunate person who has contracted the deadly disease by handling affected animals. In many instances these accidents are chargeable to the criminal ignorance or greed for gain of some empiric by prescribing treatment for cure of disease. Human and animal tuberculosis (consumption) has been demonstrated to be identical and can be transmitted from animals to man, and from man to animals; and as we know this disease is widely prevalent, the detection of the disease and prevention of sale of meat or milk of such animals for food, is highly important.

We then can be of service to stock-owners by skillful treatment of live-stock; to the country at large by controlling and exterminating contagious diseases; to humanity by relieving suffering; to public health by preventing the consumption of unhealthy food. We need the support and good will of the press, and should court these favors by contributing whatever we can to enhance the value of the press to the public. Veterinary columns in journals have been conducted so that they were beneficial to subscribers, publishers and the profession. The editors taking up topics of interest to stock-owners regarding contagious or epizootic diseases, their history, causes, means of extirpation and prevention, or some of the more common ailments, causes, pre-

vention or treatment. Gratuitous prescriptions often-times mislead well meaning stock-owners to attempt the treatment of serious cases without the assistance of an available practitioner until too late for success, when the practitioner gets the blame for bad results. However, many an animal can be benefitted and probably cured without being seen, providing you in your letters to this department give all the details so that we may have grounds upon which to form a safe diagnosis. F. H. A.

### Hull's Hotel and Restaurant.

The only restaurant with special parlor for ladies; the finest in the city. 722 Kansas avenue.

### For Sale.

A mixed herd of Ayrshire cattle, nine in all—yearlings, cows, etc. Herd at Kingman, Kas. For information address Dr. E. F. Butterfield, Syracuse, N. Y.

### Farm Loans.

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

T. E. BOWMAN & Co.,  
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### Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for Consumption. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. Address. Respectfully,  
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### Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple 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 Power's Block, Rochester, N. Y.



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That the diseases of domestic animals, Horses, CATTLE, SHEEP, DOGS, HOGS and POULTRY, are cured by **Humphreys' Veterinary Specifics**, is as true as that people ride on railroads, send messages by telegraph, or sew with sewing machines. It is as irrational to bottle, ball, and bleed animals in order to cure them, as it is to take passage in a sloop from New York to Albany. Used in the best stables and recommended by the U. S. Army Cavalry Officers.

500 PAGE BOOK on treatment and care of Domestic Animals, and stable chart mounted on rollers, sent free.

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Sent Prepaid on Receipt of Price.  
Humphreys' Med. Co., 109 Fulton St., N. Y.

## THE MARKETS.

By Telegraph, December 3, 1888.

### LIVE STOCK MARKETS.

#### St. Louis.

**CATTLE**—Receipts 300, shipments 2,600. Market strong and steady. Choice heavy native steers \$4 00a4 60, fair to good native steers \$3 50a4 00, medium to choice butchers' steers \$3 00a4 00, fair to good stockers and feeders \$2 10a3 25, grass rangers \$2 00a3 10.

**HOGS**—Receipts 1,900, shipments 3,000. Market quoted lower. Choice heavy and butchers' selections \$5 35a5 50, medium to prime packing \$5 20a5 30, ordinary to best light grades \$4 00a5 15.

**SHEEP**—Receipts ...., shipments .... Market firm and steady. Common to good sheep, \$2 00a4 00.

#### Chicago.

**CATTLE**—Receipts 6,000. Market steady. Top natives, \$5 40; best steers, \$4 90a5 40; good, \$4 30a4 80; medium, \$3 80a4 30; common, \$3 00a3 70; stockers, \$2 00a2 50; feeders, \$2 75a3 25; bulls, \$1 60a3 00; cows, \$1 25a3 00; Texas steers, \$2 50a3 40; Texas cows, \$1 60a2 40.

**HOGS**—Receipts 12,000. Market 5a10c lower. Mixed, \$5 10a5 35; heavy, \$5 15a5 35; light, \$5 05a5 25; skips, \$4 90a5 00.

**SHEEP**—Receipts 7,000. Market steady. Natives, \$3 00a4 00; Texas, \$2 50a3 50; lambs, per cwt., \$4 00a5 50.

#### Kansas City.

**CATTLE**—Dressed beef and shipping steers, \$2 90a4 25.

**HOGS**—A good many sales Saturday were made at \$5 17a5 20 with the bulk at \$5 15, and a little scattering business was done at \$5 05a5 10. The most common figure to-day was \$5 10, with mixed 190 to 220-lb stuff at \$5 00a5 05.

**SHEEP**—Receipts since Saturday 1,314. 100 muttons, 93 lbs., \$3 25; 7 do., 98 lbs., \$2 75.

### PRODUCE MARKETS.

#### New York.

**WHEAT**—No. 2, \$1 03a1 04.  
**CORN**—No. 2, 47a48c.

#### St. Louis.

**FLOUR**—Dull and unchanged.  
**WHEAT**—No. 2 red, cash, \$1 00a1 01.  
**CORN**—No. 2 cash, 33a34c.  
**OATS**—No. 2 cash, 24a25c.  
**RYE**—No. 2, 50a51c.

#### Chicago.

Cash quotations were as follows:  
**FLOUR**—Nominally unchanged.  
**WHEAT**—No. 2 spring, \$1 01a1 01a; No. 3 spring, 90a93c; No. 2 red, \$1 01a1 01a.  
**CORN**—No. 2, 35a36c.  
**OATS**—No. 2, 25a26c.  
**RYE**—No. 2, 51c.  
**BARLEY**—No. 2, 78c.  
**FLAXSEED**—No. 1, \$1 50a1 51.  
**TIMOTHY**—Prime, \$1 50.  
**PORK**—\$13 37a13 50.  
**LARD**—\$8 00.

