

KANSAS FARMER

ESTABLISHED; 1863.
VOL. XXVII, No. 29.

TOPEKA, KANSAS, WEDNESDAY, JULY 17, 1889.

SIXTEEN PAGES.
\$1.00 A YEAR.

TABLE OF CONTENTS.

PAGE 1—AGRICULTURAL MATTERS.—Farm and Field Notes. Why Farmers are Poor. From an Old Friend in Saline. Illinois Weather and Crops. Harrowing.
PAGE 2—THE STOCK INTEREST.—What About Sheep Husbandry? Low Prices of Beef Cattle. Dressed Beef Business at Chicago. Hornless Cattle.
PAGE 3—IN THE DAIRY.—Selling Crops for Dairy Cows. Dairying in Kansas. Management of Incoming Cows. The Busy Bee.—Bee Notes.
PAGE 4—SILOS AND ENSILAGE.
PAGE 5—SILOS AND ENSILAGE (continued). Inquiries Answered. Reservoirs for Irrigation Purposes. Gossip About Stock.
PAGE 6—THE HOME CIRCLE.—Some Day of Days. poem. The Mother's Status. A Word to Correspondents. The Mission of the Rose-bud. Notes and Recipes. Care of the Nails.
PAGE 7—THE YOUNG FOLKS.—The Harvest. poem. Postal Facilities. A Medley of Marvels.—The Making of Flint-Glass.
PAGE 8—EDITORIAL.—A Fool and His Money are Soon Parted. The Dressed Meat Question in Court. A Railroad Trust. United States Crop Reports.
PAGE 9—EDITORIAL.—Words of Eminent Statesmen Concerning Protection. Money, Prices and Business. Legal Definition of Trust.
PAGE 10—HORTICULTURE.—Culture of Small Fruits. About Budding Fruit Trees. Plainsman, Plant a Tree. The Ivy Plant.
PAGE 11—THE POULTRY YARD.—Wattles versus Dakin. Questions Concerning Poultry. Cayuga Ducks. Prices of Good Poultry.
PAGE 12—ALLIANCE DEPARTMENT.—"Objects of the Alliance." Weather-Crop Bulletin. The Markets. Kansas Fairs for 1889. Topeka Weather Report.

Agricultural Matters.

FARM AND FIELD NOTES.

The best way to make a horse gentle and trusty is to be gentle and trusty yourself.

Farmers ought to be very careful with their implements, putting them under cover as soon as they are through with the season's work.

If sweet-potato vines cling to the soil beyond the main root, raise them occasionally and see that no weeds grow along the ridges or in the hills.

Oats harvest is now in progress all over the state. Farmers should see that not a moment's time is wasted in taking care of it after it is cut.

Mowing machines, reapers, plows, and all other farm machinery should be put away clean and well oiled as soon as their work is done for the season.

The young colts should be handled every day and learn to stand quietly hitched in the stable, so that there need be no trouble when weaning time comes.

Rye may be sown any time now for fall pasture. If the ground is clean and soft, it need not be plowed. The seed may be sown broadcast and cultivated in or it may be drilled.

Early planted corn, especially of the early varieties, is now in roasting ears. As soon as the kernels harden stalks should be cut up and put into shocks so that the fodder may be all saved.

These are very hot days to work among corn but if there are any weeds in the corn field left there from the last plowing, remove them at once; it is better to have a corn stalk than a weed stalk.

Every farmer in Kansas who has prairie grass which is reasonably clean of weeds and which he does not need for pasture should make it into hay and ball it for the winter and next spring markets; it is always marketable in winter and spring.

Why Farmers are Poor.

EDITOR KANSAS FARMER:—I feel interested in the question "why farmers are poor." Many reasons can be given, but I will mention only two, which, in my opinion, contribute more to the farmer's poverty than most of the others that can be given. First: Capitalists and syndicates have taken possession of the public lands and are raising cattle by the hundreds of thousands, in fact, on such a scale that farmers cannot compete with them; they have no money invested in land, and very few of them pay taxes; numbers of them are not citizens, nor do they intend to be; when they have made their pile they will leave

