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## Agricultural Matters.

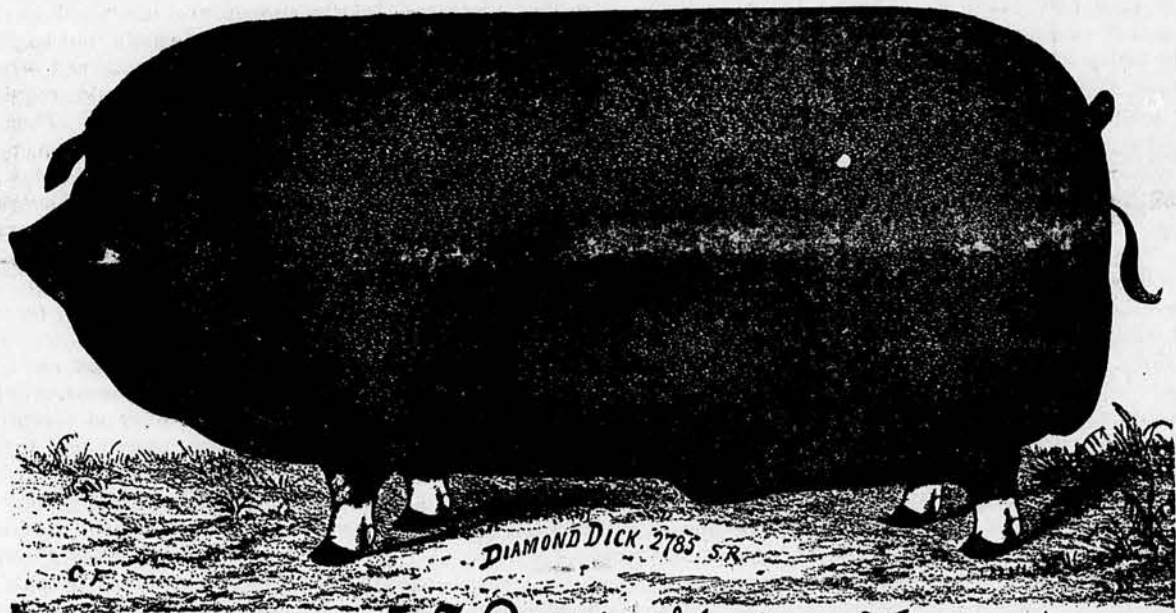
### THE INTEREST QUESTION AGAIN.

EDITOR KANSAS FARMER:—In the article published in your issue of October 16th over my signature, I supposed it would be all that was necessary for me to say on the subject, but your editorial strictures thereon compel me to ask your indulgence further in opening your columns again. First, let me disavow any intention, direct or indirect, of voicing the wish or desire of what is popularly known as the "Money Power." There may be an agency in our affairs that regulates money, limits supply and creates demand; but that that influence is an organized power, with distinct head, is successfully questioned. The law of trade may in some lines be successfully manipulated for special purposes and on special occasions. And it is true that "men deal in money just as they deal in railroads, in cattle, in grain—for money and only for money." And it is also true that we all are after that same money, and in the strife to get more than our neighbors, and in time lend to them, we are members of that same money power. But the question raised by the writer is, "will the policy pursued by the KANSAS FARMER enable us to be either a party to, or a member, of that money power, or to have enough of the money to be independent of any manipulation which the human nature of the money power would suggest?" The doctrine enunciated by the FARMER, to supply all men with money by the government, looks well, but it is the exploded theory of the now defunct Greenback party. On that question I do not wish to open any discussion, and only write further on the question of whether the policy pursued by the FARMER as to redemption and mortgage tax laws will be of material benefit to the borrowers of the State. No one has thought that the FARMER intentionally meant to repudiate the mortgage debts of the State or to postpone their payment. This was not its express intention. But the logical effect of instituting the measures advocated by the FARMER would be nothing less. A redemption law is only another name for a stay law. It will stay the collection of a mortgage

debt as certain as foreclosure is resorted to. Under the present administration of mortgages a debtor has sufficient advantage to nearly place him in the benefit of what the FARMER proposes. A mortgage is made on the first of January; at the first semi-annual period, July 1, a default is made in the payment of interest. Now, assuming that the mortgage company is, under the language of Governor Martin, stealing the farm, let us see how soon he can do it. Six months have gone by in which the creditor could do nothing; on the 2d of July, immediately after the default, he begins foreclosure. It will be at least three months before he can get a decree should the debtor make no delay,

purchase of a farm, knowing that he could not go into possession of the farm for two or three years, while in the meantime another man was taking off of it all he could and paying no interest and refusing to pay taxes? This would be the rule. Of course there might be some exceptions, as in the case of a small purchase price, and a valuable property. A redemption law would at once on default compel the foreclosure of every mortgage defaulted, and burden the courts beyond their present power. The FARMER's answer that a redemption law works to the advantage of the lender will not hold good, for in this country there are few people who can purchase for cash at foreclosure, and the lender must bid

use of his money, which the farmer has to pay, making 5½ per cent., leaving 1½ per cent., which the investor charges for the extra risk of his money, the probable expense of a foreclosure, and other contingencies. If now the Legislature says the State shall tax that investor 2 or 3 per cent. additional on the money invested here, the investor will only add that amount to the rate he charges the farmers; he loses nothing. And if the Legislature further says the borrower may keep him out of the use of his money for two years longer, the investor will only charge an additional amount for the extra risk, delay and expense. To cure this we may say we will permit the investor to charge



Owned by J. S. Risk, Weston, Mo.

which, if he wished to preserve his farm, he is very likely to do. Many foreclosure proceedings are in court a year in many of our counties before a decree is granted, but taking the shortest time possible—about three months from service of summons, then comes the stay of six months on waiver of appraisal before notice can be published, and then another three months making a total of one year and six months in which a debtor has from the payment of his last interest before he is dispossessed. I have assumed a case where there has been no delay whatever. But there are very few loan companies who would not give the debtor abundant time to retrieve himself and save his farm, if they saw he was making an honest effort to do so. But now extend this time two or three years and the human nature of the average borrower will tempt him to take advantage of it. In consequence, the loan companies, to save time, will be compelled to begin foreclosure proceedings immediately on default. The debtor, therefore, to gain any advantage, must extend the time of his redemption to three or five years. An equity of redemption is therefore, in fact, only another name for a stay law, and the FARMER admits that "a stay law is no practical benefit to debtors, and may be directly and greatly injurious to the community in general. Stay laws increase interest rates and make borrowing difficult." Under this admission on the part of the FARMER it is needless to say that a stay law or redemption law will drive out capital. Who would put his money into a

the amount of his claim to save himself, and will get the farm. This would be the practical operation of a redemption law.

The FARMER cannot understand how a loan company or money-lender can assume the position of seeking lower interest rates. There may be an apparent anomaly in this, but it is nevertheless true. A money-lender in loaning his money first asks concerning the security. This is the first question. He wants the return of his capital more than the return of his interest; and the poorer the security the greater interest he will charge; given good security and little demand for money and the borrower may dictate rates. Could all of our farmers give security as good as government bonds, the rate of interest they would pay would be nearly as low as the government pays; and I assert that the farmer of Kansas who is borrowing money at 7 per cent. is paying a rate of interest but little in excess of the rate the government pays—4½. First, the government bond is good for the money anywhere. Its credit has made the bond as good as coin in any transaction. A government bond can be cashed anywhere in this country. Second, a government bond is exempt from taxes. Now money is worth to an investor in 4½ per cent. bonds, counting the premium added, about 3 per cent. So the farmer pays, first, 3 per cent. for the use of the investor's money. Now that investor must pay taxes on that mortgage at the place of his residence. That tax will cost him, according to locality, from 2 to 4 per cent.—say 2½ per cent.—this the investor adds to the rate for the

only 5 or 6 per cent. for his money, and the investor replies, "that takes the use of my money free, I will loan it elsewhere," and what will be the result to our borrowing farmers? The Santa Fe railroad is about to fund a 4 per cent. loan. It can do this because the property is considered perfectly good, but is there any law compelling an investor to buy those bonds, or to buy our 6 per cent. mortgages? The anomaly of a money-lender seeking to lower rates is explained by his seeking better security, and the competition for this better security will lower rates.

This has been the aim of all our loan companies doing business in this State. It would be unjust to the rest to particularize the efforts of some of our loan companies to secure lower rates for farmer borrowers. Not only do they seek after better security, but they know, and every investor knows, that the lower rate a borrower pays the greater is his opportunity to make money—the better is his security. A farmer paying 6 per cent. interest can make more money than one paying 10 per cent., and the average investor will look with more favor on the 6 per cent. because he knows the certainty for the return of his money is better. If now the KANSAS FARMER will lend its aid to make our laws give perfect security to the lender, it will redound more to the benefit of the farmers of the State in getting lower rates and better terms than any agitation to make collections slow and payments uncertain.

Just at this time Kansas mortgages are be-

[Continued on page 4.]

## The Stock Interest.

### STYLES IN HORSES.

#### A Comparative View of English and American Breeds.

In contrasting horse-breeding as followed by the farmers in America and England, it appears to an incomer, that whilst the English breeder has evolved and maintained in purity two, at least, distinct types of horse, viz.: The draft and the runner (the latter hereinafter styled by its proper designation, the "thoroughbred"), making crosses of the pure stallion on mongrel mares for subordinate purposes, in ways described further on, the American farmer still clings to the "general-purpose-horse" idea, that Jack-of-all-trades and master of none. Many of the more advanced have abandoned, or are about to, that unsolvable problem doubtless, but to the others the pursuit of the "general-purpose horse," as a breed, appears to be as fascinating as the search for the philosopher's stone.

A most amusing description was lately given in an Ontario, Canada, newspaper of this chimera. A prize being offered for a "general-purpose horse," which was defined as an animal good in saddle, in draft and to drive in a buggy; the only two qualities omitted apparently being that he should be tender and well flavored, either roast or boiled. Certainly the horse is largely partaken of as food on the continent of Europe, but it is more than doubtful if the Anglo-Saxon or his crosses will ever take kindly to eating horse.

An English breeder, contemplating raising what is called there a "van" horse or "machiner," similar in build to what is called in America a Percheron, takes a light-legged, tall, common mare and breeds her to a Clyde or Shire stallion. The result is almost invariably the animal required. Such an animal would usually in this country be styled a "draft" and even if big in body a "heavy draft." This misdescription of a horse so bred tends to confusion and contradiction in terms, and may be remarked in passing.

To procure a "Brougham" horse, that is a heavy, single driver of the most powerful type, top cross a mare of the "van" type with a Thoroughbred stallion. This cross is a little less certain than the first mentioned, from the obvious reason that there is a greater conflict of blood, but when successful a magnificent animal for the purpose is procured, capable of drawing a heavy close carriage, weighing some 1,500 pounds, and carrying four persons at a seven or eight-minute gait with ease—this pace being the maximum required for carriages of this class. It may be mentioned here that rapid driving on the streets or roads is considered vulgar and provokes the remark to the coachman: "Draw on one side. Give the butcher boy room to pass to deliver his meat; he must not keep the cook waiting," besides which, anything approaching what would be styled fast driving here would bring on the prompt interference of the police, a summons to the court and a fine.

An animal with more style and quality is bred by giving a heavy Brougham type mare another cross of the Thoroughbred.

The "hunter," that is the horse that is used for riding after the hounds at a great rate of speed and leaping every obstacle in the way, is an animal bred by a cross of the Thoroughbred on mares possessing from two to six crosses to the Thoroughbred. Many are undistinguishable from Thoroughbreds in appearance, except that they have generally a little more bone and "substance." Many Thoroughbreds which are too big and coarse for racing are also used for this sport. They have more than the necessary weight-carry-

ing power, but lack a little in racing speed, so often make the very best hunters.

Of sub-types of British horses may be mentioned the coach horse, comprising the Cleveland Bay and the Yorkshire coach horse, the latter being a blend of the Cleveland Bay and Thoroughbred, according to some a great improvement in quality if not in style, which is disputed by others. Whether either will maintain its present standard of excellence without an occasional dip of Thoroughbred, time alone will show.

Long practice and experiment has convinced the British breeder that there can be no such breed as a general-purpose one. Some horses have a much greater range of usefulness than others, but the excellence of one branch invariably reduces that of the other—a gain of speed is a loss of power, or vice versa.

On the American side there is very much to commend in the handling of young colts and bringing them up gentle from the start. In this particular the farmers on this side are far in advance. In England the usual practice is rather to repel any advance towards familiarity on the part of a colt, from the idea "that a tame colt often makes a vicious horse." The originator of this idea was probably from the same stock as the "hollow-horn" discoverer.

The cross-breeds so reared are often somewhat difficult to break, but it has but little effect on the pure drafts, which are usually broken at the early age of two years with but little fuss, light work in conjunction with liberal feeding being found to aid development, so that at four they are fit for heavy work on the macadamized roads and the stone-paved streets.

In the trotting for speed there is no comparison whatever to be made between the two countries. America is first, England nowhere. In the latter country the entire attention of the racing men has been directed to the development of running. There is said to be a dawning interest in racing-trotting, but whether this will become a permanent attraction or not in England it is impossible to say. Trotting there is entirely for style, that is, high and elegant action, and speed is of no account beyond an eight or ten miles an hour gait at the most.

The conclusion probably arrived at by those giving these facts careful consideration will be that the British theory of breeding is the more correct, while the American system of handling is by far the better.—*J. Browse-Oldreive, in Western Resources.*

#### Market Straws.

Cattle exporters and other buyers have been buying a good many cattle in the country of late. Ordinarily this is an indication that good cattle are not being marketed freely enough. "Good cattle strong, others lower," has been the tenor of telegraph and other reports sent out from here for months. It is getting rather monotonous, but it shows that the number of well-matured heaves has been comparatively small.

These paragraphs are taken from the same issue of the *Chicago Drivers' Journal*, and we reproduce them as indicators, separately and collectively, of the tendency. It is only natural and to be expected after so long a period of depression and continued experiences of hope deferred that men should become discouraged with a business that gave returns only of disappointment. For a long time it was comparatively easy to reason that the tide would come in for us again; but the ranks of the hopeful have grown weaker constantly for a long time. Reason has said a new day must come, and judgment induced us to stay with the losing game yet a little longer rather than sacrifice by closing out in a time of depression; but the cold fact has remained of a continued unsatisfactory business, until the strongest waver.

There is everywhere the knowledge of less cattle per capita of population than for several years, though all people

interested at the market centers profess to believe in overproduction, working and spreading the influence industriously from "bear" motives. Last year there was a slowing up in the tendency to send "everything" to market, and these bearish people then, thinking there was evidence indicating the turn of affairs, sent purchasing agents to the country and the ranges. That little gleam of light was more than the human nature of producers could withstand, and by sending in to unload the market improvement was knocked out; and when the figures went back and started down the descending scale, hope seemed to have deserted us entirely, and the market has ever since been gorged and surfeited with everything in bovine shape—though a saving clause may be added, *except* really fit cattle. Considering the indiscriminate marketing, the extent of it and the length of time the sacrifice of she and young stock has continued, it is a reasonable certainty that with the good prices sure to rule next spring the markets cannot be again flooded as in recent seasons; and with a betterment of prices and decent prospect, everybody will be willing to hold off as much as possible.

When exporters and other buyers must go on the hunt for cattle, that tells that the producer's day is at hand. Good cattle would be marketed freely enough if they were in the land to market. The number of well-matured heaves is small, and for reasons not obscure to observers. The bulk of beef cattle proper are marketed at three years old, and it is plain that beginning with an abundant supply and working down to a scarcity would require at least three years of time. Thousands of mature steers have gone to the shambles this season whose dams went in 1886 or 1887; tens of thousands of cows went in each of the years named whose produce will not be on the market next year nor thereafter, nor female descendants on the farms and ranges to affect the future. Tens of thousands of calves, yearlings and twos have been marketed these three seasons, to depress prices and make show of overproduction as the time passed and to make evident a shortage and boom prices hereafter. "Always taking out and never putting in empties the meal bag." The bovine sisters have been putting into the meal bag of cattle supply, but nothing to compare with the taking out by needy and discouraged owners. Without exception we have all been mistaken as to what the cattle business could stand and astonished at continuance of the long depression; but as we look back it is easier to find reasons. Looking at the vast industry and considering its various phases, it is seen that its controlling influences cannot be taken away nor replaced suddenly; and the length of the depression gives assurance to those still alive of more marked and lasting reaction after the turn comes.—*Northwestern Live Stock Journal.*

#### Give the Boys a Chance.

Next to the girls, the boys are the best products of the farm. A farm without a boy is a dreary place. If the boy is the best product of the farm—the girls always excepted—then he should have the best chance for development of anything on it. It is foolish to spend much time and labor in bringing out the good points of the colt, steer or pig, and no time or thought to bringing out the good points of the boy. He is infinitely more finely organized, and correspondingly greater in his power for good or evil than any of the live stock on the farm. He will make the home a blessing—a haven of rest—or a curse, for the time will come when he will elbow the father to one side and take the reins, and whether for good or ill depends on how good a chance to make a man of himself he is allowed to have. There are a good many things involved in giving the boys a chance. All boys come into the world with the odds more or less against them. Without their consent they are, to a

greater or less extent, the inheritors, the residuary legatees, of the weaknesses, faults and vices of their ancestry. Many of these, such as a bad temper, inherited vice or ingrained do-lessness, or a tendency to crankiness, have handicapped the parents. The first duty the parent owes the child is, if possible, to help it to outgrow this taint of inheritance. He should have every chance and every help to do this.