#### Kansas City.

**WHEAT**—Receipts at regular elevators since last report 809 bushels; withdrawals, 8,000 bushels, leaving stock in store as reported to the Board of Trade to-day, 302,728 bushels. No. 2 red winter, cash, no bids, 92c asked; No. 3 red winter, cash, no bids, 80c asked.

**CORN**—Receipts at regular elevators since last report, 20,880 bushels; withdrawals, 18,156 bushels, leaving stock in store as reported to the Board of Trade to-day, 32,952 bushels. No. 2 cash, 27c bid, 28a29c asked.

**OATS**—No. 2 cash, no bids, 23c asked.  
**RYE**—No. 2 cash, no bids nor offerings.

**HAY**—Receipts 39 cars. Market weak. Fancy prairie, \$7 50; good medium, \$5 50a6 00.

**SEEDS**—We quote: Flaxseed, \$1 30 per bu. on a basis of pure. Castor beans, \$1 35 per bu. for prime.

**OIL-CAKE**—Per 100 lbs. sacked, f. o. b., \$1 25; \$12 00 per 1,000 lbs.; \$22 00 per ton; car lots, \$21 00 per ton.

**FLOUR**—Quotations are for unestablished

brands in car lots, per 1/4 bbl. in sacks, as follows: XX, \$1 00; XXX, \$1 10; family, \$1 30; choice, \$1 65; fancy, \$1 90; extra fancy, \$2 10a2 20; patent, \$2 40a2 50.

**BUTTER**—Receipts light and market firm for good. We quote: Creamery, fancy, 28c; good, 24c; dairy, fancy, 22c; good to choice store-packed, 18a16c; poor, 10c.

**CHEESE**—We quote: Full cream, twins, 12a12 1/2c; full cream, Young America, 12a12 1/2c.

**EGGS**—Receipts of strictly fresh light and market firm at 20a21c per dozen.

**APPLES**—Supply large; \$1 25a2 00 per bbl.

**POTATOES**—Irish—Market well supplied; home-grown, 30a35c per bus.; Colorado and Utah, 50a55c per bus.; Iowa and Nebraska, choice, 30a35c per bus. Sweet potatoes, white and red, 50c; yellow, 65a75c per bus.

**PROVISIONS**—Following quotations are for round lots. Job lots usually 1/4c higher. Sugar-cured meats (canned or plain): Hams 10a, breakfast bacon 10a, dried beef 8c. Dry salt meats: clear rib sides \$7 25, long clear sides \$7 00, shoulders \$6 75, short clear sides \$7 00. Smoked meats: clear rib sides \$8 25, long clear sides \$8 00, shoulders \$7 50, short clear sides \$8 00. Barrel meats: mess pork \$14 00. Choice tierce lard, \$7 75.

## FOR THE HOLIDAYS!

**C. E. BUHRE,**

623 KANSAS AVE.,

Carries the Finest Line of

**DIAMONDS,**

**JEWELRY**

**AND WATCHES**

**IN THE CITY.**

## ALL REPAIR WORK

Done Promptly and Satisfactorily.

For Sale or Exchange for Good Real Estate, a

**Herd of Fine Short-horn Cattle**

And one IMPORTED PERCHERON STALLION—an excellent breeder.

Also, one ENGLISH COACH STALLION—very fine. Address  
D. H. SCOTT, Topeka, Kansas.

**HUGH E. THOMPSON,**

**BROOMCORN**

Commission and Dealer in Broom-Makers' Supplies. Reference:—National Bank of Commerce.  
1412 & 1414 Liberty St., Kansas City, Mo.

**HAGEY & WILHELM,**  
**WOOL COMMISSION MERCHANTS**

**ST. LOUIS, MO.**

REFERENCES:—KANSAS FARMER CO., Topeka, Kas.; Boatmen's Bank, St. Louis  
Dunn's Mercantile Reporter, St. Louis; First National Bank, Beloit, Kas.

**GENERAL AGENTS FOR COOPER'S SHEEP DIP.**

We guarantee sale and full returns inside of TEN DAYS from receipt of shipment.

**FAY CURRANT GRAPES** LARGEST GROWER OF GRAPE VINES IN AMERICA.  
HEADQUARTERS **EATON, MOYER** and all others, new and old; also small fruits  
NIAGARA, EMPIRE STATE, Lowest prices, highest grading, warranted true. In every respect a model  
and first-class establishment. Free illustrated Catalogue. **GEO. S. JOSSELYN, Fredonia, N. Y.**

## The Busy Bee.

### Selling Honey.

In a paper read by S. C. Root, at the New York convention, he stated that the great need of honey-producers, in order to sell their honey, was:

First, to attain to a higher standard in the production of honey. This will be reached through the great freedom of discussion which is taking place in all our bee literature. I am a thorough advocate of the "Question and Answer department" of our papers, where we are enabled to compare the opinions of so many of our best bee-keepers, expressed in so concise and explicit a manner. We should remember that anything tending to educate in the direction of raising the quality of our honey to a higher standard, is exactly in line with creating and strengthening a better market.

Our first aim should be a prime quality, and next complete and perfect finish, so that it shall be attractive and agreeable to handle. All this means proper fall management and winter work; successful wintering, and proper spring management; so that colonies shall be populous and in condition to store honey rapidly, which aids its neat appearance. In short, it means, all the year round, hard work.