the country; they have brought down the price of stock to a point below the cost of production by the farmer. Heretofore raising stock has always been the most remunerative part of farming. Second: Farmers buy at too high prices and sell their produce too low; they allow merchants to put a price on farm products and fix a price on their own goods, and it is only human nature for the merchants to take the advantage. Besides, we have double the number of merchants needed in every town and city all over the country, consequently they have to charge a high percentage on their goods. Another thing, they pay the drummers of wholesale houses from 10 to 12 per cent. for bringing around samples and selling them goods. Then they buy goods on sixty days' time and have to pay interest at 1 per cent. per month. Of course both of these items are added to the price of their goods and the farmer pays the bulk of it, besides keeping them in good style in houses that cost thousands of dollars. The merchants must change their mode of doing business or else farmers will do their own merchandising, and they are now doing this to some extent in an Alliance Exchange here in Winfield. And Congress must stop the fencing up and occupation of the public lands by capitalists for stock-raising purposes. If capitalists had seized the United States mints, coined and circulated \$200,000,000 spurious money, they would not have hurt the industries of the people as much as they have done by flooding the country with cattle. It is a well-known fact that when any cause brings the farmers down, they drag all other industries with them.

ALEXANDER CAIRNS.
Winfield, Kas.

From an Old Friend in Saline.

EDITOR KANSAS FARMER:—While writing on business I will report that I, too, lost a calf, one week ago, that was nearly two months old and died very suddenly. It had been weaned at one week old, was picketed out, drank water at noon, refused milk in the evening, commenced bawling, running around, frothing at the mouth and stumbling over anything that came in its way, was soon covered with perspiration, ran against a building, fell down, had spasms, and was dead in a few minutes. It hadn't been a very hot day so it could have been sun-struck, and no loco-weed in the country.

Farmers here are paying 16 cents per pound for twine and cutting their very heavy crop of small grain. Some are buying new self-binders, believing it cheaper than to have binding done by hand, even if the help could be obtained, which is very doubtful. It looks so grand to see harvesting done so easily and speedily as now—a man riding in a comfortable seat driving a team and the well bound sheaves dropping at regular intervals, men following shocking. What a wonderful improvement has been made in regard to harvesting grain, and very many other things, within the recollection of many persons now living. The writer hereof remembers distinctly well—it was in the summer of 1826—when the first grain-cradle was introduced in the neighborhood where he was born and partly raised—Ross county, Ohio. The people were amazed to see a thing that could take a double land and travel right off from a reap-hook. If any person there had ventured to

predict that any of those present would live to see grain cut by horse-power they would have been thought crazy. But that was accomplished more than a generation ago, and now grain is cut and bound by horse-power. Possibly some are living now who will see it cut and bound and probably threshed by electricity.

A. CHENOWITH.

Brookville, Saline Co., Kas.

Illinois Weather and Crops.

EDITOR KANSAS FARMER:—We were glad to find in your last issue a communication from Prof. C. C. Blake. His forecasts for May and June, to date, both as to precipitation and temperature, have not been verified. In his "tables," page 35, he says: "There

will be no frosts in any part of the United States after the first of May, except in the mountain regions." And the rainfall in north Illinois would be 136-100 and the mean temperature 63 degrees. Now we had a frost here the last week in May. The rainfall was 265-100 inches. The mean temperature of May was 55-13-31 degrees. He has the rainfall for June 85-100 inch. Now the rainfall up to the 17th was 2-92-100 inches. It rains almost every day. The early spring was as he predicted. Much of the corn was planted in April and the first of May; but from the 17th of May till the 6th of June corn made very little growth, owing to the cool, wet weather that prevailed. Early planted corn has a good stand; that planted on new breaking has been badly damaged by worms. Wheat, rye and oats look very promising. There will be an average hay crop. We are frequently accosted with the remark, during this rainy weather, "How is this for a drouth?" Our reply is "There is time enough for a drouth before the season is over." We are highly pleased with the KANSAS FARMER. Of the half-dozen agricultural papers we take, we consider it one of the best.