The boy should have a chance for pure air, and good, simple, digestible food, and if the mother has made the father's life a burden by soggy bread and rancid butter, she ought, from pure love of her boy, to turn over a new leaf. He needs a chance to work from the time he is old enough to pick up chips, a chance to harness himself for usefulness in what is a preeminently industrial age. The supreme glory of honorable toil should be impressed on his mind from the very first, and if there is anything that will blot out the boy's chances for an honorable life, it is the doctrine that labor is degrading and dishonorable. The boy needs a chance for an education, not necessarily a course at college or university, but an education that will fit him in the best manner possible for his future calling. With this end in view, every farmer owes it to his boy to see that the district school is not only well maintained in the way of building, comforts and conveniences, but that it has a teacher of brains, and the kind of brains specially adapted for this work, and then he should see that his boy goes to school. Some farmers sin grievously against their boys by keeping them at home on trivial excuses. Let the boy work late at night or early in the morning, if need be, but let the school hours be sacred. The progress of the boy at the common school will determine to what extent his education should go. Nor should the educating influence of books and papers be forgotten. In these days when the best books and papers are cheap, don't fill the boy up with blood and thunder novels, or the volumes of slush that fill the lower class of newspapers. Bring his mind into contact with the best minds, the clearest and best thinkers. What the boy needs is not so much knowledge, as awakening, quickening, stimulating, and there is no stimulus so powerful and lasting as communication through a book or live newspaper with an active, vigorous mind. Therefore give him a chance at first-class literature. When his mind is thoroughly awakened and he begins to see, to think, to reason, you can begin to form some idea what he is fit for in the world. We had rather have a boy thoroughly wakened up intellectually by contact with the best minds than to have him stuffed with the mere knowledge contained in all the books ever written. If the boy begins to see things on the farm, to enquire into the whys and the wherefores, if he endeavors to read the great book of nature spread around him, and nowhere in more enticing and alluring form than on the farm, if he shows a disposition to keep himself clean, morally and socially, as well as physically, there is no fear but that he will make himself a chance. Whether he follows his father's calling or some other equally honorable, there is little fear that he will ever cause his mother to hide her head in shame or bring down his father's gray hairs in sorrow to the grave. Give the boy a chance.—*Home-stead.*

In 1860, Henry Goethe, of Beaufort, S. C., wrote Dr. Shallenberger: "I regard your Antidote a specific for chills and fever. It was used on the Charleston & Savannah R. Road last summer and autumn in the most sickly region, and under the most trying circumstances. Out of one gang of negro operatives, fifty were stricken down with chills and fever, and every one recovered by the timely use of Shallenberger's Antidote. You possess the GREATEST MEDICINE IN THE WORLD."

#### Free Reclining Chair Cars Between Kansas City, Pueblo, Colorado Springs and Denver.

The "Santa Fe Route" is now running free reclining chair cars between Kansas City and Denver on daily trains Nos. 5 and 6, leaving Topeka at 2 p. m. and 3:20 p. m., respectively. These cars are entirely new, and have been built expressly for this train, are fitted with all the modern appliances for both convenience and safety, and are unexcelled by any cars run between these points heretofore. No line can offer you better accommodations than the old reliable "Santa Fe Route." For any information desired regarding rates, through car accommodations, time of arrival and departure of trains, etc., call on ROWLEY BROS., Agents, Sixth and Kansas avenues, W. C. GARVEY, at the depot, Topeka, or any agent of the Santa Fe, or address GEO. T. NICHOLSON, G. P. & T. A., A. T. & S. F. R. R., Topeka, Kas.

## In the Dairy.

### ARE THE HOLSTEINS ENTITLED TO LEAD AS BUTTER-MAKERS?

"I believe the Holstein-Friesians surpass all others in milk and cheese. It is the best breed for butter on earth. Others have made strong claims, but they are waning. Six years ago I predicted that the Holsteins were great butter cattle. All I predicted has been realized and more. This breed has more cows that have a record of over 100 pounds of butter in thirty days than all other breeds put together; it has more cows with a record of 20 pounds a week than all others."

This is the published statement of E. A. Powell, one of the proprietors of the Lakeside herd of Holstein-Friesian cattle, by far the largest herd of the kind in America, numbering between 300 and 400 animals. The highest private tests of milk and butter have been made here, known to that breed. No other similar herd approaches it in this respect; the inference is, therefore, that the Lakeside herd of Holsteins, is the best in the country, probably in the world. But that it contains—or that the entire race of these cattle has—more cows that have a record of over 100 pounds of butter in thirty days, or more cows with records of 20 pounds a week, than all others, we most emphatically deny, and are prepared to refute the statement with facts.

In a letter to the press from Smiths, Powell & Lamb (owners of the Lakeside herd), they say: "We find that seven of our cows have made butter records which average for thirty days 100 pounds 1½ ounces each."

The best of these made 106 pounds 14 ounces in that time, the worst 95 pounds 2½ ounces, three of them falling below 100 pounds, so that really there were but four cows after all that made 100 pounds of butter and over, in thirty days. Where are the others? for surely a claim so sweeping and positive as that made by the Holstein breeders, ought to be sustained by better evidence than that four cows of the breed had accomplished the yield spoken of, or that seven of them had made the average, and upon this assumption championship in butter-making is claimed.

It is simply an unsubstantiated and misleading assertion. The Holsteins are not great butter-makers, as a breed, and the occasional exception does not constitute them "the best breed on earth" for that purpose.

If Mr. Powell had drawn the line for his favorite breed on "milk and cheese" he would have been warmly upheld by everybody having practical knowledge of the subject, and the cow's ability as demonstrated would have borne out the statement beyond successful controversy.

The Holsteins are a great milk and cheese cattle, but when the claim is made for them of leading in butter-making it is mythical and without foundation. The breed that excels all others in yield of butter—"the best on earth"—is that from the Island of Jersey, bred and fed by intelligent and practical men for many generations, butter production being the sole object. The Holsteins prior to six or eight years ago made no pretensions whatever, as great butter cows, and it is scarcely a reasonable supposition that in this brief period such wonders should be accomplished.

In contrast with the meagre showing by Holstein cattle in making butter during the past year, there were over ninety Jersey cows that made more than 14 pounds per week, twelve of them making 20 pounds and over, the highest record reported for the year being 33 pounds 8 ounces in seven days. The number of Jersey cows on record that average over 100 pounds in thirty days is forty-six, and one hundred and fifty cows with weekly records of 20 pounds and over.

This condition of affairs will scarcely be accepted by the dairy public as "waning," nor will the concession be made that because a few Holstein cows

in the Lakeside herd have distinguished themselves for making butter, that, therefore, the race is entitled to a front rank for that business.

In the first place but few butter records of importance by Holstein cows are made outside this herd, while great butter-making Jerseys are found in all localities represented by the breed, which demonstrates the reliance to be placed in it, and the success that has followed the efforts of those instrumental in furnishing the world with so incomparable a race of butter cattle. Again, the number of pounds of butter a cow may be able to produce in a given time, constitutes only one of the desirable qualities of the superior butter animal; there are other qualifications required by the butter dairyman, to insure her use profitable, besides the amount of butter fats she may yield, some of which are: the amount of food necessary to produce a pound of butter, weight of milk to be handled to obtain the same end. Economy of production, together with quality of product, is the chief factor for the dairyman's guide in the choice of breed, and its value is measured by proportionate returns from the amount required to run the business. Is it cheaper to feed a Jersey cow weighing 900 pounds that will yield 15 to 20 pounds of butter per week than a Holstein of 1,500 pounds, that will produce an equal amount? Is not the labor and consequently the expense of making butter lessened according to the weight of milk handled? Of average Holstein milk it requires 25 or 30 pounds for a pound of butter; that of the Jersey 12 to 14 will do it—the milk of a large number of Jersey cows has accomplished this with half that quantity. Jersey butter is fine in quality and will sell for more. It costs a great deal more money from every standpoint to produce a pound of butter from Holstein milk than from that of the Jersey, consequently the claim made for the Holstein as an economical and profitable butter cow, by comparison, is without force.

These questions are of vital importance for the consideration of the butter dairyman and it will require something more than mere "published statements" of butter exploits made by Holstein cows to satisfy the intelligent butter-makers of the country, who carefully count the cost and profits of their business, that these cattle are worthy, or competent to lead all other breeds as butter-producers.—*Jersey Bulletin.*

### The Cream-Ripening Puzzle.

Preparing cream for the churn is one of the modern puzzles of butter-making. One says sour it, another says oxidize it, and a third says keep it from the air and ferment it with a "starter" of loppered skim-milk specially prepared. Some churn their cream "slightly acid," and some "twelve hours after lopping." Yet all make fine butter! At one of the New York dairy conferences, Colonel Curtis, of Charlton, said, "one of the most important things in butter-making is ripening. When the cream is properly ripened it speaks for itself. It looks light-colored and has a bright satiny appearance, cracks open on the top, and one can almost see the butter right in the cream. As soon as it reaches this point it should be churned then and there." This is an attempt to inform the eye of the dairyman. If any one sees his cream in this condition, let him make a note and churn it. The cracking looks like considerable fermentation and the absence of stirring. But the Colonel said afterwards that "sour cream is not always ripe." "Sourness does not ripen the cream." What does ripen it? "It should be from eighteen to twenty-four hours ripening." Then he spoke of cream ripening too soon. If ripened, what can be the difference as to whether it is a long or a short time ripening? But when shall we solve this puzzle of ripening cream?—*Milky Way.*

## The Poultry Yard.

### POULTRY EXHIBITIONS.

Kansas Poultry and Pet Stock Association, Wichita, Kas., December 3, 4, 5 and 6, 1889. Harry Swift, Sec. retary, Marion, Kas.  
Cowley County Poultry Association, Winfield, Kas. November 26, 27, 28 and 29 1889. C. W. Farr, Secretary, Winfield, Kas.

### Poultry Notes by a Correspondent.

Any surplus cockerels should be marketed now.

Clover hay cut fine and mixed in the warm feed is relished by the flock in cold weather.

Winter is coming fast and indications say a cold one, so prepare for it now, not when it is too cold to work comfortably.

Do not keep more than ten hens confined in one small yard; they will be more profitable than fifty. If you wish a large number have several yards.

Kansas should and will be one of the greatest poultry-raising States in the West, and in a few years' time will rank among the first in the production of fine poultry.

The best cross-bred turkeys are produced from a White Holland gobble and wild turkey hen, or a Bronze gobble will be usually as good. This cross yields excellent market birds.

Fat poultry should be marketed now. The cold weather being near at hand it is wise to dispose of such stock and house nothing but your stock you intend breeding from next spring.

If you are not keeping a correct account with your poultry you should do so at once. You may be spending more than you realize, and no business should be conducted with a constant loss or no gain.

White Plymouth Rocks are excellent fowls for the farmer. They are good layers and mature rapidly, and when dressed their flesh is yellow and juicy. We know of no better breed for the farmer.

The Red-Cap have borne a share of the ridicule consequent on the introduction of all new breeds. They have been "quizzed" for their extra combs and their want of Hamburg type, neatness and graceful carriage.

The hen is omnivorous, that is she eats almost everything. Insects, flesh, grain and fruit are taken with avidity. All attempts, therefore, to confine fowls to a single article of diet will fail. Variety is what they require.

Eggs command 25 and even 30 cents at this season. Better to have your hens laying now and throughout the winter than when eggs are plenty. A little extra attention to their comfort and the proper food to stimulate egg production is the way to gain the day.

Hamburgs, one and all, have been much improved in the last thirty years, at least in the beauty and uniformity of plumage, if not in the quality of prolificness. There are six well defined varieties, the Black, White, Silver and Golden Spangled, Silver and Golden Penciled, and no more beautiful fowls exist.

The accumulation of dung about the roosts should be cleaned up once a week, and oftener if time will admit of it. The feathers should be swept up and separated from the manure. A barrel in under a shed away from the poultry house should be the proper place to accumulate the dung and make use of it for such fertilizing as you need in the spring time.

The best breeds for table purposes are the Plymouth Rock, Dorking, Langshan, Houdan, Game and Wyandotte. These are always considered among the very best. A cross of a Plymouth Rock and Langshan produce good table fowls and the Wyandotte and Game make an excellent cross. The Houdan is a nice dresser and always good for this purpose.

Breeding hens require good food to be able to lay well; a change of diet frequently is one essential point to be observed. Feed often, but sparingly, and have them supplied with pure water constantly. Keep your breeding fowls tame so you will have no trouble in handling them, and in this way we will find eggs will hatch well and our chicks that come will be strong and healthy.

The great point with poultry culture, especially when they are raised in large numbers, is to carefully study the symptoms of the different diseases, and if this be done judiciously and thoroughly the breeder will be able to detect the first sign

of any disease that makes its appearance and with the proper remedies he can quickly cure it before it gets well established in the flock, and will thus avoid serious disaster.

Pumpkins are good when boiled and fed with other food and good results follow. Boil the pumpkins with say a third of meal and wheat shorts. Feed daily all winter to your flock of young and old stock instead of continuing the use of potatoes and turnips. A saving of at least a third of the price of vegetables as food will be effected, and healthy, vigorous birds be the result. It is worth a thorough trial.

Turkeys will soon be marketable and the demand is great and prices high. If you have never tried to raise turkeys you should do so; will pay if rightly managed. They are hard to raise when young, but after they are six weeks old they grow fast and improve in health and vigor. The meadows or oats stubble field is where they can roam to advantage, and in the evening should be locked up in a dry coop.

As confinement is an unnatural condition for fowls, it is often unhealthy. If large numbers are kept together they are apt to get disease. Hence great attention should be paid to cleanliness when fowls are shut up. Lime for the hens to eat, lime scattered over the floor, and lime used as whitewash should never be neglected. Do not keep more than ten hens confined in one small yard; they will be more profitable than fifty.—*Poultry-Keeper.*

The neglect to keep your coops cleanly in nine cases out of ten results in disease of one kind or another. Filth breeds vermin, and where you find a filthy house you will find vermin also. Filth will breed lice, and more fowls and chicks die from lice than all the diseases that chickens are subject to. Yet when a fowl droops around a day or two and finally dies, poor old cholera must take the blame, simply because the owner will not acknowledge that his fowls have lice.

The meadows mown in June or July will now yield a nice crop of fine hay which should be cut and stored away in some accessible manner for the use of the fowls in winter. It saves a very large part of the expense for grain food, if the hens are given a basket of rowen each day during the winter months. It will very largely increase egg production, as it supplies a bulky food, and the hens do not readily become too fat for laying well. Turkeys, ducks, geese and chickens alike eat it boiled and mixed with warm food.

Of the distinct English breeds the Dorkings have become the most celebrated. Of these the White Dorking of Surrey is the typical fowl. It is as compared with the so-called dunghill fowls, large, the mature cocks often weighing ten pounds, the hens eight to nine pounds, and at a year old from six to eight pounds. They are of good size, plump, compact, with strong heads, full wattled, and with single serrated comb, short necks, short white legs, with five toes, and full plump breast, the plumage pure white and without spot. They are tolerably hardy, good layers, and most excellent mothers.

If one don't care for the trouble of looking after them at this late season, then October and November are good months for hatching of bantams. Cold weather retards the growth of the young chicks, and as the smaller the bantam is the more valuable, these months are good for dwarfing them as any other. If the lacing of the Sebrights is to be preserved, they must be bred in, not allowing a single out-cross, for strange as it may seem if parents properly laced produce good offspring when not related, it will be rare, so in breeding bantams for beauty follow these rules. Breed closely to the same stock, hatch late, feed on food not highly concentrated, and always select the smallest.

Go and do likewise. If your whiskers are grizzly and unbecoming use Buckingham's Dye and they will look as when you were younger.

Early lambs are considered by many sheepmen the most profitable source of income from their flocks.

### 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., Jones Building, 116 West Sixth street, Topeka, Kas.

(Continued from page 1.)

ing severely assailed in the Eastern money market. The failure of the loan company at Anthony and the recent attack made on mortgages on pre-empted land in western Kansas have seriously assailed the credit of all mortgages; and now with this comes the demand of the KANSAS FARMER to lower present interest rates and postpone the payment of the mortgage. The logical, practical result will be to drive capital away from investment here, with a corresponding increase of rates. The occasion is an excellent opportunity for banks and loan companies to advance rates, but strange as it may seem to the FARMER, our loan companies are striving to correct the false impression made by the Anthony failure and the Stevens county decision.