Second, we need to guard and foster more strenuously the fact that our product is a pure and wholesome article of food. In fact, the only commercial sweet, furnished entirely from natural sources, that has undergone no process of manufacture. It is as wholly and truly a natural production as milk, and has ranked with it in all ages past.

Third, we have now come to the point where we need a reformation. We talk much about "developing a home market," "creating a greater demand for our honey," "making proper exhibits at our fairs," etc., but we fail to practice what we advocate. In solving the problem is an entire revolution in our system of marketing. Our wares should be handled in every large and important market by those who are thoroughly informed in every branch of bee-culture.

It may be urged that by these exhibitions we will induce many not now in the business to embark in it. I think not. I believe the better way is to come right out square and let them see what we are doing. I have made exhibitions at the Saratoga county fairs for a number of years, and have yet to hear of any one starting in the business as the result, but I know that it has been the means of helping hundreds, I may say thousands of pounds of honey, out of the glutted city markets.

I think, perhaps, you will agree with me that for the cause of apiculture, exhibitions at fairs are desirable, but will it pay the persons making them for their time and the necessary expense? We might ask, does bee-keeping pay? Does my business pay? The answer depends in a great measure on the individuals themselves. It may not pay directly the first year, but if advertising is worth anything, it no doubt will, in the long run.

If your fair managers offer no premiums, make a good display one or two years without, and I think they will then, rather than lose the attractive feature. There is also a great advantage in being the first one to start anything like this.

Now, if these few ideas that I have here advanced, will result in increasing the home consumption of our honey, thereby helping to relieve the city markets, I shall feel repaid for all the

### CHICAGO.

## THE 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. Refer to Publishers KANSAS FARMER.

labor I have given this essay.—*Farm, Field and Stockman.*

More than 10,000 persons were cremated in Tokio, Japan, last year.

Thousands of cures follow the use of Dr. Sage's Catarrh Remedy; 50 cents.

One of the latest advances in electrical illumination is the lighting of the London omnibuses with electricity, the battery to be under the seat of the driver.

A patent has been granted in England for the manufacture of vinegar from tomatoes. The fruit, when ripe, or nearly so, is reduced to a pulp and steeped in water for twenty-four hours. The resulting liquor is drawn off, sugar added, and the whole allowed to ferment.

### Happiness.

The fountain of all happiness is health. A man with an imperfect digestion may be a millionaire, may be the husband of an angel and the father of half a dozen cherubs, and yet be miserable if he be troubled with dyspepsia, or any of the disorders arising from imperfect digestion or a sluggish liver. Dr. Pierce's Pleasant Purgative Pellets are the safest and surest remedy for these morbid conditions. Being purely vegetable, they are perfectly harmless.

## ST. JACOBS OIL

### FOR TOOTHACHE.



**CURES**  
Promptly and Perfectly  
Toothache, Headache,  
Faceache, Swellings, Sore-  
Throat and Glands.

AT DRUGGISTS AND  
DEALERS.

The Charles A. Vogeler Co.,  
BALTIMORE, MD.

Intelligent Readers will notice that

## Tutt's Pills

are not "warranted to cure" all classes of diseases, but only such as result from a disordered liver, viz:

Vertigo, Headache, Dyspepsia,  
Fevers, Costiveness, Billous  
Colic, Flatulence, etc.

For these they are not warranted in-  
fallible, but are as nearly so as it is pos-  
sible to make a remedy. Price, 25cts.  
**SOLD EVERYWHERE.**

### Walnut Grove Herd of Poland-Chinas.

Pigs from three first-class boars for sale. Am taking orders for full pigs, to be delivered at from eight to ten weeks old, at \$8 per head, or in pairs \$15. Sows in pig or with litters, for sale. A few choice males on hand. My stock is of the best strains in America. Inspection desired. Stock recorded in Ohio Poland-China Record. Pigs from twelve exceeding fine sows. Took six first and two second premiums at Topeka and Ottawa, only places shown, including grand sweepstakes at Ottawa.

V. B. HOWEY,  
Box 103, Topeka, Kas.

### THE GOLDEN BELT HERD OF Thoroughbred Poland-Chinas



One hundred and fifty choice Spring Pigs now ready to ship, at prices lower than ever. Order now, and secure selections from either sex, or pairs, trios, or small herds, not akin. Stock shipped from here over either the A. T. & S. F., Mo. Pacific or St. Louis & San Francisco R. R. All breeders registered in American P.-C. Record. Pedigree with each sale.

F. W. TRUEDELL, Lyons, Kas.

### KANSAS CITY.

### F. M. LAIL, MARSHALL, MO.,

Breeder of the very best

### POLAND-CHINA HOGS.

Pigs from ten first-class boars for the season's trade.

### W. T. DOYLE,

MARYVILLE, MO.,

Breeder of Poland-China Swine of the most fashionable strains, has for sale a choice lot of boars and sows. Young stock not akin for sale. A few choice sows bred to Bravo C. 567 S. R. or Gold Dust 11980 S. R. for sale. Correspondence solicited. Personal inspection invited. Special rates by express.

### OTTAWA HERD

Of POLAND-CHINA and DUKOC-JERSEY Hogs. Twenty head of first-class boars from four to nine months old. Also seventy-five head of sows of same age, sired by Bruce 4695, C. R., Leek's Gilt Edge 2887, C. R., Whipple's Stemwinder 4701, Daisy's Corwin 4697. Dams—Mazy 2d 6214, Zelds 3d 8250, Maggie's Perfection 8210, Vone's Perfection 9434, Fay's Gold Drop 11676, Jay's Dimple 12172, Eureka Mayo 12176, and many other equally as well bred, and fine as can be produced by any one. Part of sows bred to gilt-edge boars of the most popular strains. Will sell at prices to suit the times. Never had any cholera in the herd. Write for prices.