J. P. B.

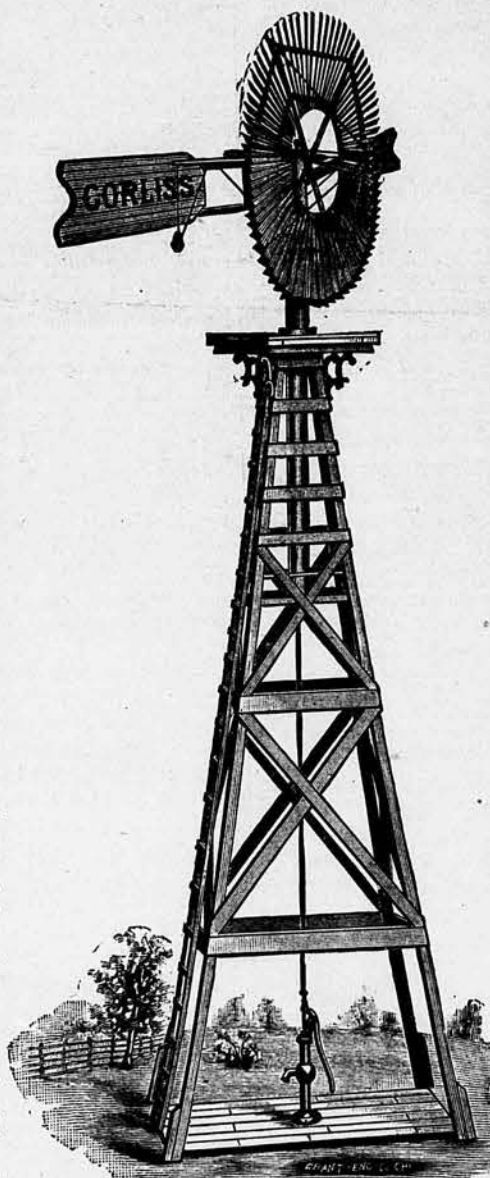
Elburn, Kane Co., Ills.

Harrowing.

EDITOR KANSAS FARMER:—In preparing the soil for fall seeding of both wheat and grass, harrowing will bear an important part in the work to be done. In fact, after the soil is properly plowed the harrow will be one of the best and most economical implements that can be used in the work of properly fitting the soil. The old style of preparing the seed-bed for wheat and grass was to plow the ground shallow first, then harrow the way it was plowed and again crosswise. Then another plowing, deeper and more thorough than the first was given, and the harrow and roller used to fine the soil before drilling, the idea being to get a fine, level seed-bed, as deep as the soil was plowed. But the later plan is to plow deep and thorough as soon as possible after the crops are harvested and then use the harrow to fine the soil and making a seed-bed to the depth of three inches as fine as possible. There are quite a number of different harrows that can be used in different kinds of soil to a good advantage. In preparing a sod for seeding one of the very best that can be used is the disc. Unless the sod is unusually tough two good harrowings, the first given in the same way that the ground was plowed and the next given crosswise, will be sufficient. A common harrow can be used after this, if necessary, to thoroughly fine the soil. On old ground one of the very best is the spring-tooth; two workings will, in anything like an average soil, put it in first-class tilth for seeding. The cutting harrows, like the "Acme," are good in some soils, but will not do as good work in a stiff soil as the disc; at least this is my experience. When it can be done, and especially when the soil is dry and hard, the harrowing should be kept up with the plowing. If allowed to stand even for a few days, the lumps will get harder. If the work is so that this plan cannot well be followed, the better plan is to wait until after a rain. With harrowing, as with other parts of farm work, it will always pay to do thoroughly. Properly managed good service can be done with the harrow, while it is possible to do considerable skimming. Sufficient harrowing and working should be done to not only fine the soil but also to keep down the weeds and volunteer growth that is almost certain to spring up after plowing. And care should also be taken to harrow sufficiently to have the soil in a fine tilth before sowing the seed.

N. J. SHEPHERD,

Eldon, Miller Co., Mo.



THE CORLISS WIND ENGINE.

MANUFACTURED BY THE PEABODY MANUFACTURING CO., PEABODY, KAS. [See Gossip About Stock.]

The Stock Interest.

THOROUGHbred STOCK SALES.

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

JULY 30—Wm. J. Miller, Percherons and Short-horns, Belleville, Ill.
OCTOBER 5—John Lewis, Short-horns, Miami, Mo.
OCTOBER 9—John Lewis, Poland-Chinas, Miami, Mo.

WHAT ABOUT SHEEP HUSBANDRY?

The KANSAS FARMER has all along insisted that the outlook for sheep-raising was as encouraging as that of any other industry. Prices of farm products generally have fallen. Horses and hogs have kept in higher ranges than other classes of live stock, but they are about the only things raised on farms which have not been distressingly low during the last three or four years. As in some measure offsetting this, prices of most manufactured articles except those which are protected by patents, have fallen on an average about as much as those of what farmers raise. Without going into details it has appeared to us that good results would follow a wise management of sheep husbandry by farmers. We are pleased to know that in this we have been in accord with that sterling stock journal, *Breeder's Gazette*, in whose columns the following excellent article appeared recently:

"The wool crop of 1889, now beginning to move toward market, seems destined to not only command a higher price per pound than obtained in 1888 but also to secure a larger aggregate return to growers than they received last year for a considerably larger clip. This appreciation of price results to some extent from recent treasury decisions putting an end to practices nullifying in a great degree the effect of the tariff on foreign wools, raw and manufactured, but is mainly traceable to the fact that buyers have reached the conclusion so long urged by growers, that wools have been inordinately low, and cannot longer be held down to the unremunerative figures ruling for some time past. With a visibly shortened domestic supply, and those mutations in wool values with which all students of the wool market are familiar, and which all prudent growers have learned to properly discount, once more prices show an upward tendency—however, with no promise of an approaching boom.