Bankers doing a regular banking business will lend money at 6 per cent. to a perfectly responsible customer before they will discount the note of a man who regularly fails to meet his notes or litigates the collection of his honest debts. Money-lenders are not what the FARMER terms philanthropists, but are business men, and lend money for certain returns.

The editor of the FARMER has made mention of the publication which I have the pleasure of editing. As editor of that paper it has been my aim to give to investors and others at all times a better knowledge of Kansas affairs and her resources, believing that if investors fully understood all matters they would be better satisfied with lending their money here. It has been the policy of the *Kansas Financier* to uphold the credit of the State, and to treat capital fairly, believing that in this way the borrowers of the State would be benefited, and I still declare that this policy will in the end assure better results than the illogical course of attacking our credit. I especially disclaim to be the voice of the money power, as the FARMER defines that power. Strange as it may seem, I seek to lower rates instead of to advance them.

In closing this communication I beg leave to say that the quotation from my former article in the editorial of the FARMER, on page 9, edition October 16, second paragraph, is misapplied. By a reference to my article same issue, page 1, second paragraph, the quotation applies to a different party than the farmers of Kansas. Not wishing to longer prolong this discussion, and thanking the FARMER for access to its columns, I remain very respectfully,  
S. L. SEABROOK,  
Editor *Kansas Financier*.

## Correspondence.

### MORTGAGE LIFTING.

**A Plan of Salvation Founded on the Proposition that All Men Should Enjoy Equal, Natural and Legal Rights.**

EDITOR KANSAS FARMER:—I am exceedingly interested in the financial discussions in your columns, as, in the language of Senator Plumb, "the money question is the most important thing now pending."

I am well pleased with the ground taken by yourself, that farmers and other legitimate borrowers should be favored with money at lower interest. As a rule I have been opposed to government loans to individuals, on the ground of the complicated and impracticable details, yet relief *must be had*, or great distress will affect our people and great calamities may befall the country. Some time ago I prepared and published a discussion of this subject, as follows:

It will be admitted and agreed, of course, by all parties, that our people are terribly mortgaged, and utterly without means of relief now, or hope of escape in the future. This, of course, produces a white heat of distress and a dismal and heart-sickening apprehension of the fearful by and by, so filipantly predicted by Senator Ingalls, of Kansas, when the great middle classes of America are to be *wiped out!* It prepares us for the consideration of plans and means of relief which are not strictly orthodox, though in no wise unjust or dishonest.

#### MEANS OF RELIEF.

*Be it Enacted by the American Congress, Etc.:*

That, on and after the 1st day of January, 1890, it shall not be lawful to collect debts that are secured by mortgage on real estate by the usual methods of foreclosure under the laws of the several States; but the method of procedure and collection shall be as follows:

(1.) The creditor holding the mortgage shall proceed in person or by attorney or lawful representative, to the office of the register of deeds, where the mortgage is recorded, and there procure a correct abstract of title of the estate held by this mortgage, including the in-

combrance created by his claim or debt. The register of deeds shall certify to the correctness of the said abstract, and attach his signature. The county clerk of said county shall also examine and certify to the correctness of the said abstract, and attach his seal and signature.

(2.) It shall then be the duty of the creditor to proceed to the county treasurer's office, where the said abstract shall be permanently placed on file for future reference.

(3.) On the presentation of the said certified abstract in the county treasurer's office, it shall be the duty of the said county treasurer to issue in due form, on blanks prepared for the purpose, a draft for the amount of the mortgage debt, including interest and official fees to date, on the treasurer of the United States. Said draft shall be examined by the county clerk, and certified as correct by his official seal and signature. Said draft will then be due and payable by the treasurer of the United States on demand of any lawful holder of the same. Said draft must contain an accurate description and location of the estate mentioned in the abstract; and the amount of the draft shall be charged up against the said estate, creating a lawful lien on the same. The debtor shall now be allowed twenty years' time on the debt, by paying interest promptly on the same semi-annually, at the rate of 1 per cent. per annum—that being the terms allowed to national bankers during the past twenty-five years. The record of the mortgage shall be marked "Settled by the United States government."

(4.) This procedure, herein set forth, shall be the only lawful way for collecting mortgage debts until the aggregate circulation of lawful money in the United States shall amount to \$50 per capita of the population, not counting the lawful reserves in banks and other fixed non-circulating deposits required by law.

(5.) After said aggregate of \$50 per capita of population shall have been reached, the usual modes of legal procedure in the several States will again become lawful, except at such times as the increase of population shall require further floating of new money to preserve the even unfluctuating aggregate of \$50 per capita.

(6.) This said means of floating money and relieving debtors shall not prevent other legitimate means of coinage and issuing money in order to facilitate or aid in reaching and maintaining the aggregate and unfluctuating circulation herein mentioned. Nor shall it be considered a bar or hindrance to private parties who desire to settle their own debts in their own way by mutual consent.

(7.) To enable the treasury of the United States to meet the demands under this law, the treasurer shall be authorized to create and pay out on demand a sufficient amount from time to time of United States treasury notes, receivable by the United States government for all dues, and legal tender for all debts and taxes. And, in order to show the amount of money afloat and its relation to the number of population, it shall become the duty of the United States treasurer to embody in his monthly reports a careful calculation of the whole population at the end of each month, computed on the basis of known percentages of increase, and a statement of the money per capita afloat at the end of each month. These reports sent out monthly to the registers of deeds in the several counties of the United States shall be authority indicating the mode of procedure in the collection of mortgage debts for the ensuing month.

(8.) When the mortgage debts become due and payable, it shall be the duty of the holder of the mortgage to proceed to collection within thirty days. If procedure is not commenced within the said thirty days, interest shall cease on the said mortgage on the day on which, by its terms, the debt became due and payable.

#### REMARKS.

On this plan there is no need of any new of floor, or any complication or risk in valuing lands and placing mortgages; no new agencies; no straw bonds nor new risks. No money leaves the United States treasury until paid out on drafts to the lawful holders of the same. The expenses, delays and annoyances of collections are far less than the present legal processes. And, the debtor is placed on an *equal footing* with the national banker, a *right* which it is his *duty to demand* under the Declaration of Independence, under the constitution of the United States, and, under the organic laws of the several States.

Of course this mode of relief will raise a howl among the shysters, and they will cry out "Wild cat!" "Shinplaster!" But, is it not time that the cry of distress among the people shall be heard?

The treasury notes issued by the general government and made receivable in the public revenues have never been below par as compared with coin in the history of this country. A single instance of such depreciation has not occurred since the adoption of the American constitution.

The plan here pointed out will insure a good, reliable money, in even, unfluctuating quantity for the general and equal use of the people. From the very first there will be rising prices and good times; and ultimately, as there will be no contraction, there can be no falling prices and hard times.

Now, Mr. Editor, will you please consider the policy here outlined, and give the public the benefit of your judgment in the premises, and thus aid in perfecting a just and practicable

mode of relief for the distressed people, and, at the same time, a plan which may remain as the permanent policy of the country?

Very respectfully,  
JOHN DAVIS,  
October 19, 1889. Junction City, Kas.

### Weather Predictions.

EDITOR KANSAS FARMER:—On the first page of your issue of October 9th I notice an article by "Joe Pilgrim," saying that my weather calculations ought to be made for at least five years in advance. I agree with him that it ought to be done, and know that such calculations can be made for even ten years in advance. But has he a correct idea as to the amount of figuring it would require? My book of predictions for 1890 required the whole of my time and the most of the time of two assistants for nearly a year. While the book is not a large one, yet the figuring used in the preparation would more than cover 800 pages of legal cap. If I had five or six expert astronomical mathematicians to assist, I could issue my books for several years in advance. But such experts could not be had for less than \$3,000 per year each. Who would pay them? I expended over \$30,000 in cash, besides my own time for many years, before I could sell books enough to pay even one man. But it is paying fairly well now, and I have reduced the price 50 per cent., so that I am offering the book for \$1 per copy. As the sales increase I will reduce the price, though some people think that a reduction in price is a sign that it does not sell well, and if others don't want it they don't, no matter what its merits may be. I have sold more books at \$2 per copy than I ever did for a less price during the same time in any other year, and I think it unwise, so far as I am personally concerned, to reduce the price. But I know that money is scarce in the Western States, and many poor farmers would like to have the work. I will do what I can to accommodate them by making the price only \$1 per copy until November 15. My object has ever been to sell a large number of copies at a low price, and still get money enough to soon be able to employ enough assistants to calculate for several years in advance. How soon this point will be reached will depend upon the people. If a good portion of the farmers will not buy my books at a low price, then I must make a higher price and sell only to the rich and the speculators, who prefer to pay a big price if sales are confined to their class. But most readers of the KANSAS FARMER know where my sympathies are.

In closing, I wish to say to the people of the United States that they had better use all possible diligence in taking advantage of the present fine weather, as cold weather will come within three weeks. November will not this year produce as much warm weather in the Northern States as we usually have during that month.  
C. C. BLAKE.

### From Kiowa County.

EDITOR KANSAS FARMER:—Kiowa county can no longer be classed with the arid counties of the State. A wheat crop has been harvested yielding from twenty to forty bushels per acre, one field yielding fifty-two bushels per acre. Oats, corn, sorghum and maize have produced a large yield. From 8,000 to 10,000 acres of wheat have or will be sown, and with the past five-days' rain, which has thoroughly soaked the ground, a good wheat crop the coming season is almost assured.

This is a splendid location for a flouring mill of from fifty to one hundred barrel capacity. There is no mill west of us, and none east nearer than thirty-five miles, and with two lines of railroad west, a bonanza awaits the right man to locate here. There are 75,000 bushels of wheat now in the county.

We have a soil second to none in the State, a golden opportunity is offered to those desiring to purchase cheap homes.

Stock doing well.  
Greensburg, Kas.  
M. H. KENAGA.

### From Barber County.

EDITOR KANSAS FARMER:—We are having a siege—a six days' rain, all soaked in the ground, and wheat is just booming.

We have got a party to put up a hundred-barrel flouring mill, giving our town—Medicine Lodge—\$1,200 a year for the grand water-power for twenty-five years. Gypsum works going up, and sugar factory pounding out two hundred tons of cane a day. A grand success, lovely sugar.

We farmers are gathering big, yellow ears of corn that is yielding from twenty-five to eighty bushels to the acre.

Stock is doing finely. I just bought sixty-five head of nice yearling steers, at \$13 a head, that do a man's eyes good to look at—eating cane and corn I planted after taking wheat off. Some good feeding steers here for sale yet. Anyone wanting any, write me; I will do you good.  
E. BENEDICT.  
Medicine Lodge, Kas.

### To Breeders.

The breeders of improved stock in Kansas should send for a sample copy of *Western Resources*, published at Lincoln, Neb. It is a representative live stock journal. For samples address the publisher, H. S. Reed, Lincoln, Neb.

We have it! A stove that requires neither pipe or chimney. Will heat a room 15x15x10 feet. D. A. MULVANE & CO., Topeka, Kas.

### Gossip About Stock.

L. A. Knapp, of Dover, Kas., reports his Short-horns as doing fairly well. He says his Buff Cochins are the best he ever raised.

Messrs. A. Pringle, of Kansas, and W. D. Michael, of Canada, have established a breeding ranch in Wabaunsee county in the neighborhood of that well-known breeder of first-class Short-horns, T. P. Babst, Dover, Kas. He has sold them a few choice heifers for their breeding herd. This firm will also handle Clydesdale horses.

A well-known breeder who has been advertising in other live stock and agricultural papers in the West as well as in the KANSAS FARMER, says: "In the future what money I pay out for advertising will go to your paper as my advertising in the FARMER has always paid me." Western breeders who have never tested this medium will please observe this significant fact.

The sale of Holstein-Friesian cattle held at Manhattan last week by George W. Harrop did not result in very encouraging prices, although the cattle were not in very good condition, nor of extra fashionable breeding, yet the prices were not all representative for the class of stock offered. Mr. Harrop caustically summarizes his sale as follows: "Seventeen head Holstein cattle brought \$1,000, an average of \$59.35. My throat was cut from ear to ear. Puritanic and prohibition principles will soon make Kansas like New England for close-fisted littleness."

S. E. Prather, secretary, writes: "A special meeting of the American Southdown Association will be held in the Sherman house, Chicago, Illinois, on Friday, November 15, 1889, at 7:30 p. m. The offer by the Association of a \$50 solid silver prize cup for the best Southdown wether at the coming American Fat Stock show can hardly fail to attract universal attention to the Southdown exhibit. There is a strong feeling among the members forming the project of a grand display of Southdown sheep in 1890. One object of the meeting hereby called is to decide upon and prepare the way for a creditable international exhibition in connection with some one of the leading fairs in 1890. Letters from members unable to attend, pertaining to the work of the association and the interests of sheep-breeders generally, if addressed to the secretary in time, will be duly considered during the meeting. It is, however, desirable that all who can do so should be present."

The great fine stock sale of the season is announced by the Leonard Bros., of Missouri, to take place at the checkered barn at Lincoln, Neb., on Friday, November 15, when about sixty head of the famous "Scotch Dobbies" or Angus, and Galloway cattle will be sold without reserve. This will be the best opportunity afforded this season of buying at your own price of these deservedly popular breed of cattle, said to mature more quickly, fatten on less food, sell for higher prices, are more docile, having no horns, are all of the same color, jet black, hence the most beautiful breed in existence and are properly named "the breed that beats the record." The Leonard Bros. have done more to introduce these cattle in this country than any one else in the Union, as they imported from Scotland about 1,500 head during 1883-4-5. Don't fail to attend this sale and send for catalogue to the *Nebraska Farmer*, Lincoln, Neb., or Leonard Bros., Mt. Leonard, Mo.

H. G. Farmer, of Garnett, advertises on the last page of this paper his annual sale of Poland-China swine, and as he exhibited at a number of fairs, we give the season's record of his Poland-China herd exhibit which filled all the classes excepting yearling boar. At the Neosho Falls fair the herd won first prize in each class shown, also sweepstakes on sow, boar and herd; at Garnett, won a premium in every class shown, consisting of four first, two second, sweepstakes on sow and second sweepstakes on herd; at Mound City, won six first and three second premiums, also sweepstakes on herd; at Springfield, Mo., the herd won four first, three second and sweepstakes, and diploma for best sow, also best herd; at Nevada, Mo., all breeds shown in the same ring but he succeeded in winning three first, three second and sweepstakes herd prize with Poland-Chinas, his Berkshire boar won sweepstakes; at Carthage, Mo., won two first and five second premiums, and finally at Lamar, Mo., where all stock over six months were shown in the same ring he won the \$25 sweepstakes over the hog that won it at Topeka. Mr. Farmer also showed Berkshires and Yorkshires and won either first or second premium in every class shown. This show herd will be included in his public sale at Garnett on November 9. The foundation stock is from the well-known herd of I. L. Whipple. Don't forget the sale.

The assignee's sale of the estate of Wm. P. Higinbotham's Blue Valley Stud occurred at Manhattan last week. Col. S. A. Sawyer, the skillful auctioneer, did his work creditably, but was unable to get very fancy prices. The imported French stallion Richelieu 28, 7 years, went to J. W. Ebersall, Beatrice, Neb., for \$1,500, and the standard stallion, Doc Vail 2844, went to G. W. Higinbotham, of Manhattan, for \$700. Twenty-one colts averaged \$61.65; twenty-one yearlings averaged \$65; twenty 2-year-olds averaged \$35.60, and twenty-four mares, horses and fillies averaged \$38.20. The following is a list of the purchasers: J. Neal, Manhattan; James Beck, Wamego; W. F. Stambaugh, Abilene; W. A. Rule, Kansas City, Mo.; C. W. Higinbotham, Rossville; John Mather, Sherman Johnson, Manhattan; W. A.



## 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.

### Indian Summer.

Just after the death of the flowers,  
And before they are buried in snow,  
There comes a festive season,  
When nature is all aglow—  
A glow with a mystic splendor  
That rivals the beauty of Spring—  
A glow with a beauty more tender  
Than aught which fair Summer could bring.

Some spirit akin to the rainbow  
That borrows its magical dyes,  
And mantles the far-spreading landscape  
In hues that bewilder the eyes.  
The sun from his cloud-pillowed chamber  
Smiles soft on a vision so gay,  
And dreams that his favorite children,  
The flowers, have not yet passed away.

There's a luminous mist on the mountains,  
A light azure haze in the air,  
As if angels, while heavenward soaring,  
Had left their bright robes floating there;  
The breeze is so soft, so caressing,  
It seems a mute token of love,  
And floats to the heart like a blessing  
From some happy spirit above.

These days so serene and so charming,  
Awaken a dreamy delight—  
A tremulous, tearful enjoyment,  
Like soft strains of music at night;  
We know they are fading and fleeting,  
That quickly, too quickly, they'll end,  
And we watch them with yearning affection,  
As at parting we watch a dear friend.