I. L. WHIPPLE, Box 270, Ottawa, Kas.

### JACKVILLE HERD OF POLAND-CHINAS

J. S. RISK, Prop'r, WESTON, MO.



I have 100 Pigs for sale, sired by such noted boars as Gov. Cleveland 4529, Royalty 6469, John 690, King Kiever 2d 1309, and other equally noted sires. I can supply very choice pigs. Write for prices or call and see stock.

### MAINS' HERD OF POLAND-CHINAS.



Jas. Mains, Oskaloosa, (Jefferson Co.), Kas., is located two and a half miles southeast of Oskaloosa, on Maple Hill Stock Farm. All hogs eligible to Ohio Poland-China Record. A fine lot of spring pigs now ready for sale at prices that will suit the times. Also some fall sows now ready to breed or will be bred if desired. Personal inspection solicited.

### Gold Dust Herd of Poland-Chinas.



J. M. McKEE, WELLINGTON, KANSAS.

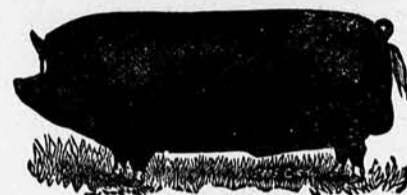
Tom Corwin 3d 5293 A. P. C. R. at head of herd. Strains representing Model, Give or Take, Gold Dust, Black Bess and Black Beauty. Have some choice male pigs for sale. Also eggs of P. Rock, Brown Leghorn and Light Brahmas, \$1.25 per 13; Toulouse Geese, 15c.; Pekin Duck 10c. each. Write; no catalogue.

### SELECT HERD OF LARGE BERKSHIRES!

Owned by G. W. BERRY, Berryton, Shawnee Co., Kas. My sows represent the Royal Duchess, Sallie, Hillside Belle, Charmer, Stumpy, Fashion, Queen Betsy, and other families of fine, large fleshy qualities. Herd headed by British Champion III 18481, Dauntless 17417, and the noted young show boar Peerless.

Berryton — Is located nine miles southeast of Topeka, on the K., N. & D. R. R. Farm adjoins station. Come and see me and all my hogs at home, or address as above.

### ST. LOUIS.



ROYAL GRANITE 10105.

### BERKSHIRE PIGS

Of Best English and American-bred Families.

Write for now Catalogue of breeding stock.  
SPRINGER BROS., Springfield, Ill.

### ROME PARK HERDS

T. A. HUBBARD,

Wellington, Sumner Co., Kansas,

Breeder of

### POLAND-CHINA and LARGE ENGLISH BERKSHIRE HOGS.

My herds are composed of the richest blood in the United States, with style and individual merit, representing such families as Corwins, U. S., Black Bess, I. X. L., Sallies, Dukes, Duchesses, Belladonnas, Hoods, Champions, etc. Show pigs a specialty. Am using twelve show boars on a bunch of sows that are pleasing to the eye of a breeder. Sows bred to my sweepstakes boars for sale. Come and see or write for prices.

### The Echo Herd.



For Registered Prize-winning  
BERKSHIRE SWINE AND SOUTHDOWN SHEEP  
or money refunded. Come and see or address  
J. M. & F. A. SCOTT,  
Huntsville, Randolph Co., Mo.  
Mention Kansas Farmer.]

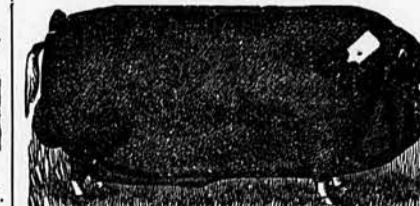
### ENGLISH BERKSHIRES.



THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPFUL 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.

### PLEASANT VALLEY HERD OF Pure-bred Berkshire Swine.

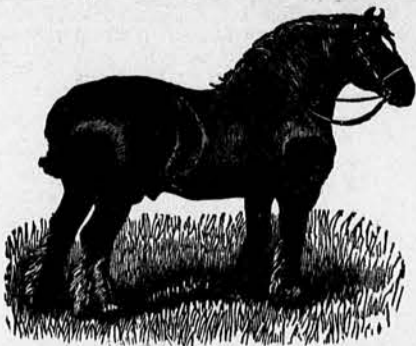


I have thirty breeding sows, all matured animals and of the very best strains of blood. I am using three splendid imported boars, headed by the splendid prize-winner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for 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.

### FAT FOLKS

using "Anti-Corpulento Pills" lose 15 lbs. a month. They cause no sickness, contain no poison and never fail. Particulars (sealed) 4c. Wilcox Specific Co., Phila., Pa.



## HIGHLAND STOCK FARM

RIX & GOODENOUGH,  
TOPEKA, KANSAS,

Importers and Breeders of English Shire, Clydesdale, Percheron and Cleveland Bay Horses.

Our horses are selected by a member of the firm from the most noted breeding districts of Europe. The lot now on hand have won fifty-four prizes in the old country, which is a guaranty of their superior qualities and soundness. Every animal recorded, with pedigree, in the recognized stud books of Europe and America and guaranteed breeders. Terms, prices and horses that induce people to buy of us. Write for Illustrated Catalogue.

Farm and stables four miles southeast of city.