"But growers must not be allowed to overlook the fact that something more than comparatively fair prices for wool is requisite. Not now, any more than any time during the decade in which transactions have been on a specie basis, is there any safety to prospect for permanent prosperity in wool-growing beyond that secured by due observance of all those economies of production so often insisted upon in the columns of the *Gazette*. The necessity for heavier fleeces of wool, more and better lambs, larger and more desirable mutton carcasses for a given expenditure of labor and consumption of grass and grain will be found as necessary to assured flock profits next year and beyond as they were last year and this.

"Much disappointment has come to wool-growers through their seeming failure to appreciate the changed condition of their surroundings. They seem to have overlooked the downward tendency of prices in all the necessities of life, and the fact that this all-around reduction has been made possible mainly through economies in production unthought of twenty years ago. With everything else raised by the farmer or produced by the manufacturer (except when shielded against competition by patent rights) selling at figures that would have been deemed incredible a few years ago, there is little hope for getting wool out of the category in the absence of some abnormal disturbance of the market.

"Fortunately this outlook is not necessarily discouraging; and what is

better, intelligent, energetic men are now demonstrating the fact that notwithstanding depression in wool prices, sheep can be made to yield as fair returns as any class of domestic animals. A notable illustration is found in Tennessee, where a neighborhood of farmers have organized for the rearing and sale of early lambs, by which means they have succeeded in bringing prices up to a figure which seemed beyond reach a few years ago. One of the requirements of the lamb club is that no animal inferior in size or condition shall be offered for sale. Two selling dates are fixed, and all lambs not ready for the first must be held over. On a fixed date, when the number of eligible lambs owned by members has been determined, announcement of number and weight is made in available city markets, and bids solicited. If the offer is satisfactory the party is notified, all lambs shipped on an agreed day, paid for, and the whole transaction closed at the best prices the market affords, without the intervention of middlemen, and the necessary division of profits. What has been done in this one neighborhood can be repeated at hundreds of other stations throughout the country. There is no secret about the proceedings, no class of sheep not within reach of farmers everywhere. Evenness in size and condition, these the best attainable, and getting enough animals together to fill one or more cars, so that freight charges will be at a minimum, solves the whole problem of prices. The club's first sale this year was 1500 lambs at \$6.50 per 100 pounds.

"Another step outside the long-trodden path has been taken by the wool-growers of Texas, looking to uniformity in grading wools and consequent advantage marketing, both in dispensing with much of the tribute now paid to middlemen and securing for the growers of the more desirable grades the recognition and remuneration to which they are entitled. While this forward step to secure the flock-owners some part of the profit from their business, of which they have hitherto been deprived, is certain to prove more tedious and difficult than the experiment at combination in Tennessee, the *Gazette* is not prepared to pronounce it impossible. If the zeal and intelligence evinced by the leaders in this new departure are not permitted to wane, and can be imparted to a majority of those whose interests are to be subserved, an improvement in existing marketing arrangements may quite confidently be looked for.

"One thing seems certain, too many men are dividing the profits that should go to the flock-owner. Every movement promising a change should be encouraged. Time and energy thus expended promise better results than will ever come through greening under present burdens or hunting a way out of sheep husbandry with no assurances that any better profits can be secured in some other line of business."

Low Prices of Beef Cattle.

A friend sends us a clipping from the *Chicago Daily Market Review* of June 21, from which we quote the following:

"One hundred and twenty thousand cattle for two consecutive weeks in June was something undreamed of. The market simply could not withstand the pressure. Monday's supply was taken at strong prices, but since then there has been a shrinkage in the selling value of shipping cattle of 20 to 30 cents per cwt., and the decline was the most severe where it was the least expected, viz., in choice to extra steers of from 1,400 to 1,600 pounds weight. There appears to be practically no limit to the number of fat cattle ready to be dumped upon the market at a day's notice, and the time when we may confidently count upon a steady and permanent dwindling of the receipts, and a steady and permanent enhancement of values seems as remote as ever. Cattle averaging over 1,400 pounds are now about as low as they have ever

been. They are nearly \$2 per 100 pounds lower than at this time last year. This means a difference of \$30 per head in the selling value of a 1500-pound bullock. Is there any wonder that cattle-raisers are thoroughly discouraged and anxious to go out of the business? Not a fat steer arriving at the yards but is losing for the feeder from \$5 to \$10 per head."