Oh! beautiful Indian Summer!  
Thou favorite child of the year,  
Thou darling whom Nature enriches  
With gifts and adornments so dear!  
How vain would we woo thee to linger  
On mountain and meadow awhile,  
For our hearts, like the sweet haunts of Nature,  
Rejoice and grow young in thy smile.

Not alone to the sad fields of Autumn  
Dost thou a lost brightness restore,  
But thou bringest a world-weary spirit  
Sweet dreams of its childhood once more;  
Thy loveliness fills us with memories  
Of all that was brightest and best—  
Thy peace and serenity offer  
A foretaste of heavenly rest.

### GET THE UNDERWEAR READY.

There are housewives and housewives. There is one class, who by strict economy and a small amount of self-assertion, combined with a little suppression of their accustomed self-denial, have managed to obtain a week—possibly two weeks—outing, and now, with the domestic harness well on again, feel new strength and courage for their work. There is another class, who could not compass an outing, but who, by persistent determination to do only the work positively necessary through the trying months, and rest, rest, rest, take a hopeful outlook on their work. And there is another class, who either from necessity or habit, never have any rest, but month in and month out is one continual round of hard work, always with the harness galling on the self-same spot. No wonder our American women are noted for their early decay and premature breaking down. I should like to stop and give these same well-meaning housewives a vigorous lecture, because I believe with very many of them both the fault and the remedy lie with themselves; but I did not start on that subject.

To every thrifty housewife alike, whether she be rested or completely fagged out, the name of September is an almost endless necessary preparation for winter, and with all the canning and preserving and pickling of fruit with which this month is filled, there is little time or inclination for nice or difficult sewing. But it is the very best kind of a time for bringing out all the winter underwear of the family and putting it in readiness for that first cold spell when every one shivers and hunts it up. There are so many demands on our time during the busy spring, that most exemplary housewife is compelled to do her weekly mending in a hurried manner, and many winter clothes are put away sadly in need of mending. Go now and bring them all out, no matter how formidable and discouraging a task it is; thoroughly examine and sort them over, making three grades, namely—those requiring a little nice mending, those requiring thorough overhauling and patching, and those only fit to cut over for the children or to make patches of. Put each grade in a basket by itself, get all the requisites together for mending them, and having all in a convenient place, you will surprise yourself, not only by the amount of work you will find time to do, at odd hours, but by the thorough, careful manner you feel like doing them in, when you are really making a business of it, instead of hurrying them off to get at

other sewing, as is usually the way with our weekly mending. There will be many days when you can take them out under a tree or on the piazza, and they will not look half as ugly.

Using cloth to patch merino underwear is a delusion and a snare; use pieces either from fine worn-out garments or from cotton or cashmere hose. The knees or bodies of drawers and sleeves of shirts (at the elbows) should have generous sized patches, rounded at the corners, cross-stitched finely with strong thread without turning in the edges, put on their wrong sides as soon as worn thin. By this means you can darn down into these patches with very little trouble, and will feel grateful every time you see one of them. Narrow bias pieces of fine cotton cloth are better for binding over the necks of shirts than tape is. When the edges of the sleeves are worn at the bottom, a good way is to cut them off a little and button-hole stitch them around with silk or worsted, and then crochet a scallop of the same material. The bottom or bodies of worn shirts make excellent skirts for small children, and by the addition of a fancy stitch to the hem or woolen lace to the edge are really pretty. Children's drawers can also be easily made from the worn ones of their elders by making a cotton yoke on which to sew them at the top.

By the way, I know of nothing more beneficial and helpful than these same cotton yokes, a pattern of which can be obtained of any dealer. One serious defect in our manner of making both cotton and woolen underwear is in having too many gathers, too much heat over the abdomen; and these yokes, which can be utilized on all muslin and woolen drawers and skirts, are a remedy for this, as well as being very desirable to the women with large hips, as there are no large gathers in them except a few at the center behind, not necessarily even that. They can be varied from four to twelve inches in depth, thus being very desirable for lengthening down skirts. The latter require no goring when put on one of the yokes, merely regulate the fullness, so there shall be very little at the front, more at the sides, but most at the back. Patches of the same material, put on in the same manner, are an excellent thing for the knees of children's cashmere or woolen hose, and when done with cotton thread will show little, if any. It is also advisable to run the heels of all such, as our mothers used to their hand-knit one.

I always put the yokes mentioned above on all women's merino drawers, before wearing, for the reason mentioned.

Children and women should invariably wear warm woolen drawers from October till May; they are far warmer, and more comfortable in every way, than many skirts. One, or at the most two, of the latter is all that should ever be worn, and like all other underwear, the soft and fine is much warmer than the coarse and heavy.

Regardless of what fashion may dictate in the matter, a woman who wears a small bustle, on which are a pair of well-fitting skirt-supporters, under her skirts, will do work in more comfort than she who does otherwise. Skirts for children can be made of various kinds of materials—the odds and ends of the household accumulations.

The domestic dyes are so easily and satisfactorily used that no garment is too faded to be made well-looking for some use. The lighter grades of men's clothing make excellent skirts, by pinking the bottoms of them and sewing to a yoke. A nice skirt for school-girls, or those compelled to be much out of doors, is one cut in princess shape, either with or without sleeves.

An excellent waist for children is cut with one dart, an under-arm gore and French back. Make without sleeves, and either high or low in the neck, as you prefer. Cut it three inches deeper than the waist line, and face up to that depth. On the bottom, at each side, sew a button for the stocking-supporters; at the center of both the back and front, one for the under-drawers; at an equal distance on each side of the center or both back and front, one (four in all) for the outside drawers, and at the waist line, four more for skirts. This waist does away with all superfluous ones, and still makes all the clothing secure.

All old people—and children—as well as all persons compelled to sleep in cold rooms, or to be up during the night, should wear flannel night-dresses. Small chil-

# H. H. MILLS & SONS,

Cash and One Price. 723 Kansas Ave., Topeka.

## OFFER TO OUT-OF-TOWN CUSTOMERS

Advantages enjoyed by no other DRY GOODS HOUSE in the city, viz.: We buy our goods for cash and sell for cash in every instance, avoiding the expense that houses doing a credit business have to incur, such as Bookkeeper, Collector, Bad Debts, etc., which makes it plain to any one we can sell our goods cheaper, snaring the benefit with our customers. **THINK OF THIS** When sending away for goods. By sending your order to us you will get the benefit your cash purchase deserves, while sending to houses doing a credit business you don't buy them any cheaper than the one who buys on one or two months time.

### SEND FOR SAMPLES.

Our stock is now complete in all departments. In Dress Goods we are offering bargains we will not have later in season, viz.: 36-inch all wool Colored Dress Flannels at 35 cents a yard; 48-inch all wool Colored Merino at 45 cents a yard; 50-inch Dress Flannels at 50 cents a yard; 18-inch Colored Flannel at 35 cents a yard, etc. Our Cloak Department is replete with bargains. If you want a cloak, send us for prices, which will be cheerfully given. Blankets, Wool Flannels, Cotton Flannels, Domestic of all kinds, Carpets, Curtains, Hosiery, Gloves, Underwear. All of the above goods we carry in large variety.

EXPRESS CHARGES PAID ON ALL PURCHASES.

## H. H. MILLS & SONS, Cash and One-Price Dry Goods and Carpets.

723 Kansas Ave., TOPEKA, KAS.

dren's are best cut with drawers, but men's can be made precisely as muslin night-shirts are made. And for ladies—especially for an over one—there is no style better than the Mother Hubbard, when cut long enough for both yoke and skirt, and the former made of inch-wide tucks, feather-stitched in a contrasting color, yoke depth, with cuffs and pockets to correspond, are very neat and pretty. One made of very dark gray flannel, and stitched with yellow silk, was amongst the most prized of a wealthy lady's numerous Christmas gifts.

Another comfort for old people is an over-night-cap, crocheted out of soft zephyr or Shetland wool, with narrow ribbon ties. Old people are sometimes wakeful because their heads are cold.

I have said nothing of darning stockings, mittens and leggings. This is a matter in which experts are made by careful, painstaking experience, and little advice can be given in regard to it, save that I think it an art which all girls should early learn, and think it degrading to wear those needing it, as I have known well-dressed girls to do. I could easily go on and give some of the ideas I have learned by hard experience about re-making dresses, but this work is not usually undertaken until next month. And tidy, warm underwear is by far the most essential at any time, and she who succeeds in having this well repaired during September, may feel a very commendable pride in her work.—Katherine B. J., in Country Gentleman.

### Things We Throw Away.

I have been told by many ladies that they never throw away anything; I have been defied by others to mention anything except dirt which they did not cling to like a rich aunt.

Now, to begin, does any housewife ever throw away crusts, and odd pieces of bread, or does she just slip them into the catch-all, when no one is looking? All ye that are liable to be tempted in this way know that crusts carefully saved can be made into griddle cakes, puddings, meat dressings, fish cakes; and when dried in the oven and ground up with the rolling-pin they can be used for thickening soups and gravies, or for any purpose for which rolled crackers are used. The pan of crusts carefully kept will save the measure of meal or crackers and leave another little coin in the purse to be generous with, or to wear away the barriers of narrow means.

You have heard of the lady whose cake disappointed her in the very face of company coming to tea. Did you also hear that she was mad and threw it away? She did nothing of the kind. Instead, she cut it up in slices, made a delicate little custard, brought out her preserves, and triumphantly placed on the table a very palatable *charlotte russe*. Another lady, in relating her marital experiences, said her husband objected to having rhubarb sauce brought to the table more than three times in succession! Of course she threw it away, and, of course, he twitted her with being wasteful. Oh, if one had but dared to suggest to the unhappy woman that she might have taken her rhubarb sauce, or any other sauce that chanced to offend by its too great familiarity, and have made of it a nice large tart, with fancy twisted bars across the top, and thus she would have mollified the tyrant, man.

I wonder if every living housekeeper knows that apple jelly and vinegar can be

made from apple parings? Save the parings in the ice chest till a sufficient quantity accumulates, wash, cover with water, and boil quickly for an hour. Strain through a jelly-bag, add half the quantity of white sugar, and boil gently two hours. Flavor with vanilla, and pour into heated glasses. For the vinegar, the parings are put into a jug, a little water is added, and they are allowed to ferment in a warm place behind the stove.

Do we throw away old clothes before all use is got out of them, and they are rags? Some don't, more do. With the scientific housekeeper the shining robe of state descends in regular gradations till its lowly lot is cast in a comfortable mat beneath the feet. With the less industrious, and the immature, who are constantly taking their places in the world, clothes are often thrown into the rag-bag before they are half worn out. A child's dress gets short in the sleeves, and in it goes! A skirt shrinks and demands piecing out. The demands, like the demands of an oppressed people, are consigned to oblivion—the oblivion of the rag-bag. Changing fashions condemn many garments to that pit of darkness before their time and the point at which discretion judges best to take a stand against outside pressures must ever remain an individual matter to decide. While some may overstep the boundary on one side or the other, the woman of reflection will generally do what is best.—Good Housekeeping.

### Enterprise to the Fore.

The labor-saving implements of the household have received no more useful addition than the Enterprise Meat-Chopper, an advertisement of which (describing a small family size) will be found in this paper.

Its uses are manifold, such as chopping Mince-Meat, sausage Meat, Hash, Hamburg Steak for dyspeptics, Codfish, Tripe, Hogs Head Cheese, Chama, Suet, Chicken Salad, Scramble, Peppers, Sorap Meat for Poultry, Corn for Fritters, Cocoanut, Stale Bread for Bread Crumbs, etc. Also for making Beef Tea for Invalids, Mashing Potatoes, Pulverizing Crackers, etc.

The ease with which the chopper may be taken apart and cleaned should be appreciated by the housekeeper. Its simplicity naturally follows because its parts are few, and if, after long use, should any of the parts need replacing, a trifling outlay will cure their duplication, all being interchangeable. Its capacity of chopping 1 lb. of meat per minute may surprise our readers, but it is nevertheless a fact, and a recent improvement in the perforated plate at the end of the chopper, makes it capable of chopping even faster, finer and easier than the old style machines.

A perusal of the Enterprise Man'g Co's Catalogue, obtained by sending to 3rd & Dauphin streets, Philadelphia, Pa., may help our readers to understand better the good points of this and other ingenious devices, and we are positive you will learn something to your advantage should you follow the above advice.

### CATARH CURED.

A clergyman, after years of suffering from that loathsome disease Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren street, New York, will receive the recipe free of charge.



I have no hesitation in recommending Dr. Seth Arnold's Cough-Killer for coughs and colds. A few doses cured me. (It is a) **WONDERFUL REMEDY** writes G. L. Walker, a prominent citizen of Fairbuck, S. D. 25c. 50c. and \$1 per bottle. **ALL DEALERS SELL IT.**

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# The Young Folks.

## When Day is Done.

When day is done the robins sing  
Their dulcet vesper lays,  
When day is done the black bats wing  
Through all the dusky ways;  
The crickets blow their flageolets  
More loudly than by day,  
The crystal dew steals forth and wets  
Each blossom-bell and spray.

When day is done the western skies  
Become a sea of gold,  
And holy, countless stars arise  
And pierce heaven's curtain-fold;  
The low winds sing a lullaby,  
And rock the flowers to sleep,  
The moon climbs up the eastern sky,  
And bridges o'er the deep.

When day is done the mother lays  
Her babe upon her breast,  
And while she dreams of other days  
Slow sings it unto rest;  
When day is done the shepherd leads  
The lambs home to the fold,  
When day is done, our labor-meeds  
Our willing fingers hold.

When day is done the tollers come  
With weary feet and slow,  
Unto the peacefulness of home,  
Where life's best pleasures flow;  
When day is done—life's little day,  
Which ends so quickly here,  
God grant our weary feet may stray  
Unto His pastures dear.  
—Good Housekeeping.

I heard a brooklet gushing  
From its rocky fountain near,  
Down into the valley rushing,  
So fresh and wondrous clear.

Is this the way I was going?  
Whither, O brooklet, say!  
Thou hast, with thy soft murmur,  
Murmured my senses away?  
—Longfellow.

Purblind to poverty the worldling goes,  
And scarce sees rags an inch before his nose;  
But from a crowd can single out His Grace,  
And cringe and creep to fools who strut in lace.  
—Churchill.

## FOOTPATHS TO SUCCESS.

Doubtless many young persons who read this paper have seen a manufacturing village, with its schools, churches, postoffice, its rows of comfortable dwellings (with flower-pots in the windows, busy wives at work and well-fed children at play) built up almost entirely by the energy and force of a single man. It is he who has drawn these people together, given them work and created the prosperity which they enjoy. Did you ever stop to think how many persons are benefited by the life of such a man? His pay-roll includes, perhaps, hundreds of names. All these men and women, though they earn their own living, depend upon his skill and good judgment in managing his business, and are in a very real and immediate sense gainers by it. It furnishes them the work by which they live, and if he does not prosper in it they suffer at once.

But you must look beyond the mill operatives, beyond the school, the library, the various privileges which he provides for his little world, beyond his own home and all the advantages of wealth and culture which the members of his own family enjoy. If his business is a genuine success there are thousands of people, some of them in far off countries, who buy and wear his goods, and are made more comfortable and better off by doing so. There are many merchants who gain their profit by buying and selling them; ships that sail to carry them; laborers in the cities who handle the bales and boxes; machinists who work and thrive that he may have the machinery that he needs in carrying on his great enterprise.

This is one illustration of the way in which an active life reaches out in every direction, and makes itself felt in constantly widening circles of influence. Not in any vague or doubtful influence, but by giving real, practical help to a great many people, and making their actual lives better worth living.

How little most of us think of the various sources of supply of all our comforts, and the many hands that contribute to what we daily enjoy! Let any one begin some morning and take special thought for just one day of every article that is used, stopping to consider where it comes from, who made it, and how many hands it has probably passed through. I am quite sure that before night he will have a new sense of the mutual dependence of mankind, and find a new meaning in phrases about the wide distribution of the results of labor. The very ease and convenience with which we obtain an almost innumerable variety of those objects and commodities in familiar use make us apt to take them for granted. It is worth while occasionally to reflect upon the personal exertion that each has cost, in order

to realize in how many ways our lives are connected with other lives.

Each one of us has something to do in exchange for all these benefits received. It is a busy world; what can we contribute as our share to this vast amount of interchangeable productions? A time comes, or should come, to every boy and girl, when the great, pressing question is: "What shall I do?" It is all very well for a bright youth to look on for a while, but he soon begins to think about what he can get from the world. To find an answer to that question he must first decide what he can give to the world.