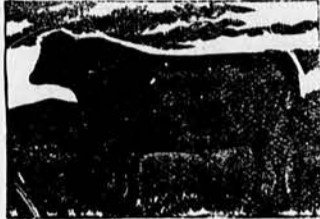
## IMPORTERS AND BREEDERS OF ENGLISH SHIRE AND SUFFOLK PUNCH HORSES



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### RED POLLED CATTLE.

We have on hand a very choice collection, including a recent importation of horses, several of which have won many prizes in England, which is a special guarantee of their soundness and superiority of form and action. Our stock is selected with great care by G. M. Sexton, Auctioneer to the Shire Horse Society of England. Prices low and terms easy. Send for catalogues to



Peter Piper (77).

SEXTON, WARREN & OFFORD, Maple Hill, Kansas.

## E. Bennett & Son,

TOPEKA, - KANSAS,

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## CLYDESDALE, PERCHERON, CLEVELAND BAY

### French Coach Horses.

AN IMPORTATION OF 125 HEAD,

Selected by a member of the firm, just received.

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E. BENNETT & SON.



## ELLWOOD'S PERCHERONS

And French Coach Horses.

Over FOUR HUNDRED imported STALLIONS ready for service actually ON HAND, embracing all the leading Prize Winners at both the Percheron and French Coach Fairs of France, for 1888. We challenge the world to a comparison as to number, quality, price and terms. An investigation will demonstrate that we are prepared to maintain our present leading position in the trade. We have not only the largest importing establishment, but the largest Breeding Establishment in the United States, embracing 4,000 acres of well improved land, upon which is constantly kept from one to two hundred imported mares selected from the choicest strains. FRENCH COACHES—Owing to the extraordinary demand for this popular breed of Coach Horses, our importation for 1888 consists of double the number brought out by any other individual or firm, all of which are the produce of Government stallions for which the French Government certificate will be furnished with each and every horse, and also the American Stud Book Certificate. Catalogue Free.

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DeKalb, Illinois.

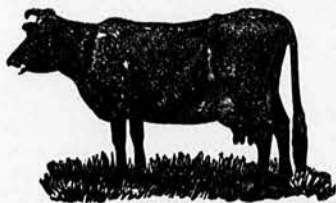
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Substance, flesh, early maturity and good feeding quality the objects sought. The largest herd of Scotch Short-horns in the West, consisting of Cruickshank Victorias, Lavenders, Vilets, Secrets, Brawith Buds, Kinellar Golden Drops, etc., headed by Imp. Baron Victor 42824, a prize-winner and sire of prize-winners.

LINWOOD—Is twenty-seven miles from Kansas City, on Kansas Division Union Pacific R. R. Farm joins station. Inspection invited. Catalogue on application.



Home of HASSELMAN'S BROWNIE 28777.  
Tested on Island of Jersey at rate of  
83 pounds 12 ounces in seven days.

## A. J. C. C. JERSEY CATTLE,

Offer a few choice-bred Bull Calves by such noted sires as the St. Lambert Duke 76 bull, ST. VAL-ENTINE'S DAY 15278, whose sire was a son of Stoke Pogis 3d 2238, and a grandson of Victor Hugo 197; dam a daughter of the great prize bull, Duke P. 76 C.; and the in-bred Coomassie bull, HAPPY GOLD COAST 14713.

Several of these Bulls are old enough for service, and are out of tested cows. To responsible parties, will give time or exchange for cows or heifers.

SHERWOOD & ROHRER, WICHITA, KANSAS.

## HANGCOCK COUNTY IMPORTING COMPANY, WARSAW, ILLINOIS,

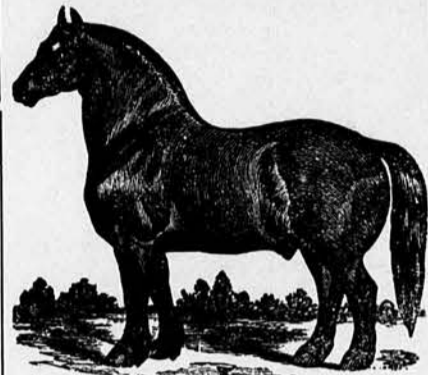
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## Percheron and English Shire HORSES.



We have a choice collection of Registered horses on hand, from two to five years old, unsurpassed for quality and breeding. Our importation this year numbers thirty head, making in all fifty head, which we now offer to the trade. We have a large lot of two and three-year-old stallions, imported last year, which are now fully acclimated. Customers will find it to their interest to call and examine our stock before purchasing. Prices low. Terms to suit.

WARSAW is four miles south of Keokuk and forty miles south of Burlington, Iowa.



The Imported CLYDESDALE Stallion

## KNIGHT OF HARRIS 995 (2811),

The property of H. W. McAFEE, will make the season at Prospect Farm, three miles west of Topeka, Sixth street road.

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Of European Herd Book Registry.



The sweepstakes bull PRINCE OF ALTIJDWERK (61 M. R.) at head of herd, has no superior. Cows and heifers in this herd with weekly butter records from 4 pounds to 19 pounds 10 1/2 ounces; milk records, 50 to 80 pounds daily. The sweepstakes herd. Write for catalogue. M. E. MOORE, Cameron, Mo. (Mention this paper.)