Dressed Beef Business at Chicago.

Last week we presented to our readers an interesting article from the pen of Mr. John Clay, Jr., in the journal of the Royal Agricultural Society of England, treating the subject of cattle-raising in the United States. Below we give some of the figures showing the extent of the dressed beef business in Chicago, prepared by the same writer:

The dressed beef business in America was founded some twenty years ago. A few years later the work was taken up by the late Mr. George H. Hammond, of Detroit, who may be termed the father of this business. He was a man of fine executive ability, and he built up through his energies a magnificent trade. He died, unfortunately, just when he had reached the zenith of his powers. Other parties took up the business, and it has gradually grown (figuratively speaking) from a grain of mustard seed to a very large tree. Mr. T. Eastman, one of the largest live stock shippers in America, branched off into this trade; Mr. Nelson Morris, well known to every cattleman both at home and abroad, also took a hand; in 1880, Mr. G. F. Swift began upon a most extensive scale; while two years later Messrs. Armour & Co. also commenced the business. We have now in Chicago four immense concerns, viz: Swift & Co., Armour & Co., Hammond & Co., and Nelson Morris & Co. These firms, along with Libby, McNeill & Libby, buy a very large proportion of the cattle coming into our market. As facts speak for themselves, we took the liberty of propounding a series of questions to the various parties, and herewith we give the result:

1. Number of cattle killed during 1888? Answers: Swift, 815,031; Armour, 450,000; Hammond, 283,894.

2. Number of cattle slaughtered for dressed beef during 1888? Answers: Swift, 678,896; Armour, 290,000; Hammond, 283,894.

3. Number of cattle slaughtered for canners during 1888? Answers: Swift, 136,135; Armour, 190,000; Hammond, none.

4. Number of buyers employed? Answers: Swift, 10 to 12; Armour, 7; Hammond, 7 to 9.

5. Number of men employed? Answers: Swift, about 4,000; Armour, 5,000; this also includes men employed on pork-packing; probably 3,000 would cover beef employees. Hammond, about 900.

6. Some details as to wages and salaries paid? Answers: Swift, varies from \$1.50 to \$4.50 per day, according to skill of laborers—only the very highest class of skilled laborers getting the higher amounts. Armour, buyers, \$2,000 to \$7,000; expert butchers, \$4 to \$4.50 per day; helpers, \$3; laborers, \$1.75—total cost labor our houses, \$2,500,000; \$700,000 per year for labor on beef. Hammond, wages from \$1 to \$4 per day.

7. Number of cattle sold to the principal cities in the East? Answers: Swift, during 1888, New York city, 117,908; Philadelphia, 60,178; Baltimore, 17,065; Washington, 10,195; Boston, 54,546. Armour, Philadelphia, 16,000; Boston, 30,000; New York and Brooklyn, 26,000. Hammond, 243,463.

8. Average percentage of dressed beef obtained in proportion to the live weight? Answers: Swift, about 57 per cent; Armour, about 57 per cent; Hammond, 55 per cent.

9. Largest number of cattle killed in a day? Answers: Swift, 4,523; Armour, dressed beef, 1,710; canners, 2,300; total, 4,010; Hammond, 1,449.

10. Average number of cattle killed

per day? Answers: Swift in 1888, 2,612; Armour, about 1,600; Hammond, about 900.

11. Average cost of cattle? Answers: Swift, in 1888, \$4.29, dressed beef only; Armour, \$4.25, dressed beef only; Hammond, \$4.13 per 100 pounds.

12. Average weight of cattle? Answers: Swift, in 1888, 1,146 pounds, dressed beef only; Armour, 1,144 pounds, dressed beef; Hammond, 1,206 pounds.

Hornless Cattle.

The general agitation of the question of the advantage to stock-growers of breeding hornless cattle, and the preference of these over horned animals, has become one of great popularity, as witnessed by the remarkable interest in the subject of dehorning cattle, a practice which has been much in vogue for the past year or more in all sections of the West.