It is perfectly right and natural to wish for wealth, distinction, and the control of large and varied resources. But there is only one honest road to this desirable end, and that is usefulness. In a general way, what we do must be the measure of what we get. In choosing work, we all need to remember that the best thing for us to do is what we can do best. All useful work is or may be good—its quality depends upon the doer; the very best work for each person is that work by means of which he can best bring himself to bear upon the real wants of the world. The work into which you can put most of yourself, and your best self, will be the best work for you. Every trade or profession, once mastered, is a mere tool. Whether the lever be long or short, a railroad or a spade, a pen or a hammer, it is the brain that moves it, the man behind it, that is the real power. It is the chance to make his own gifts tell, whatever they may be, that is the true opportunity of life for each individual. Sagacity, knowledge, imagination—these may be real forces just as truly as muscular strength. But to accomplish anything they must be put to some real service. Self-culture has been called "storage of power." But sometimes these intellectual gains are sought merely for the sake of personal satisfaction. There must be earnest work to accomplish anything important, whether it be brain work or physical labor, and it is well to remember that brain work is the harder of the two. And the changes effected by ideas are just as real facts as compost heaps or brick and mortar.

The first step toward a successful career, and it is a very important step, is making up your mind what you want to do. A strong purpose in life comes as near as anything can to insuring success. If you have a definite object in view, know exactly what you want and care enough for it to make everything else bend to that purpose, you are tolerably sure of reaching your end sooner or later. Sometimes the most direct road is impossible, but as the old saying has it—"All roads lead to Rome." A firm will carry one to the goal by a very roundabout road. There is a compensation in the struggle by which character is strengthened, even at the cost of delay. Headway is lost, but still advance is really made, as when a vessel tacks to catch the wind. It is never worth while to be too much discouraged by unfavorable circumstances; even when they seem the worst, a strong will and a clear head will get the better of them. It may be that only a little patience or perhaps a good deal of patience is needed. The moment is sure to come when the way will open to a determined purpose.

There are two quite different courses open to every young person who has a definite object in view, as the special aim that is to give direction to a successful career. One presupposes what we call "advantages"—important help from others at the outset; the other course demands entire self-reliance, and is generally accepted as a matter of necessity. One boy is sent to school and college and supported by his father through a long period of training and preparation, and enters a profession when his education and personal expenses have cost him quite a little fortune. Another begins, perhaps, at 12 or 14 years old, to pay his own way by downright hard work, and has to earn every inch of advantage for himself. I doubt if the chances are, in this country at least, in favor of the boy who has most done for him. There are no worse failures than are made by many of our rich men's sons, and the plucky boy who is determined to succeed, learns the secrets of success as he goes along.

"Self-reverence, self-knowledge, self-control,  
Are the three hinges of the gates of life  
That open into power every way."

The boy who makes his own way becomes more sure of himself. He tests his knowledge and his ability at every step, and

learns that if he rises it must be because he deserves to rise. He should have a high opinion of himself, but only as he does his duty. He should be his own master, but only to follow the true ends and uses of life. He has a good chance of learning the most important practical questions of life, which is to know what you can do, and then do it.

Where every step is fought and earned, there is less risk of attempting what you cannot do than in the case of those favorites of fortune who are encouraged to strive for the high prizes of life while all their actual wants are supplied. But on the other hand, there is serious danger of making one fatal mistake—the work which you can do and must do to begin with is slighted. That never answers. Where work of a low order has to be taken up, it always pays to do it as perfectly as it can be done. If it is worth while to do a thing at all, if the doing it really belongs to you, it is worth while to throw yourself into it and do your very best. It is often best to take the very first chance that offers, no matter what it may be, determined to do it so well that the next thing will be a higher and more responsible kind of work. Prove your ability, not by talking about something else than you believe you could do, of more value, but by the unusual excellence of your actual work. Thoroughness and intelligence will tell in every kind of work, if they are actually applied to the case in hand. There is always a demand for better work; it is the one thing that is wanted in every occupation of life. The boy or girl who does it, who raises the standard of the actual result produced by putting into it higher personal qualities, is certain to rise. Sometimes a better opening comes almost immediately; sometimes it comes slowly, but it is sure to come.—D. H. R. Goodale, in Country Gentleman.



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PROF. O. W. MILLER.

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ESTABLISHED IN 1868.

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Electros must have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.

All advertising intended for the current week should reach this office not later than Monday.

Every advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders.  
KANSAS FARMER CO., Topeka, Kas.

The statement comes from Ishpeming, Mich., that the shipments of Lake Superior iron ore by lake this season had reached nearly 6,000,000 tons up to last Saturday, with a month of navigation yet in prospect for the season. This far exceeds the estimates of production made last spring, and yet ore is readily taken at Cleveland at prices slightly above those of two months ago.

Thomas J. Shearman, in the November *Forum*, tells the wealth of each of the seventy richest Americans—the Astors, the Vanderbilts, the Rockefellers, Leland Stanford, Jay Gould, and others, and a calculation showing that the United States are practically owned by less than one in every sixty of its adult male population, and that there is greater concentration of riches here than in any other country.

A Boston dispatch, under date the 24th inst., conveys this information: The report of a traffic agreement between the Union Pacific and Chicago & Northwestern railways was confirmed at the Union Pacific office here to-day. The agreement is for ten years. The agreement establishes a line via Council Bluffs to be known as the Chicago, Union Pacific & Northwestern line. The entire systems are parties to the contract, except in the case of the Kansas division of the Union Pacific, which at no point connects with the Northern Pacific.

Under date October 24, inst., a New York telegram says: The plan for changing the constitution of the American cotton seed oil trust and merging it into a new corporation company, was today made public. Under its provisions the new company will issue \$21,000,000 stock and \$11,000,000 in 5 per cent. bonds. The new securities will be exchanged for outstanding certificates. The present holders will receive 25 per cent. of the face of the certificates in new bonds and 50 per cent. in new stock. All of the property of the present trust will be transferred to the new company.

## INTEREST--REDEMPTION.

Our comments on the letter of Mr. Bowman a few weeks ago called out a good deal of criticism from persons engaged in the business of lending money. They insist that the policy of the *KANSAS FARMER* in "going outside its proper province" to discuss financial questions is ruinous to the best interests of the State. This week we have a very long communication from Mr. Seabrook—so long that we have no room for comment. Next week we will present our side, and if the discussion is to be continued further, correspondents must be brief.

## THE KANSAS SUGAR INDUSTRY.

The *KANSAS FARMER* congratulates the people of the United States in general and the farmers of Kansas in particular on the successful beginning of the sugar industry in this State. That sugar exists in sorghum cane was known thirty years ago and proved in Missouri and several other States; but that it could be profitably extracted in large quantities had not been satisfactorily demonstrated three years ago. In 1887 the diffusion process was tested, last year its complete success was established and this year's experience but confirms the record, so that now it is beyond question. This is the third season of successful sugar-making in Kansas by that process at the Parkinson sugar works in Bourbon county, near Fort Scott.

But we are not dependent on the diffusion process alone for making sugar certainly and profitably. Within the last thirty days another, and as we believe, a cheaper and simpler process has been tested with perfectly satisfactory results. It is known as the "roasting" process, discovered by A. J. Adamson, of Nemaha, county, this State, some years ago and patented in 1884. It was not until this year, however, that his designs and plans of machinery and buildings were so perfected as to justify extended operations. Last spring the *KANSAS FARMER* published a brief outline of Mr. Adamson's roasting process, with its origin and history up to that time, and some time afterwards announced the formation of a company to apply the process on a large scale in southwestern Kansas. In June last the American Sugar Company, with O. B. Hamilton as President, A. J. Adamson as Vice President, Wm. K. Palmer, Secretary, and M. J. O'Meara, Treasurer, began work on a plant at Minneola, in the western part of Clark county, Kas., on the line of the C., R. I. & P. (Rock Island) railroad, and the machinery was set in motion about one month ago when some sirup was made. Rains and other matters incident to the first movement of new and untried machinery delayed operations a good deal, so that it was not until last week that they began to make sugar regularly, and a telegram to this office conveying the news moved the writer hereof to go and see the thing done.

The Rock Island road—splendidly equipped, by the way, with new and elegant coaches, with smoothly running trains in charge of courteous officers, traverses a magnificent region in Kansas stretching away southwest 350 miles from Topeka, peculiarly well adapted to the growth of sorghum cane. There are now four sugar plants located along this line besides the one which we are about to describe. The Minneola works are situated half a mile north of the village, a few steps west of the railroad track, and they consist of several large buildings with attachments and their contents. The buildings are all of wood, substantially constructed, resting on solid masonry. These are the dimensions: Main building, 36x60 feet, 3 stories; all building, 18x30 feet, 2 stories; boiler and engine room, 28x74 feet, 1 story; boiler and engine ell room, 16x24 feet, 1 story; well house, 10x10 feet, 1 story; cane shed, 32x70 feet, 1 story; barrel house, 28x82 feet, 1 story; sirup cellar, 26x80 feet, 1 story.

The engine is fifty-horse power, the well is four feet in diameter and nearly 100 feet deep, "sheet water" being found in a gravel stratum at that depth. The quantity of water needed to supply the works when running on full time—twenty-four hours a day, is about fifteen gallons per minute, or 900 gallons an hour—540 barrels a day, and this well affords plenty.

We have no cuts to illustrate any part of the work, but if the reader will add just a little mind-sight to the following descriptive words, he will have

about as perfect a conception of how the "roaster" looks and operates as he could obtain by looking at the best picture of it. First imagine two rows of small brick piers three feet apart—the rows three feet apart and seventy feet long, the piers two feet high and eighteen or twenty inches apart in the rows. These piers are for the roaster to rest on. The roaster is a long, low, nearly flat oven four feet wide, six or eight inches high inside and seventy feet long, all made of cast iron perforated on the top with numerous holes for the escape of gas, smoke, steam, etc. Before going any further, get the form and dimensions of that oven fixed in the mind. If it will assist any, look at the top of a long dining table—seventy feet long, with a hollow six-or-eight inch top (a little crowning) with holes in it laid over the top, so that, looking in at the opening at one end you look through a long channel as wide as the table—say four feet wide, eight inches high in the middle, six inches high at the sides, with inch-holes scattered plentifully all along in the top, and seventy feet long. Set that on the brick piers properly adjusted so that the sides shall rest evenly and equally on the two rows, every pier bearing its proper proportion of the weight. Looking at the structure in that form you observe a seventy-foot space between the rows and also a space of say eighteen inches between the piers. Now build a brick covering for this, resting on a solid stone wall; build the sides some distance—say six inches out from the piers so that there will be an open space between the wall and the piers all the way along, and continue the walls up over the top of the roaster in an arch, at least four inches above the iron, so that there shall be an open space four to six inches all along the sides and over the top of the roaster. But do not close up the ends. Then look in at one end of the oven and you can see through to the other end along the top of the roaster and along the sides as well. If a fire were started at one end under the roaster, between two end piers, it is easy to see how heat would be conveyed through the whole length of the open space (furnace) and not only through that, but also out between the piers along the sides and up all over the iron roaster. And that is what is expected to be done when everything is ready for work. A smoke-stack is to be put at one end of the furnace, which will afford draft for the fire which is fed at the other end, the flames operating not only under the roaster, but on the sides and all over it.

The reader is doubtless ready to inquire how so long and flat and hollow a casting as that roaster is can be made and put on the piers. It is made in pieces, each two and a half feet long—that is, two and a half feet the long way of the roaster. It requires twenty-eight such pieces to make the seventy feet, and they are so shaped at the edges as to be readily adjusted to one another and on the piers.

Take some plastering lath and place them, parallel to one another, six or eight inches apart, and fasten them in that position by means of two wires at each end, and continue the process until you have a picket fence 235 feet long—the fence laid down flat. A contrivance very much like that, only not quite so wide, is made of iron, and instead of wire fastenings, the slats are riveted on links of a flat chain an inch or so wide, so that when ready for operation the slats are carried forward by an endless chain movement. This is to be carried through the roaster on little rollers at the sides, running over a roll at the other end and brought back on bearers below, and the ends are joined; so that when the roaster is in operation this slat-endless chain work passes continuously through from one end to the other, carrying cane. But instead of fastening the ends of the carrier so that

when so fastened the whole length will be only twice the length of the roaster with a little more room for play, it is made ninety feet longer so that it may be extended forty feet out from the feeding end of the roaster and moved on an open wooden frame corresponding, to dimensions to the roaster—height, width, etc. This extension is to afford room and opportunity for men to place cane on the carrier as it passes over the wood frame before entering the roaster.

At the other end of the roaster and about five feet from it the crusher is placed, which is an ordinary cane mill with three iron rollers twenty inches in diameter and thirty inches long. The carrier is extended far enough beyond the roaster to cover this five feet, and when the cane which has been carried through the roaster appears in this open space, it is there adjusted, if it needs any adjustment, as it passes on and directly into the crusher. It is intended to have the machinery so adjusted that the cane shall be about seven minutes in passing through the roaster. The shafting and gearing, the wheels, drums and pulleys are so arranged that one power and one handling puts the cane from the feeder in the cane shed through the roaster and into the mill; then the crushed cane—bagasse, is carried away, passed through a drier and dropped in the boiler room convenient for the firemen, for this is the only fuel used at the factory. [As the work is now done, the bagasse is carried into a receptacle with movable bottom and high enough for a cart to be driven under. The bottom is opened, when the bagasse is caught in the cart and hauled a few rods away, dumped on the ground, scattered and let lie in the sun a few hours, when it is raked and carried to the firemen, where it is pressed for their use by a hay-press. This round-about method of getting the bagasse to the firemen will be abandoned after this year, and the carrier process above described will be substituted.]

Let us start the machinery. Coal is necessarily used to start the first fires and to keep them going during the first half day's run of the first year; after that the bagasse is all the fuel needed, and when the works are run all the time there will be a surplus of bagasse, which can be baled and used for fuel in stoves or furnaces, or for steam boilers in other classes of establishments. We say *fires*, for there is one for every boiler and one for the roaster. A fire place—a furnace, is made at the feeding end (on one side) of the roaster. The fire is kept going under the roaster until it—the roaster—is very hot—red hot, indeed. Cane is headed and piled in the cane shed convenient for the feeders, two of whom are required for the work. The machinery running and the roaster hot enough, the carrier is started, the feeders spread the topped cane on it evenly and it is carried into the roaster where the leaves and shoes are burned off, the stalks softened and about 25 per cent. of the water in the cane is evaporated, the steam and gas passing out through the holes in the top of the roaster, and the hot soft cane passes directly into the mill where it is crushed so completely that there is not enough juice left in it to be worth mentioning. The crushed cane smokes as it leaves the mill and the juice is so hot that it boils on the rollers, then drops into a tank and is pumped to the third floor, having a temperature ranging about 150° when it reaches the defecator, where it is purified, the remaining acids neutralized, and then evaporated and handled two or three times until it is in thick sirup and put in boxes on wheels and let stand until it becomes "mush sugar, when the sugar is separated from the sirup by means of a centrifugal—a machine revolving at the rate of 1,600 revolutions a minute. Sirup is heavier than sugar, it is therefore thrown out through perforations on the rim of the



machine, while the sugar, which is lighter, is left inside.

As to the full effect of roasting the cane all that need be said here is that some chemical changes in the juice which, by the usual processes are effected after the juice has been extracted from the cane is, by the roasting process, effected in the stalk before the juice is extracted, and in addition to this, the cane is so much heated that gums and other impurities are largely removed or neutralized and the cane stalks are so much softened that about all the juice is extracted by passing them through the ordinary roller mill.

The aggregate cost of this Minneola plant was about \$85,000, but it could be duplicated for \$30,000, for this being the first effort a good deal of work was done which can be lessened or avoided in future building. And then, a great deal of money can be saved by ordering large quantities of the needed machinery instead of just one set as had to be done in this case.

When the works are running on full time, thirty-five hands are required for the two reliefs, twelve hours each, and this makes up the entire expense account, for the fuel costs nothing. The capacity of this plant is 150 to 160 tons of cane daily, and if coal only were used for fuel, twenty-five tons at least would be required daily—twenty tons for the boilers and five to ten tons for the roaster. Coal in southwest Kansas is worth at least \$4.50. All this is saved by using the bagasse, which the engineer and firemen assured the writer is quite as good as coal for fuel, and it is clean—the smoke which issues from the stacks being white.

Ground which will produce thirty-five to fifty bushels of corn per acre in Kansas will produce eight to twelve tons of sorghum cane to the acre—say an average of ten tons. One ton of good cane will yield 100 pounds of sugar and twelve gallons of molasses. Say such a factory as this runs seventy days during the season and averages 125 tons of good cane, the output would be 875,000 pounds of sugar and 105,000 gallons or 2,625 barrels of molasses. That would be an extra good run, much better than any Kansas factory has yet made. The Fort Scott works last year turned out 400,000 pounds of sugar, and will not exceed, if they equal that amount this year. Many things as weather, accidents, sickness, etc., operate to prevent continuous running on full time. Bad roads interfere with the delivery of cane, and long continued rains have a like effect. It is not safe to count on more than 75 per cent. of a full run under the best circumstances.