## Holstein - Friesian Cattle.

I have a choice herd of these justly-celebrated cattle of all ages. Also some nice grades, for sale at reasonable prices. Personal inspection invited. Call on or address

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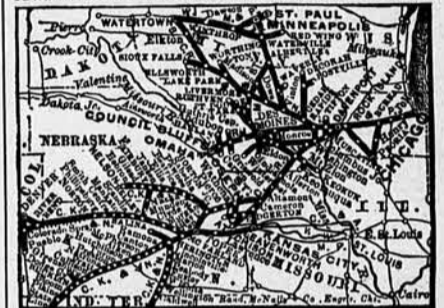
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## THE STRAY LIST.

HOW TO POST A STRAY.  
THE FINE, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1884, 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.

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

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

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

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

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

Any person taking up 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, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

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 NOV'R 22, 1888.

Jewell county—H. L. Browning, clerk.

COW—Taken up by Mathias Sons, in Walnut tp., September 28, 1888, one medium-size cow, 7 or 8 years old, right horn broken off, large sore on side.

CALF—By same, one bull calf; both valued at \$25.

Elk county—W. H. Guy, clerk.

STEER—Taken up by E. C. Sanger, in Oak Valley tp., November 15, 1888, one red steer, 2 years old last spring, white on forehead, white across hip, bush of tall white, white on belly, brand on right hip but not distinct; valued at \$18.

Hamilton county—Thos. H. Ford, clerk.

MULE—Taken up by W. L. Gamage, in Syracuse tp., November 2, 1888, one chestnut sorrel mare mule, nick on both sides of point of right ear; valued at \$45.

MULE—By same, one mouse-colored mare mule, 14 hands high, black stripes on both hind feet, white spot at root of tail, no marks or brands; valued at \$50.

Russell county—J. B. Himes, clerk.

HORSE—Taken up by Thomas B. Nicholas, in Plymouth tp., September 10, 1888, one sorrel horse, white face, hind feet white, about 15 hands high, about 14 years old; valued at \$10.

Osage county—R. H. McClair, clerk.

COW—Taken up by Alex. Welr, in Ridgeway tp., October 20, 1888, one strawberry-roan cow, 6 years old, no marks or brands; valued at \$20.

Anderson county—S. Durall, clerk.

HORSE—Taken up by Solomon S. Sewell, in Monroe tp., (P. O. Garnett), one gray or roan horse, about 15 hands high, 3 years old last spring, no marks or brands visible; valued at \$50.

Wabauunsee county—G. W. French, clerk.

COW—Taken up by J. L. Brown, in Wabauunsee tp., November 5, 1888, one cow, 8 years old, Mexican brand on left side, right horn top down.

Labette county—W. J. Millikin, clerk.

MARE—Taken up by J. A. Morse, in Howard tp., October 28, 1888, one sorrel mare, about 10 years old, both left feet white, about 15 hands high, blaze face, brand similar to Fy on left side; valued at \$20.

MULE—By same, one dark horse mule, about 10 or 12 years old, 13 hands high, saddle and collar marks; valued at \$10.

Coffey county—H. B. Cheney, clerk.

STEER—Taken up by Jacob Haehus, in Pleasant tp., one red steer, 2 years old, white spot on right shoulder and white on belly, under-bit in both ears and silt in top of right ear; valued at \$20.

Miami county—H. A. Floyd, clerk.

HEIFER—Taken up by C. E. Johnson, in Mound tp., October 25, 1888, one roan heifer, about 2 years old, no marks or brands; valued at \$15.

## FOR WEEK ENDING NOV'R 29, 1888.

Leavenworth county—J. W. Niehaus, clerk.

MARE—Taken up by R. F. Hill, in Tonganoxie tp., October 14, 1888, one bay mare, about 15 hands high, 7 or 8 years old, collar marks on neck; valued at \$40.

Bourbon county—J. R. Smith, clerk.

PONY—Taken up by A. D. Fairman, in Osage tp., November 12, 1888, one bay pony filly, supposed to be 2 years old past, no marks or brands visible; valued at \$20.

Sedgwick county—S. Dunkin, clerk.

MULE—Taken up by C. R. Miller, three and a half miles northwest of Wichita, October 18, 1888, one dark brown mare mule, about 6 years old, brand similar to R on the left hip and white spot on top of neck caused by collar.

Ottawa county—W. W. Walker, clerk.

2 COWS—Taken up by Thomas Smith, in Ottawa tp., November 9, 1888, two cows, one dark red, about 4 years old, and one white cow, about 4 years old.

Lyon county—Roland Lakin, clerk.

MARE—Taken up by Jas. Kibby, in Fremont tp., November 14, 1888, one brown mare, 10 years old, blind; valued at \$15.

HORSE—By same, one sorrel horse, white strip in face, white hind legs; valued at \$15.

STEER—Taken up by Ernest Avery, in Americus tp., November 12, 1888, one red yearling steer, a little white on belly, white hairs in forehead, branded S on right hip; valued at \$11.

STEER—By same, one red yearling steer, white on belly, on forehead and hind legs, branded S on right hip; valued at \$11.

HEIFER—Taken up by Joe Bleiman, in Elmendorf tp., November 2, 1888, one red yearling heifer, branded C on right hip, under half-crop off right ear, and over half-crop off left ear, white spot in face and some white on belly; valued at \$11.

Coffey county—H. B. Cheney, clerk.

MARE—Taken up by L. D. Carmean, one brown mare, 3 years old past, both hind feet white; valued at \$40.

MARE—By same, one brown mare, 3 years old past, no marks or brands; valued at \$30.

HEIFER—Taken up by L. L. Brown, in Pleasant tp., one white heifer with red neck, 3 years old, under-bit in left ear; valued at \$15.