This is a good place to correct an impression which our article of three weeks ago made on some minds. We stated, on the authority of Mr. Adamson, that a good roasting plant could be erected for \$5,000, and supposed our language was plain enough to convey the idea that a \$5,000 plant would necessarily be very small, and could be relied upon for only a very small return. President Hamilton, who knows where every dollar of the \$35,000 which were put into the Minneola plant went, assures us that a 100-ton plant cannot be put in place, fully equipped with substantial and perfect machinery, guaranteed to do good work, for less than from \$22,000 to \$25,000. His opinion is that a \$5,000 plant would not be worth building, if the object be to make sugar for the market. We did not intend to be understood as saying that a plant which would not cost more than \$5,000 could be made to produce large quantities of sugar; it would serve the purposes of a few families to make their own sugar and a little to spare. It will do "good work," as we said, but not very much of it.

The writer saw every one of the processes above described at the Minneola works, and he brought home with him

samples of roasted cane taken direct from the roaster, bagasse taken fresh from the crusher, mush sugar from the wagon, and dry sugar from the centrifugal. There can, therefore, be no room for doubt about the successful operation of the works. But the cane is very poor, some of it not worth working, and the best of it not above 7 per cent. in sugar, when it ought to be 12 to 15. Mr. J. Geo. Lumelius, the chemist, had made numerous analyses and tests and found none of the cane going more than a fraction above 7 per cent. First-class cane averages 12 to 15. The poor quality of the cane is easily accounted for. In the first place, the seed from which the crop grew was mixed. On examination of the head piles near the cane-shed, we found scarcely one head of pure seed. Much of it resembled broomcorn, some of it rice corn, and there was a general mixture of various kinds of sorghum—Chinese, African, Amber, Orange, etc. In the second place, most of the cane was grown for feed and not for sugar, and that which was grown for the sugar mill came from seed planted in June, at least a month too late, and it was caught in the most needy stage by the drouth of July and August. The stalks are small, the shortest spaces between joints being at the upper end of the stalks instead of at the lower. The average length of the headless stalks is less than four feet, and the color is more like that of broomcorn than of pure sorghum. This condition of cane makes black sirup and dark sugar. A process which gets sugar out of such cane will surely not fail on a good article.

And this brings us to the most important part of sugar-making—the growing of the cane. If sugar is not in the cane, no process can get any out of it. Broomcorn has no sugar in it—at most not enough to be worth anything in practice. The same is true of all the other corns allied to sorghum. But pure sorghum has sugar in it, sugar in paying quantities, and we now have appliances to get it out successfully and profitably. The first thing to be done, then, is to grow good cane, and that cannot be done from poor or mixed seed, nor by untimely planting or careless culture. Good soil, good preparation, good seed planted in season, good cultivation and good care and attention all through the season, will insure good cane, and then, and then only, can we safely expect good sugar in large quantities. Let the farmers and the factory men unite in collecting pure seed, and let us all study best methods of growing the cane. The field is practically unlimited. Profitable sugar-making is now within reach of the people. The experience of the next few years will bring existing processes down to the lowest cost. Congress and the State Legislature will lend substantial encouragement until the industry is permanently established. We need sugar-makers and practical chemists. Let them be preparing for the work which is soon to be ready. The harvest is ripe but the laborers are few. There is no danger of glutting the market with sugar, for it would require more than four thousand factories, each producing one million pounds of sugar annually to supply the quantity now used by the people of the United States, and the demand is increasing at the rate of 4 per cent. a year. Let us take hold of the work earnestly but judiciously and not begin before we are ready. Let us be sure we are right, then go ahead. Good soil, good seed, good farming, good processes, good machinery with competent men to run it, and first-class men to manage the business affairs.

There is good demand for stock hogs in Indian Territory.

Eternal diligence is the price of success to the farmer.

#### BUREAU OF ANIMAL INDUSTRY.

On recommendation of Senator Plumb Mr. H. A. Heath, of the KANSAS FARMER, has been appointed by Secretary Rusk to represent the live stock interests of Kansas in the Bureau of Animal Industry. Mr. Heath's special fitness for this important position will be recognized by the people, for no man in the State is better qualified in that respect.

His duty will be to collect facts in relation to the animal industry within the State. This includes all classes and breeds of domestic animals raised on farms for profit. He will be expected to report on horses, cattle, sheep and swine and to furnish details which will be helpful in making up the general report for the country at Washington. The range of inquiry will include the breeds, the kind or class of grades produced, with description, and also a statement as to how the farms are managed, what crops are raised as adjuncts to stock-raising, the manner of caring for, feeding and sheltering the animals. He desires information as to the kind of stock of each breed most in demand, the places where the stock is marketed and the selling price of the animals at different ages. He wishes to make a statement from a business point of view, giving the cost of production and the profit or loss on the transaction, taking into consideration the cost of feeding and care; also what changes might be made to increase the profits. He expects to give a statement of the local advantages for each branch of the animal industry as well as the local disadvantages to be encountered and such other points of importance as will best illustrate the condition and needs of the live stock interests of Kansas.

#### THE WHEAT GROWERS' CONVENTION.

The Wheat Growers' convention was held, pursuant to call, in Central Turner hall, St. Louis, October 23d and 24th inst. It was called to order by Hon. Walter N. Allen, president of the Farmers' Federation, who delivered an address, urging organization on the part of farmers. Ex-Governor Robinson, of Kansas, was chosen temporary president, and J. P. Limeburner, of Kansas, secretary of the Farmers' Federation, served as temporary secretary. The permanent organization was effected by the selection of Hon. Norman J. Colman, of Missouri, as president; Hon. Walter N. Allen, of Kansas, vice president; Z. J. Wilson, of Minnesota, secretary, and J. P. Limeburner, of Kansas, assistant secretary.

Mr. Robert Lindblom, a commission merchant of Chicago, addressed the convention the morning of the second day, urging co-operation on the part of farmers and advising them to sell their wheat just as they buy their groceries—in small quantities and at different times. He was followed by Colonel Coleman, who devoted considerable time to a discussion of the tariff, arguing that high tariff duties are responsible for many of the farmers' woes.

Mr. Blue, of Kentucky, chairman of the committee on resolutions, read a series of resolutions which set forth that the farmers were the hardest workers and most economical class in this country; that their business is unprofitable; that they were in debt to the amount of half the farm value of the United States, and are yearly growing poorer; that this state of things does not exist in other callings, where men amass colossal fortunes with but small labor and capital; that as a result of their poverty their children grow up in ignorance, and their wives are carried by hard labor into early graves; that they recognize the price paid for their products in foreign markets fixes the price at home, and that certain foreign duties must also be paid before their products can go into such markets, therefore they resolved to petition Congress and the President of the United States to make such reciprocity treaties with those foreign nations to whom the farm surplus is shipped as will cause the removal of foreign customs and duties from farm products, thereby causing higher prices for our exported farm surplus and in-

creasing the price at home; that Congress take such action, either by the passage of laws or the repeal of existing laws, as will destroy existing monopolies and trusts, and prevent the formation of others; that to the end of securing farming implements cheaper the present laws imposing a duty on such implements be repealed and the raw material entering into their manufacture be admitted free; that they are more interested in the realization of these objects than the success of any political party, and that copies of resolutions be furnished the President and Secretary of State of the United States.

The resolutions were warmly received, although animated discussion followed in which politics figured plainly, and the resolutions were adopted by a large majority.

Mr. Blue, of Kentucky, then stated to the convention that the committee on resolutions had an additional report to present, which was read by Mr. Hall, as follows:

WHEREAS, We, as wheat-growers and farmers of the Mississippi valley, in delegate convention assembled, realizing our individual feebleness and the great importance of unity of action for our own safety and protection as a class, be it therefore

Resolved, That we now proceed to a permanent organization of the Inter-State Wheat Growers' Association by an election of an Executive Board to be composed of two members from each State and Territory included in the Mississippi valley, whose term of office shall be two years; and

Second—That said members of the Executive Board shall meet before the adjournment of this convention and organize by the election of a president and secretary, to be known as the Executive Board of the Inter-State Wheat Growers' Association of the Mississippi valley.

Third—That said Executive Board shall have power to call annual or quarter annual meetings as within their judgment may seem best.

Fourth—That said Executive Board shall meet quarterly on the first Monday in January, April, July and October at such place as the board may designate, and may have adjourned and special meetings, fixing time and place.

Fifth—The duty of said Executive Board shall be to examine crop reports furnished by the statistician of the Farmers' Federation, inquire into the possibilities of new and foreign markets, advise as to production and to have a general supervision over the agricultural interests of the Mississippi valley and the Pacific States.

WHEREAS, A large portion of the delegates to this convention are feeders and raisers of cattle and swine and other products as well as wheat-growers; therefore be it

Resolved, That the said Executive Board, together with the Executive Boards or heads of departments of the Farmers' Federation shall have power to advise relative to price that all farm products should be sold for in the markets of commercial centers in the Mississippi valley.

Sixth—That this Inter-State Wheat Growers' Association shall be composed of one member from each county in the respective States and Territories in the Mississippi valley, and that said members shall be elected by the wheat-growers and farmers of their respective counties for a term of two years and shall by virtue of said office or election become a shipping agent of their respective counties.

Seventh—That said Executive Board of the Inter-State Wheat Growers' Association may have such salaries as may be determined by the wheat-growers' convention of the Mississippi Valley, said salaries to be paid quarterly out of the money received on commissions, such revision and modification as shall be made from time to time by the Executive Board of the Farmers' Federation.

WHEREAS, For the want of proper facilities for holding and otherwise properly caring for our wheat we are compelled to market the same as soon as we threshed, thereby to some extent depressing the market; therefore, be it

Resolved, That we recommend our brother farmers, when and where practicable, to build joint stock elevators for their own use and benefit, and, further, we believe that another cause of the disaster to the wheat-growing industries of America lies in what is known as bearing and bulling the market and, therefore we respectfully request our Congress to pass an Inter-State law making it a felony for any man or company which he or they do not own at the time of sale or offering for sale.

WHEREAS, There is a growing belief that the farmers and other wealth producers do not obtain an equitable share of the results of their toil and that the farms and homes of the country are very largely under mortgage; and

WHEREAS, Exact knowledge on this subject is of great importance in the study of the economic questions of the day; therefore, be it

Resolved, That Mr. Robert P. Porter, Superintendent of the Census, be respectfully requested to collect the data to show in the next census what percentage of the people in this country occupy their own farms and homes and what percentage are tenants; and of those who occupy their own farms and homes, what percentage have their property free from debts; and of the farms and homes which are under mortgage, and what percentage of the value is so mortgaged and the gross amount of mortgages.

Resolved, That the Secretary of this meeting be requested to transmit a copy of these resolutions to Mr. R. P. Porter, Superintendent of the Census, and the Hon. John W. Noble, Secretary of the Interior, Washington, D. C.

The resolutions were adopted without division and the committee retired to form an executive board and elect permanent officers.

The committee returned and reported that they had selected Hon. Norman J. Colman as permanent President, with the privilege of naming his own Secretary, and that the following gentlemen constitute the Executive Board:

Missouri—N. J. Colman, M. S. Hall.  
 Kentucky—W. L. Scott, A. D. Noe.  
 Minnesota—E. H. Murphy, P. A. O'dell.  
 Oregon—Calvin Cole, Geo. Gibson.  
 Illinois—D. B. Green, J. T. McCaffrey.  
 Tennessee—N. O. Walker.  
 Ohio—H. W. Sargent.  
 Kansas—Walter N. Allen, Governor Charles Robinson.  
 Indiana—J. A. Coates, D. A. Epperson.  
 Provision was made for filling vacancies on the committee and extending its work to include all the States and Territories. W. N. Allen, M. S. Hall and R. B. Glover were appointed a committee to draft a constitution and by-laws. Colman's Rural World was selected as the official organ of this association.

**Horticulture.**

**What Should the Farmer Do to Protect Insectivorous Birds?**

Read at the session of the Farmers' Institute and County Horticultural Society, October 5, 1899, by N. P. Deming, Lawrence, Kas.

How perfect are the laws of the divine nature! Each living thing upon this earth has a work which only itself can do, and each has a given instinct of what this work is, and a given power to perform this work. And how evenly balanced are nature's laws! One living object preys upon another, so that none will predominate, and each depends upon another for its livelihood.

Some insects obtain their living from fruit and grain fields, and if having no check, would soon destroy our crops. But nature has provided a remedy for this. There are certain birds that prey upon these injurious insects, causing their number to be greatly diminished. Now, should these birds be destroyed, the insects would increase and soon overrun our orchards. Many men and boys shoot these birds merely for sport, food, or adornment, therefore, nature over-balanced, the insects predominate.

What shall the farmer do to protect these birds?

First, obey the laws for the protection of game.

The country has enacted laws prohibiting the hunting of friendly birds, and prescribes punishment for the violation of same. Every individual should know and obey these laws.

The State Horticultural Society has done a noble work in fixing these. Chapter 115, session laws 1886.

**SECTION 1.** It shall be unlawful for any person or persons, at any time excepting as hereinafter provided, to catch, kill, trap, shoot or ensnare, or to pursue with such intent, any wild bird except the wild goose, duck, hawk (excepting the harrier), crow, blue-jay, snipe, curlew, plover, piper, bittern, heron, crane and wood-pecker.

**SEC. 3.** It shall be unlawful for any person or persons, at any time to shoot, hunt or pursue after any wild game upon the occupied or improved premises of another, or upon any traveled or public road that adjoins such occupied or improved premises, without having first obtained permission or consent of the owner or occupant of such occupied or improved premises.

**SEC. 5.** Any person found guilty of violation of any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof before a Justice of the Peace shall be fined in a sum of not less than five nor more than twenty-five dollars for each and every offense, and costs, together with the attorneys' fees of ten dollars, and shall be committed until paid.

Second, allow no hunting on your place. Can this not be done otherwise, have the Sheriff appoint a game-keeper, who shall have authority to arrest any one whom he shall find hunting on forbidden ground.

Third, protect and encourage the birds.

Put boxes around in the trees for the building of nests. The blue bird, wrens and various other birds will build nests in boxes. Protect dry trees where the wood-pecker has its nest. Teach the boys that the killing of these birds is the means of increasing the insects. Do not allow them to rob their nests, or destroy the birds with guns or sling-shots.

It seems a pity that our friends, for such they are, should fall victims to the folly of thoughtless people.

I speak in behalf of the birds; let us contrive some plan for their protection; let us put our energy in this line, for the surest, best and quickest way of ridding our orchards and grain fields of the small insect pest.

**Setting Trees in the Fall.**

The principal objection to setting out trees in the fall is the damage that is often done through the winter by thawing and freezing. If, however, the work is to be done, care must be taken to have the soil well prepared. Plow well, and harrow until in a good tilth. In digging or preparing the places for the trees, be sure there is plenty of room for the roots, so that they can be spread out evenly and naturally.

The soil should be well loosened up in the bottom. If manure is to be applied around the trees, care should be

taken to incorporate thoroughly with the soil. It is not a good plan, where it can be avoided, to have manure come in direct contact with the roots of the trees, unless it be compost. Keep the roots moist and see that they are not, or have not been, injured by frost. Spread them out evenly and fill in with dirt. After the roots are well covered, tramp down well, so that the soil will come in close contact with the roots. Fill up well around the stem of the trees.

A good plan is to make a mound around the tree, as this will not only aid to protect from injury by thawing and freezing, but be a help in preventing mice from doing injury.

Good drainage must in all cases be furnished. Never allow water to stand around the roots of any kind of fruit plants. The surest plan of avoiding this is to provide good drainage in the fall.

After the ground freezes, a good mulch should be put around each tree. Old straw, bagasse, or corn-fodder, are all good materials. As this is applied to keep the soil at as even a temperature as possible, rather than as a protection, it will be best not to apply too early. Wait until the ground freezes hard, and then apply.

Protection must also be given against rabbits; and this should be applied early—generally when the trees are set out—in order to lessen the risk.

A plat should always be made of the orchard in setting out trees, so that in case labels should get lost there will be no danger of the names of the varieties being entirely lost. If the work is carefully done, the trees mulched in good season, and properly protected, full-planting will succeed fully as well as spring; but considerable loss is often occasioned by carelessness in this work. —N. J. S., in *Prairie Farmer*.

**Peach Rot and Peach Blight.**

In the September issue of the "Journal of Mycology," published quarterly by the section of vegetable pathology of the United States Department of Agriculture, Dr. Erwin F. Smith contributes a paper on "Peach Rot and Peach Blight," embodying the result of his observations in Michigan, Maryland, Delaware, and other peach-growing sections of the United States. The loss from peach rot is often enormous, some years amounting to nearly the entire crop. At all times it is considerable. In 1888 on the Delaware and Chesapeake peninsula the loss during one week amounted to nearly half a million dollars. The loss this year was also serious.

The disease is due to a parasitic fungus which produces many small ash-gray tufts on the discolored surface of the rotting fruit. These tufts consist principally of spore dust, which is carried by animals, washed by rains, or blown about, and causes the rot to develop in sound peaches whenever it falls upon them under proper conditions. The most favorable conditions for the germination of the spores and the rapid spread of the rot are hot and moist weather.

Dr. Smith finds that this fungus also causes a very characteristic blight of the twigs and branches. In rainy seasons this is quite apt to occur, especially if the rotting fruits are allowed to remain upon the tree. He also finds that the fungus lives over winter in the decayed fruits, and in this way is reproduced year after year. In the spring these dry, wrinkled fruits, which have been left upon the earth or still cling to the branches, swell and soften under the influence of repeated rains, and produce a new crop of spores exactly like those of the previous season. The practical importance of this discovery is very great. Could the blighted twigs and rotted fruits of one season be entirely destroyed the fungus would disappear and the rot with it. The more nearly complete this removal of in-

fectious material can be made the safer will be the succeeding crop. During the growing season the fungus produces innumerable spores and spreads its infection very quickly. For this reason, all rotting peaches should be removed from the trees and buried or burned, as soon as discovered. This can be done during the picking season without much additional expense; but it may frequently be necessary to do it before the fruit is ripe, if the grower would save any portion of it in a marketable condition. *Finally, not a single rotted fruit should be allowed to winter over.* All must be destroyed. If fruit-growers would unite and follow this method systematically for a series of years, the losses from peach rot would be reduced to inconsiderable proportions. These remarks apply also to the rot of plums and cherries which is caused by the same fungus, known technically as *Monilia fructigena*.

In the same issue, Mr. Clarence M. Weed, of the Ohio Experiment Station, summarizes a series of experiments on prevention of potato rot (*Phytophthora*) by use of the Bordeaux mixture. This he sprayed upon the foliage four times during the growing season—May 28, June 6, June 29, and July 16.

Four varieties were treated and the rot was sufficiently prevalent to make the experiment decisive. The blight appeared in the experiment field about the middle of June and did serious damage for the next six weeks. The sprayed vines showed much less injury, remaining green after the others were dead, while at harvest the difference in the yield of tubers was enough to many times cover the cost of treatment. In brief, the total treated area yielded 320 pounds 7 ounces of tubers, three-fourths of which were marketable size, while a similar untreated area produced only 274 pounds 4 ounces, about three-fifths of which were marketable. This is equivalent to a difference per acre of 62.2 bushels in favor of the treatment.

The tubers on the treated portions were also much freer from scab. The author concludes that a large proportion of the injury done by potato rot can be prevented by spraying the vines with the Bordeaux mixture, and says that by adding London purple the same treatment will answer for the Colorado potato beetle.

To satisfy a probable demand from parties especially interested in the subject matter of the two papers referred to above, a special edition of each has been published separately from the Journal in which they appear and either of them will be sent free on application to Mr. B. T. Galloway, United States Department of Agriculture, Washington, D. C.

**Home Nursery Company.**

Our readers have undoubtedly noticed the significant advertisement of the Home Nursery Co. and Fruit-Growers' Exchange, of Normal, Ill. Their system of supplying nursery stock at wholesale prices on the membership plan is meeting with popular favor everywhere.

One of the purposes of the Fruit-Growers' Exchange is to give to the customer or member, direct, the benefit of the wholesale rate, doing away with the middlemen; therefore a small membership fee is charged which entitles the member to all the benefits of the Exchange for two years. The estimated saving on a sample order which at old price would cost \$17, or under this new plan \$9.65, making a saving of \$7.35.

This institution has been established long enough to cease being a matter of experiment. As to the character and responsibility of the general manager, Mr. W. H. Schureman, is beyond question, judging from the strong indorsements which we have received regarding him, notably among them are the following: From H. C. De Motte, Su-

perintendent Soldiers' Orphans' Home, Normal, Ill., and for several years one of the publishers of the KANSAS FARMER, writes us as follows, regarding the general manager of the Home Nursery Company: "I am personally acquainted with Mr. W. H. Schureman, of Normal, Ill., and I regard him as a reliable, honest business man in every respect. His present business standing is excellent." The next is from the Secretary of the Missouri State Grange!

I had the pleasure of paying a visit to the Home Nursery Co. at Normal, Ill. My visit, though brief, was sufficiently lengthy and comprehensive to embrace within its purview everything of importance connected with its object. It gives me pleasure to say that I found the Home Nursery fully up to my expectations; as also to every representation made by the manager, Mr. W. H. Schureman. In company with Messrs. Schureman, Geo. Ball, Treasurer of Illinois State Grange, and G. A. Griggs, Steward of above, we drove over the company's fine and well-kept nursery, and noted the thrifty and varied stock therein. I never saw a better stock of trees, nor a nursery kept in better shape. The company is amply prepared to make good its every guarantee, and any one making an order may rest assured of receiving stock true to name and of the best quality. The Fruit-Growers' Exchange, originated by Mr. Schureman, is co-operative pure and simple, and it is to be hoped that the Patrons of this State will follow the example of those of Illinois and adopt this plan of purchasing their nursery stock.

The Illinois State Grange has already given the plan its unqualified indorsement, and tree-planters are availing themselves of its advantages. Those who contemplate the planting of any kind of trees, plants, bulbs, etc., should procure a certificate of membership in the Fruit-Growers' Exchange, and thereby get their supplies at lowest wholesale rates. Any one desiring to see a nursery with the best of stock and conducted with the most perfect system should visit the Home Nursery, at Normal, Ill. For information address W. H. Schureman, Manager, Normal, Ill.

Respectfully yours, A. S. SMITH, Secretary Missouri State Grange.

At the St. Louis fair the Home Nursery Company had one of the most interesting and complete exhibits, that attracted universal attention, and for which they were awarded the first premium of \$50.

Full particulars of the Home Nursery Company and Fruit-Growers' Exchange will be given upon application to the general manager, W. H. Schureman, Normal, Ill.



**MANLY PURITY AND BEAUTY**

CUTICURA REMEDIES CURE SKIN AND BLOOD DISEASES FROM PIMPLES TO SCROFULA.

NO PEN CAN DO JUSTICE TO THE ESTEEM IN which the CUTICURA REMEDIES are held by the thousands upon thousands whose lives have been made happy by the cure of agonizing, humiliating, itching, scaly, and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared for its external use, and CUTICURA RESOLVENT, the new Blood Purifier. Internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c.; RESOLVENT, \$1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

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**CATARRH HAY FEVER CATARRH DEAFNESS**

**A NEW TREATMENT.** Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been discovered which permanently cures the most aggravated cases of these distressing diseases by a few simple applications made (two weeks apart) by the patient at home. A pamphlet explaining this new treatment is sent free by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.

**FAT FOLKS** using "Anti-Corpuience Pills" lose in lbs. a month. They cause no sickness, contain no poison and never fail. Sold by Druggists everywhere or sent by mail. Particulars (sealed) 4c. WILCOX SPECIFIC CO., Falls, Pa.

A FEW NOTES.

Probably not half the farmers give lime in any form to their fowls. Those who do not can hardly expect the fowls to be particularly generous to them in the supply of eggs, or in thickness of shell on those they do furnish.

With the strictest utilitarian management few things in the country landscape are prettier than the blossoming or fruiting orchards, and a little taste and skill in arrangement will make the fruits a decided adjunct of the pleasure grounds.

The Poultry Keeper says: The theorist—for that is all he is—who first advised poultrymen to feed sulphur to fowls ought to be made to swallow a pound a day. It causes the birds to easily take cold. The throat disease is caused by exposure to dampness and draughts, the sulphur inducing the difficulty.

The proper feeding of calves is a question that should be carefully studied. Judging from results, very few do so. Cold milk should never be fed. To make up for the butter taken out of the milk in the shape of cream, some supplementary feed should be given with the skim-milk. Linseed, oil cake, cottonseed meal, bran, oats and peas are all good.

A great many persons have tried spraying orchards the past year with arsenical poisons for the destruction of insects, and all report good success in killing them, says Orchard and Garden. The only trouble reported was in the burning of the foliage, by having the mixture too strong or putting it on too heavy, the latter owing often to the fact that the machinery used was not the best. If the spray is too coarse, or if put on so that the solution will hang in drops on the leaves, the result is that the atmosphere dries up the water and there is too much poison on the edges of the leaves, and harm follows.

The Elixir of Life

Is agitating the public mind at the present time, but we would remind the public, especially those who contemplate a trip to Chicago, St. Paul, Minneapolis, or anywhere else in the east or north, to be sure and travel over the Chicago, St. Paul & Kansas City railway, celebrated for magnificent equipment, fast time and punctual service. Write for rates, time tables to any agent of the company, or to W. R. Busenbark, Gen'l Pass. Agent, Chicago

Vandalia and Pennsylvania Line.

The Only Dining Car Line Between St. Louis and New York.

Commencing with train No. 20 of Wednesday morning, October 16, and daily thereafter, the Vandalia and Pennsylvania Line will run on this train, which is otherwise known as the "Pennsylvania Special," leaving St. Louis at 8:10 a. m. and arriving at New York at 4:00 p. m., next day, elegant Vestibule Dining Cars, serving all meals between St. Louis and New York.

These cars are regular dining cars in which meals are served at a stated price. They are not "Buffet" or "Cafe" cars. This is positively the only line that runs a regular dining car out of St. Louis to the East. Breakfast served immediately on leaving St. Louis. Ticket office, 100 North 4th street, St. Louis.

The Handsomest Train in the World

Leaves Union Depot, Kansas City, every day at 8 p. m. for Chicago and Eastern cities. This train is the Pullman Vestibule Express that has created so much talk among travelers, and is recognized by all as the completest, safest and most comfortable train in the world. The service in the Dining Cars is remarkably good and constitutes a strong attraction for people who are fond of the good things of life. A select library for the use of passengers, properly appointed smoking accommodations and handsome Sleeping and Reclining Chair Cars (free) are in this train, which is lighted by electricity and heated by steam. A competent electrician accompanies each train to attend to the lights and signals. It connects in Chicago with the new Fast Express trains on the Eastern Lines, which all leave Chicago after 10:00 a. m.

H. A. BONN, Western Pass. Agent, 812 Main street, J. J. BYRNE, Kansas City, Mo Ass't Gen'l Pass. Agt., Chicago.

Spokane Falls New Line.

The Union Pacific Railway, having completed its line to Spokane Falls, Washington Territory, is running its trains direct to that point, thus forming the most desirable route from the East on account of its Pullman Palace sleeping cars, Pullman Dining cars, and Free Pullman Colonist Sleepers.

Spokane Falls is situated in the Palouse country and is the distributing center for a section of the Northwest, the resources of which are unlimited. As an illustration: 50,000 bushels of wheat have been raised from 1,000 acres of land. Another feature of the country greatly conducive to the raising of crops, is the rainless harvest, no rain falling while crops are being harvested. Many desirable farms may yet be had in this remarkably productive region on reasonable terms, and a more favorable opportunity for procuring a farm cheap will not soon present itself again.

For pamphlets descriptive of the country, or for rates, time tables or maps pertaining to the Union Pacific Railway apply to your nearest Ticket Agent, any Agent of this company, or the undersigned. E. L. LOMAX, Gen'l Pass. Agent.

The Popular Line

To the East is the Burlington Route (Hannibal & St. Joseph R. R.). The service by this line has been constantly improved until it has reached a degree of excellence surpassed by none, and equaled by few. The Burlington's "El" is probably the finest and most popular train running between the Missouri river and Chicago, being a solid through Vestibule train of Pullman Sleepers and Free Chair Cars. Leaving Kansas City, Atchison and St. Joseph after supper, the passenger arrives in Chicago at 9:15 in the morning. Having taken breakfast on one of the Burlington's World-renowned Dining Cars, he is ready for the day's business, or in ample time to make all Eastern connections.

For the convenience of passengers from Kansas City the "El" takes a Dining Car out of Kansas City on which East-bound passengers are served with a supper which is equaled by few hotels.

The Burlington's St. Louis line, though comparatively new, is becoming better known and growing in popular favor every day, until it bids fair in the near future to be the favorite line between the Missouri River and St. Louis. This train, consisting of through Sleepers, Chair Cars and coaches, leaves Kansas City, Atchison and St. Joseph after supper and puts the passengers in St. Louis for breakfast, and ample time to make all connections.

You are also requested to bear in mind that the Burlington (Kansas City, St. Joseph & Council Bluffs R. R.) is the only line running through Pullman Buffet Sleepers between Kansas City and St. Joseph and St. Paul and Minneapolis. This is the short line between Kansas City, St. Joseph and Omaha. Through daily trains with Sleepers and Chair Cars.

In whatever direction you travel be sure your tickets read over the Burlington Route, thereby insuring yourself the greatest amount of comfort, with the least expense of money and time.

Write for information, circulars, etc., to H. C. Orr, Gen'l S. W. Northwestern Pass. Agent, 900 Main St., Kansas City, or A. C. DAWES, Gen'l Pass. & Ticket Agent, St. Joseph, Mo.

The Northwest.

There is no part of the United States that affords for the pen of the descriptive writer such a field as the great Northwest, with its illimitable prairies, endless lakes and mountain scenery, said by experienced foreign travelers to be the finest in the world; its wonderful and beautiful twin cities, St. Paul and Minneapolis, situated on the Mississippi river, called rightly the "Father of Waters." The latter city is known far and wide as having within its borders the largest flouring mills in the world, and both of them being noted for their wonderful growth, financial soundness and credit. Two beautiful cities and a fit ending to a charming ride in luxurious vestibule compartment trains over the Chicago, St. Paul & Kansas City railway. Money, experience and strict attention to business have in a short time made this line one of the leaders of the Northwest. A ride over this route, whether the traveler is on business interest or a seeker after pleasure, is long to be remembered. The greatest desires of the traveler are secured in the Chicago, St. Paul & Kansas City railway, viz: comfort, safety, and an arrival at destination on schedule time. The officials in the offices are men of experience in catering to the public, and consequently courteous to all. The employees of the road and in the trains are careful, polite and attentive to the wants of their patrons. Full information in regard to routes of the Chicago, St. Paul & Kansas City railway promptly furnished at all times upon application personally or by letter to W. R. Busenbark, General Passenger and Ticket Agent, Chicago, Ill.—Illustrated World, Sept. 14.

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BEST HOME-GROWN TREES. Choice Fruit and Ornamental Trees of real merit for the Western Tree-Planters. Also best Fruit and Flower Plants. Water-proof. Samples by mail, 10 cents each; \$5 per 100, by express. A. H. GRISSA, Drawer 28, Lawrence, Kas

Hart Pioneer Nurseries

Established 1865. 460 Acres. Full line of Nursery Stock. Forest Seedlings for Timber Claims and Apple Trees for Commercial Orchards a specialty. Large Premium for planting forest trees in spring of 1889. Treatise on cost and profit of apple orchard, free on application. Good salesmen wanted.

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Fifty thousand Apple Trees, 4 to 6 feet; thousands of Cherry, Plum, Peach, Pear, Blackberries, Evergreens, Ornamental Shrubbery, etc. Prices low. We sell direct to the farmer and save him the agent's commission. Write for free price list. W. H. LITSON, Jr., Nevada, Mo.

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Established in the county in 1869. For the coming fall and spring, we present a full line of nursery stock for the market. We have a large surplus of 1, 2 and 3-year apple trees; 25,000 1-year Concord grape vines—No. 1; 8,000 of other varieties, by the 100 or less—Kivira, Drucut, Amber, Catawba, Warden, Niagara, Ives, pleplant by the 1,000; 750,000 No. 1 hedge plants. Everything at hard-time prices! Send us your list and let us give you rates. Write for price and variety list. WM. PLASKET & SON, Lawrence, Kansas.

379 FRUIT TREES VARIETIES Vines, Plants, etc. Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for catalogue. J. S. COLLINS, Moorestown, N. J. 1889. Mount Hope Nurseries For the Fall of 1889 and Spring of 1890, we call attention to our IMMENSE STOCK of Nursery Stock in all its branches, especially of Cherry and Pear Trees, Standard and Dwarf. This is native stock and is worth twice that of Eastern-grown. Wholesale trade a specialty. Catalogue in August. Agents wanted. Correspondence. A. C. GRISSA & SONS, Lawrence, Kas.

MILLIONS OF FRUIT TREES, SHADE TREES, Small Fruits, Vines, Ornamental Trees, Etc. Ten Million Forest Tree Seedlings. One Million Hedge Plants. D. W. COZAD, Box 25, LA CYGNE, LINN CO., KANSAS.

ATTENTION FARMERS! And all who are interested in reform. The Home Nursery Co. AND FRUIT GROWERS' EXCHANGE. Incorporated under the laws of the State of Illinois. Capital \$25,000. NORMAL, - - ILLINOIS. Takes the lead in offering to the general public a system of membership by which the member is entitled to purchase nursery stock at wholesale, direct from the grower, delivered subject to examination and approval before payment is made. This system is fully indorsed by the State Orange of Illinois, and is fully indorsed by this and other States. Every member receives a certificate, for a nominal sum, entitling him to the benefits of the Exchange and a copy of the Home Journal for two years. Also a complete price list, order blanks, etc. Correspondence solicited. Address W. H. SCHURMAN, Manager, Normal, Ill., or J. M. HOLFERTY, Manager Western Dept., Kansas City, Kas.