COW—Taken up by Sarah F. Mills, in Liberty tp., one cow, red and white spotted cow, 3 years old, figure 3 on right hip; calf, about 4 months old; valued at \$15.

Chase county—J. S. Stanley, clerk.

HEIFER—Taken up by W. H. Cox, in Bazar tp., (P. O. Matfield Green), November 23, 1888, one light red and white yearling heifer, no marks or brands; valued at \$12.

HEIFER—By same, one roan yearling heifer, branded H on right hip; valued at \$10.

HEIFER—By same, one 2-year-old heifer, dark red with some white, no brands; valued at \$14.

STEER—Taken up by Andrew Drummond, in Diamond Creek tp., November 12, 1888, one red 2-year-old steer, branded TU on right hip, under-bit in right ear, white on end of tail.

HEIFER—By same, one red 2-year-old heifer, white on end of tail, under-bit in right ear.

Wabauunsee county—G. W. French, clerk.

STEER—Taken up by W. H. Karon, (P. O. Paxico), November 12, 1888, one roan and white spotted 2-year-old steer, blurred brand on right hip; valued at \$18.

STEER—Taken up by E. J. Daffey, in Mission Creek tp., (P. O. Eskridge), one 2-year-old steer, blind in left eye, a little white on belly, branded C on right hip; valued at \$25.

COLT—Taken up by J. M. McFarland, in Alma tp., one dark bay horse colt, 3 years old, white dot in forehead, no brands; valued at \$35.

Nemaha county—W. E. Young, clerk.

HEIFER—Taken up by George A. Allen, in Wetmore tp., (P. O. Ontario), November 11, 1888, one red and white spotted 2-year-old heifer, silt in left ear; valued at \$16.

Greeley county—J. M. Brown, clerk.

COW—Taken up by Harrison Oliver, in Colony tp., July 19, 1888, one red cow, 7 years old, branded with triangle with a C in center; valued at \$10.

HEIFER—By same, one red 2-year-old heifer, F and horseshoe on left hip; valued at \$9.

STEER—By same, one roan 2-year-old steer, F and horseshoe on left hip; valued at \$8.

STEER—By same, one red 2-year-old steer, F and horseshoe on left hip; valued at \$7.

MARE—Taken up by W. Z. Lindley, in Harrison tp., September 20, 1888, one dark brown mare, 13 hands high, small star in forehead, collar marks; valued at \$25.

HORSE—Taken up by J. R. Beadedet, in Tribune tp., July 29, 1888, one white horse, branded 77 on left hip; valued at \$40.

Chautauqua county—W. F. Wade, clerk.

COW AND CALF—Taken up by G. W. Layton, in Harrison tp., November 5, 1888, one red cow, crop and silt in left ear and half under-crop in right ear, about 7 years old; calf by her side; valued at \$15.

Anderson county—S. Durall, clerk.

STEER—Taken up by Howard Hester, in Lone Elm tp., (P. O. Colony), one pale red steer, 2 years old, white in forehead; valued at \$17.

STEER—By same, one pale red steer, 2 years old, white in forehead and on side; valued at \$17.

HEIFER—Taken up by Joseph Depoe, in Lone Elm tp., (P. O. Colony), one dark red heifer, white spots on back and sides, 2 years old; valued at \$15.

STEER—Taken up by M. E. Osborn, in Lincoln tp., one red and white yearling steer, silt in point of each ear; valued at \$14.

STEER—Taken up by Geo. Patten, in Monroe tp., (P. O. Garnett), one red yearling steer, white spot in forehead and on flank, no marks or brands; valued at \$18.

COW—Taken up by A. Brubaker, in Reeder tp., (P. O. Harris), one red and white spotted cow, 5 or 6 years old, no marks or brands; valued at \$20.

STEER—By same, one red and white spotted steer, no marks or brands; valued at \$10.

FILLY—Taken up by Frank Foy, in Reeder tp., (P. O. Harris), one light sorrel filly, 3 years old, light-colored feet, hind parts high, no marks or brands; valued at \$50.

COW—Taken up by S. S. Herriman, in Jackson tp., one white cow, roan head and neck, branded H on left hip, both ears cropped, about 8 years old; valued at \$12.

COW—Taken up by W. F. James, in Jackson tp., (P. O. Greenleaf), one pale red cow, short horns, branded H on left hip, white belly and white tail; valued at \$12.

Shawnee county—D. N. Burdge, clerk.

COW—Taken up by James Henry, in Silver Lake tp., November 18, 1888, one red cow, some white on end of tail, 9 years old, F7 on left hip; valued at \$10.

COW—Taken up by Ephraim Detrich, in Menoken tp., November 19, 1888, one roan cow, 6 years old, no marks or brands; valued at \$10.

Wyandotte county—Frank Mapes, clerk.

COW—Taken up by W. J. Reams, in Delaware tp., one red cow, 6 years old, 4 feet high, crop and split in right ear and two under-bits in left ear.

MARE—Taken up by Thomas Brown, in Shawnee tp., one bay mare, shod all around.

Linn county—Thomas D. Cottle, clerk.

STEER—Taken up by E. F. Barnes, in Mound City tp., November 10, 1888, one small red 2-year-old steer white stripe in face, branded on left hip; valued at \$18.

## FOR WEEK ENDING DEC'R 6, 1888.

Coffey county—H. B. Cheney, clerk.

STEER—Taken up by L. H. Draper, in Spring Creek tp., one red and white speckled steer, 1 year old; valued at \$15.

COW—Taken up by G. F. Reinhardt, in Hampden tp., one white cow, 3 years old, branded W. H. on left hip; white calf; valued at \$12.

STEER—Taken up by M. A. Reed, in Liberty tp., one light roan 2-year-old steer, branded C on left shoulder; valued at \$20.

Osage county—R. H. McClair, clerk.

STEER—Taken up by David J. Davis, in Burlingame tp., November 18, 1888, one red 1-year-old steer, white spot in forehead shape of a heart, white on each shoulder blade, piece out of right ear; valued at \$14.50.

COLT—Taken up by Wm. Culver, in Fairfax tp., November 8, 1888, one brown or black-gray 1-year-old colt, black legs, small body and leggy; valued at \$25.

HEIFER—Taken up by Sylvester Campbell, in Olivet tp., November 10, 1888, one red 1-year-old steer, white spot in forehead; valued at \$8.

HEIFER—By same, one red 2-year-old heifer, white spot in forehead; valued at \$12.

HEIFER—By same, one red and white spotted 1-year-old steer; valued at \$6.

Nemaha county—W. E. Young, clerk.

COW—Taken up by W. H. Leighty, in Wetmore tp., November 15, 1888, one light roan cow, 6 or 7 years old, brand on left hip, both horns drooped, a little off point of left horn; valued at \$15.

COW—Taken up by Hugh Ross, in Illinois tp., November 14, 1888, one red cow, about 10 years old; valued at \$10.

STEER—Taken up by L. E. Ellis, in Illinois tp., November 10, 1888, one dark red 1-year-old steer, small white spot on left shoulder and one on left hip, one on right side and one in face; valued at \$10.

HEIFER—Taken up by F. A. Stickle, in Illinois tp., November 10, 1888, one light red 1-year-old heifer, white hind feet, no marks or brands visible; valued at \$10.

Johnson county—W. M. Adams, clerk.

HORSE—Taken up by J. Stephenson, in Gardner tp., November 18, 1888, one sorrel horse, 15½ hands high, 15 years old, blind in right eye; valued at \$15.

Crawford county—J. C. Gove, clerk.

FILLY—Taken up by W. A. Cole, Mulberry Grove, November 5, 1888, one gray-roan filly, star in face, little white on left hind foot, dark mane and tail; valued at \$30.

Lyon county—Roland Lakin, clerk.

STEER—Taken up by Wm. F. Kurzen, in Fremont tp., November 1, 1888, one white yearling steer, medium size, under-bit in right ear, no other marks or brands visible; valued at \$15.

STEER—Taken up by W. B. Vandivort, in Agnes City tp., November 2, 1888, one 3-year-old red-roan steer, white face and line-back, indistinguishable brand on left hip; valued at \$30.

STEER—Taken up by John Slesher, in Jackson tp., November 28, 1888, one 3-year-old red steer, branded H on right hip; valued at \$25.

Cowley county—S. J. Smock, clerk.

HEIFER—Taken up by Wm. Beckman, in Richland tp., October 20, 1888, one dark red heifer with white stripe between the fore legs.

Franklin county—T. F. Ankeny, clerk.

STEER—Taken up by Joseph Rubick, in Homewood tp., November 16, 1888, one small red 2-year-old steer, branded S on right hip; valued at \$40.

Butler county—T. O. Castle, clerk.

STEER—Taken up by J. F. Smith, in Rosalia tp., October 22, 1888, one red long yearling or short 2-year-old steer, no marks or brands.

Atchison county—Chas. H. Krebs, clerk.

COW—Taken up by S. E. Hood, in Benton tp., October 7, 1888, one pale red cow with white spots, cloth with No. 53 painted on it pasted on right hip, 6 years old; valued at \$13.

COW—Taken up by John B. Terry, in Grasshopper tp., October 16, 1888, one dark red cow, branded V on left side, right ear cropped, hole in left ear, right horn broken off, 7 years old; valued at \$17.

Montgomery county—G. W. Fulmer, clerk.

STEER—Taken up by L. Glatfelder, in Caney tp., one white and red 2-year-old steer, branded O on left side, right ear cropped close to head; valued at \$8.

HEIFER—By same, one 2-year-old dun heifer, three white spots across back, branded 5 on left hip; valued at \$10.

CALF—By same, one dun calf, crop and two silts in right ear, crop and silt in left ear; valued at \$3.

MARE—Taken up by E. M. Prichard, in Caney tp., October 27, 1888, one brown mare, 2 years old, white spot in forehead, dim brand on left shoulder; valued at \$20.

COLT—By same, one bay horse colt, 1 year old; valued at \$15.

Wabauunsee county—G. W. French, clerk.

STEER—Taken up by Wm. Maas, in Washington tp., one roan steer, 2 years old; valued at \$22.

COW—Taken up by Peter Thoes, in Farmer tp., one light roan cow, about 5 years old, right horn off, dim brand on left hip.

Sherman county—O. H. Smith, clerk.

HORSE—Taken up by D. C. King, (P. O. Topland), October 23, 1888, one gray horse, 16 hands high, collar marks; valued at \$25.

Jackson county—E. E. Birkett, clerk.

STEER—Taken up by M. E. Mulanax, in Cedar tp., November 1, 1888, one red 3-year-old steer, some white in forehead, flanks and on belly, no marks or brands visible; valued at \$22.

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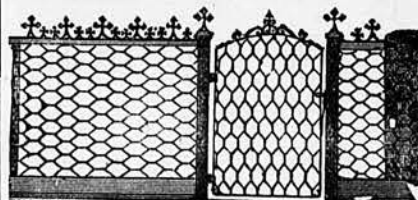
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