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We have made arrangements with that well-known book-binding establishment, the Hall & O'Donald Lithographing Co., of Topeka to supply up with a limited number of Farm Records, a blank book nicely ruled, printed and classified with the following contents: Directions and Explanations, Introductory, Diagram of Farm, Inventory of Live Stock, Inventory of Farm Implements, Inventory of Produce on Hand, Cash Received from all Sources, Cash Paid Out, Field Account, Live Stock Account, Produce Account, Hired Help per Month, Hired Help per Day, Household expense, Accounts with Neighbors, Dairy and Fowls, Fruit Account, Notes and Obligations Owning, Notes and Obligations Due You, Interest, Taxes, Insurance, Physician and Druggist Account, Miscellaneous Accounts, Improvement and Repairs, Weather Report, Recapitulated Annual Statement, Tables of Useful Information, etc., etc. This book contains 220 large pages 8x12 1/2 inches in size and is sold regularly at \$2 and is well worth many times that price to any farmer who desires to keep run of his business. We will supply this "Farm Record" and the KANSAS FARMER one year for \$2, the book delivered by express or mail. Or we will send the Farm Record free to any one sending us a club of ten yearly subscriptions and ten dollars (\$10.) Address KANSAS FARMER CO., Topeka, Kas.

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The Standard Record never was more popular than now, nor ever received as many new patrons from among experienced, successful and reliable breeders, during a like period of time as during the past ninety days. Volume No. 3, containing nearly 4,000 pedigrees, is out, uniform in style with volumes 1 and 2, and is rapidly finding its way into the hands of breeders. To stockholders in the Standard at \$3 or the set at \$8, and to non-stockholders at \$4, or the set at \$10.50, always prepaid by mail or express. Standard stock, per share, \$15, including volume 1.

Now is the time to forward orders for recording if you want your pedigrees to appear in volumes 4. Remember that after the next thirty or sixty days you may be lamenting with those that have postponed what might have been done in time, being too late for volume 4. Pedigrees always filed in the order received, and if illegible, will be permanently numbered and a certificate of pedigree, under the seal of the association, promptly returned.

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IRA K. ALDERMAN, Maryville, Nodaway Co., Mo. (Constitution and By-Laws free.)

Patents.

Higdon & Hirdon, Patent Lawyers, solicitors for American and foreign patents, office rooms 55 and 56 Hall Building, Kansas City, Mo., and room 29 St. Cloud Building, opposite United States Patent Office, Washington, D. C., report the following inventions patented for week ending October 23, 1889. [By applying to them at either office a printed copy of any patent here named can be obtained for 25 cents. Send for book of instructions, free of charge]. MISSOURI. Machine belt—Gary B. Smith, Kansas City. Ruling device for slates, etc.—August G. W. Will, St. Louis. Bath-holder—William L. Dempsey, Warsaw. Co-coupling—Orie & Morris Montgomeiry City. Hydrant-valve—Peter Whit e, St. Louis. Clasp—T. Wend W. Noxon, St. Louis. Water-hoist—Alexander Niedrigghaus, St. Louis. Gasoline stove attachment—Charles A. Stockstrom, St. Louis. Photographic vignetter—Aaron W. Clark, St. L. Mo. KANSAS. Combined fence and insect-destroyer—Charles B. Hester, Humboldt. G-me apia-tus—William L. Hofer, Manhattan. Skirt-protecting garment—Elizabeth A. Wood, Topeka. Cylindrical for brick yards—Andrew J. Bates, Sumner, Mo. Fire-escape—Orin T. Welch, Topeka. Combined sheathing and lath—Thomas Mason, Topeka.

Public Horse Sale.

I will make my first sale of fine horses at Fulton, Kas., November 14, 1889, and hope to make one every two years in the future. Among the lot offered will be my beautiful dark dapple gray, Apollo, Jr., No. 3523 P. N. Stud Book, Vol. 4. The grand horse, Kher Konk No. 58, Vol. 1. Canadian Clyd saddle Register. The imported Scotch Clyde, Gil Morehill, No. 2807 in the Scotch Register. The noted thoroughbred grandson of Lexington, Canton Boy, dam Princess. See Bruce's Stud Book, Vol. 1, 2. Fourteen high-grade stallions, colts of above mentioned horses, all young. Also a number of high-grade brood mares. Some cows and heifers of the Short-horn and Durham bred. Don't fail to attend the sale, as it will go, rain or shine, and will commence at 9 a. m. See sale bills for terms or write for particulars. Ed. T. SHAFER, Fulton, Kas.

A Great Offer.

The publishers of the KANSAS FARMER have made arrangements by which we can offer this paper and the Kansas City Evening News together for one year for \$2.60. This is only a half the regular price of the two papers. The Evening News is published every day in the year except Sunday, and is one of the brightest papers in the Great Southwest. It regularly gives all the news from both home and abroad. It is bright, crisp and entertaining. Sample copies will be sent on application to the publishers of this paper. Send in your orders at once.

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Endorsed by the State Alliance as the State Alliance Insurance Company of Kansas. A. F. WAGNER, President. FRED JACKSON, Sec'y., MoPherson, Kas. Boynton Furnaces at D. A. Mulvane & Co.'s, Topeka.

THE MARKETS. (OCTOBER 26.)

Table with columns for Grain (Wheat, Corn, Oats) and Live Stock (Beef Cattle, Fat Hogs, Sheep, Horses) with prices listed for various locations like New York, Chicago, St. Louis, and Kansas City.

Topeka Produce Markets.

Corrected weekly by W. G. Frazier, wholesale produce commission merchant at 213 West Fifth street, Topeka, Kas. Prices subject to commission: Choice Dairy Butter—16@18c per lb. Eggs—17@18c per doz. Spring Chickens—\$2.25@2.50 per doz. Hens—\$2.50 per doz. Turkeys—8c per lb live weight. Prairie Chickens—\$3.50 per doz. Qualls—\$2.00 per doz. Mallard Ducks—\$2.00@2.25 per doz. Squirrels—\$1.00 per doz.

H. GIVEN HAGEN, FOUNT P. HAGEN, FOREST HAGEN, BEN M. HAGEN, THOS. J. HAGEN, LEWIS W. HAGEN.

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SUCCESSOR TO HUNTER, EVANS & CO. CAPITAL STOCK, - - - \$200,000. KANSAS CITY STOCK YARDS, 17 YEARS' ACTIVE EXPERIENCE in Live Stock Commission Business, Market Reports regular and special, and all other information incident to the business, will be furnished FREE by each house. KANSAS CITY, MO. Each Office in charge of a member of the company. UNION STOCK YARDS, CHICAGO, ILL. Correspondence always has prompt attention. NATIONAL STOCK YARDS, ST. CLAIR CO., ILL. DIRECTORS: A. G. EVANS, President. M. F. BUEL, Vice President. G. A. SNIDER, Treasurer. A. T. ATWATER, Secretary. F. W. FLATO, Jr., LIKE T. PRYOR.

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The Kansas City Stock Yards.

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Kansas City Stock Yards Co. Horse and Mule Market.

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Advertisement for the Enterprise Meat Chopper. Includes an illustration of the machine and text: UNEXCELLED FOR CHOPPING Sausage Meat, Mince Meat, Codfish, Hamburg Steak for Dyspeptics, Hash, Hog's-Head Cheese, Chicken Salad, Peppers, Chicken Croquettes, &c., &c. THE MEAT CHOPPER for the PEOPLE. Chops one pound per minute. No. 5, Family Size, Price, \$2.00. Philadelphia, Pa.

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THE STRAY LIST.

FOR WEEK ENDING OCTOBER 16, 1889.

Johnson county—W. M. Adams, clerk.
2 HORSES—Taken up by Charles E. Ducean, in Shawnee tp. P. O. Merriam, September 20, 1889, two dark brown horses, about 12 years old, 15 hands high, weight 1,000 pounds each, both have stars in forehead, one has white hind feet, the other one white hind foot; valued at \$20.
HORSE—Taken up by Ulys Rice, in Shawnee tp. P. O. Merriam, September 20, 1889, one bay horse, 10 years old, star in forehead, weight about 1,000 pounds, no marks or brands; valued at \$15.
Cherokee county—J. C. Atkinson, clerk.
HORSE—Taken up by F. M. Wade, in Ross tp., P. O. Colum us (October 2, 1889, one bay horse, about 16 years old, 5 feet 6 inches high, has collar marks, three shoes on left hind foot, white a little white on right heel, fractured rib on right side; valued at \$25.
Clay county—W. P. Anthony, clerk.
PONY—Taken up by J. B. McGaffin in Blaine tp., September 25, 1889, one bay pony mare, 12 years o.d., branded C. H. on left shoulder; valued at \$10.
Anderson county—S. Durall, clerk.
COLT—Taken up by F. M. She'ba, in Reeder tp., October 8, 1889 one brown horse colt, 4 months old, small white spot on right hind foot; valued at \$15.
Butler county—T. O. Castle, clerk.
HORSE—Taken up by John Gayman, Douglas tp., P. O. Douglas, September 1, 1889, one light sorrel horse, 4 years old, white spot in forehead, three white feet; valued at \$12.

FOR WEEK ENDING OCTOBER 23, 1889.

Johnson county—W. M. Adams, clerk.
HOG—Taken up by J. G. Drake, in Aubry tp., P. O. Spring Hill, September 21, 1889, one black sow, no marks, weight 265 pounds; valued at \$10.70
Ellis county—M. E. Dixon, clerk.
HORSE Taken up by Chas. Froelich in Walker tp., September 21, 1889, one dark bay horse, 16 hands high, white hind feet, small white star in forehead; valued at \$20.
Wilson county—D. N. Willits, clerk.
PONY—Taken up by J. W. Roberts, in Pleasant Valley tp., October 17, 1889, one light brown mare pony, 12 years old, strip in face, brand on left hip which resembles letter A; valued at \$20.
COLT—By same, same time, one bay mare colt, right hind foot white, no other marks or brands; valued at \$25.
Butler county—T. O. Castle, clerk.
2 STEERS—Taken up by John Eckel, Glencoe tp., P. O. Keighly, September 30, 1889, one red and one roan steer, 5 year-olds, branded with half circle on right hip and 1 right shoulder and two half circles on right side; valued at \$20 each.
Atchison county—Chas. H. Krebs, clerk.
MARE—Taken up by O. A. Cleveland, in Grasshopper tp., P. O. Muscotah September 5, 1889, one black mare, white star in forehead, hind ankles white, weight about 900 pounds, about 9 years old; valued at \$75.
Rooks county—J. T. Smith, clerk.
STEER—Taken up by T. W. Reynolds, in Hobart tp., September 13, 1889, one 2 year-old spotted steer; valued at \$18.

FOR WEEK ENDING OCTOBER 30, 1889.

Johnson county—W. M. Adams, clerk.
HEIFER—Taken up by Thomas Dong as, in Shawnee tp., P. O. Shawnee, October 11, 1889, one red and white spotted heifer, 3 years old, no marks or brands; valued at \$15.
MARE Taken up by B. F. Noble, in Oxford tp., P. O. Stanley, October 14, 1889, one roan mare, 12 years old.
MARE—By same, one bay mare, 15 years old.
HORSE—By same, one black horse, 8 years old; valued at \$60.
Atchison county—Chas. H. Krebs, clerk.
CALF—Taken up by Geo F. Randolph in Centre tp., P. O. Pardee, September 23, 1889 one red and white steer calf, crop off left ear, small size, 1 year old; valued at \$12.50.
Nemaha county—W. E. Young, clerk.
STEER—Taken up by G. K. Holt er, in Centena tp., P. O. Woodlawn, October 9, 1889, o a dark red steer, 1 year old, each ear notched on under side, brand on left hip EC or IC; valued at \$15.

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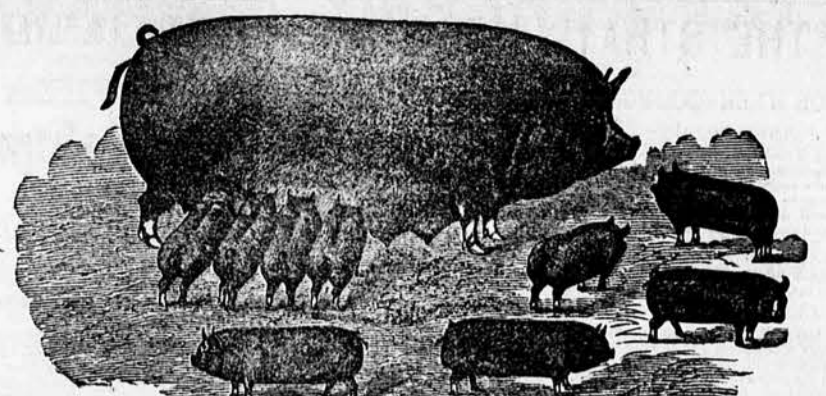
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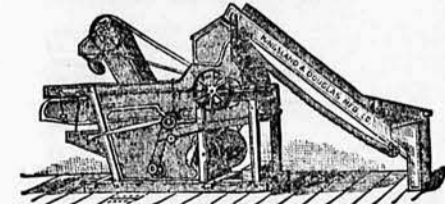
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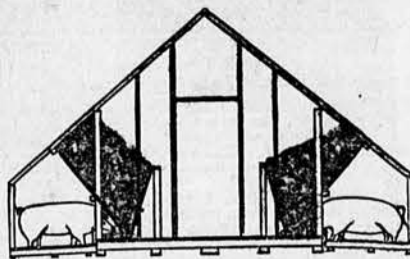


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[Patented Oct. 9, 1888, by a practical feeder.]

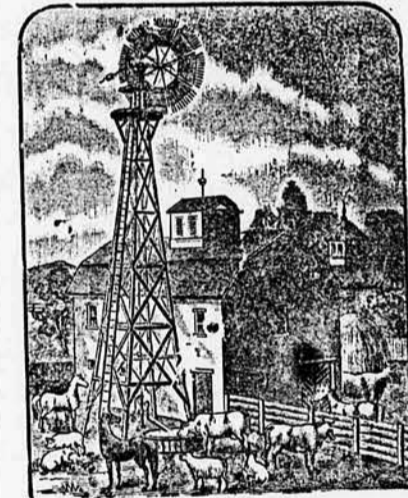
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A Granary and Automatic Feeder Combined  
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For feeding laxative and nitrogenous food,  
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Shorts, etc., with Corn, shelled or ground, dry  
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times, thoroughly mixed through the feed.  
Warranted, when properly used, to save at  
least 20 per cent. of the feed as usually fed.  
Not by the direct saving alone, but mostly by  
reason of increased thrift and rapid and even  
fattening.  
The use of this feeder with a proper supply  
of nitrogenous and laxative food with corn  
will in two weeks' time place the most un-  
thrifty hogs in good condition, if not already  
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guard against cholera. Sanitarium hogs eat  
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The Sanitarium can be built of any desired  
size and feeding capacity, two plans being  
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standard size (being 16x18 feet) will store 900  
bushels shelled corn and feed 150 head of hogs;  
will require for construction 2,000 feet of lum-  
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(being 8x10) is admirably adapted to the use of  
the average farmer, as it will feed seven-  
fifty head of hogs, store 125 bushels shelled  
corn, and require for construction 725 feet  
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It can be readily moved on wheels or skids.

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the expiration of one year from the receipt  
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the regular permit will be issued. In the event  
of the feeder failing to give satisfaction, a  
written agreement to discontinue the use of  
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of any further obligations.

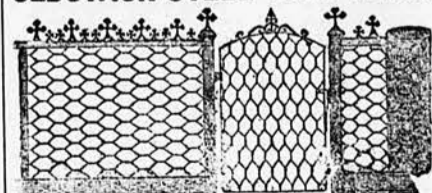
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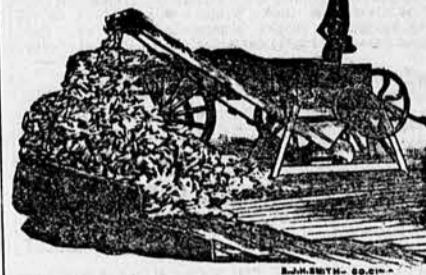


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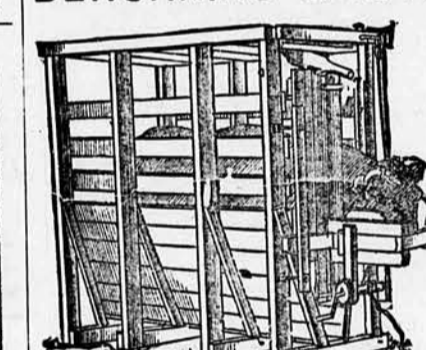
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