That there are many and important advantages to be gained by the stockmen and farmers generally, by growing hornless cattle, hardly any person will deny. But the process of dehorning as generally practiced has numerous and strong opponents, even among those who favor hornless cattle, because of the painful operation and the alleged injurious effect many times upon the animals treated. This fact has led to the seeking out of other methods of removing the horns from the animals, and this has resulted in the bringing out of substances for killing the horn in young animals during the early stages of its growth. These, while probably not absolutely painless, are as nearly so as it is possible for anything to be, and is therefore the most humane, as well as the cheapest and least troublesome method of getting rid of the useless appendages of domestic animals.

The latest agency recommended for the purpose of removing the horn from cattle, is the use of caustic potash applied to the young calf and preventing the growth of any horn, as explained in the following, clipped from another paper:

"Suppose a way should be discovered to make a calf grow hornless at an expense of 1 cent for one hundred calves? That is what we are coming to, and it seems to be here even now. A scientist says: 'A single application of caustic potash prevents the growth of the horn. Caustic potash is simply the pure potash. Get a nickel stick at the drug store and keep it in a bottle so that it will not slack. When a calf makes its arrival, determine whether you want it to be horned or hornless. If you have no use for horns (the calf itself will never have any good use for horns) then take your stick of caustic potash, wrapped up in a paper, in one hand, take the calf between your knees, wet the hair over the horn spots, rub the end of the potash well on these spots and he will grow up a polled Jersey, polled Holstein, polled Short-horn, polled whatever it is.'"

This we believe to be the simplest, most expeditious, if as successful as claimed, cheapest and least painful of any method yet suggested, and is worth a trial.

An agency of this kind merits strong recommendation, as the practice of dehorning by some humane method should be earnestly encouraged. Horns are worse than useless upon cattle as they are only instruments of warfare, which no domestic animal has any business with. A cow or an ox has no more need of horns than a horse has, and they would seem absurd on the latter. And the frequent loss of human life from wounds inflicted by cattle with their horns is sufficient ground for the removal of the horns from all neat cattle, to say nothing of the many advantages in an economical and financial way to breeders of stock in growing hornless cattle. *Richfield (Kas.) Republican.*

From the *Herald of Faith*, St. Louis, Mo., August 10, 1887: "Referring to Shallenberg's Antidote for Malaria, the business manager of the *Herald of Faith* would say, that he gave this medicine a personal trial, and was speedily cured of an unpleasant Intermittent Fever. He then recommended it to F. J. Tiefenbraun, 1915 Papin street, and to police officer Meidenger, at the Union depot, both of whom were cured by it of chills and fever of several years standing. Recently his wife, after a fever of several days duration, took a single dose and was perfectly cured. In view of these remarkable cures, and remembering how much money is spent for quinine, so little to be depended upon, and often so injurious, we can only wish that Shallenberg's Antidote would come into general use."

BOYS!

If you are interested in a business education, that will be worth a fortune to you if taken, write to me, mentioning this paper, and I will send you by mail an elegant illustrated catalogue and beautiful specimens of penmanship free. Address D. L. MUSSELMAN, Principal, Gem City Business College, Quincy, Illinois.

Choice Heifers and Bulls

For sale—A number of thoroughbred Short-horn heifers already bred, also a few choice bulls, on terms to suit purchasers. Address T. P. BABST, Dover, Kas.

See that all nuts and bolts in farm machinery are kept in place and properly adjusted.

BERNHAM'S PILLS cure constipation and nervous illness.

In the Dairy.

Soiling Crops for Dairy Cows.

One of the essentials in dairying is fresh food during as much of the year as possible, and in order to have fresh food for cows in the summer—good fresh food—the dairyman should so arrange the growing of his crops as to have fresh succulent grass every day during the growing season. This can be started by sowing rye in the fall to afford early spring pasture of an extra good quality. Oats sown in the spring early will produce a next crop to follow the rye. Orchard grass, well rooted, will come in during this time in good supply. Early corn—sweet corn, perhaps, would be better—may be sown broadcast or planted in drills near together early as the ground will permit; this will come in immediately after the green oats. By that time red clover will be in its best condition for food. Rye sown in the spring will produce early fall pasture and it may be continued by sowing different plats of ground at different times, say two or three weeks apart, thus insuring a continuance of green rye during all of the fall months.

In addition to this, sorghum, milo maize, Kaffir corn, millet, Hungarian, and other quick-growing grasses may be used by the skillful dairyman in such manner as to have fresh, good, rich grasses always at his command.

In order to preserve the best properties of green grasses for use of the cows during winter, let it be saved in silos. Every reader of the KANSAS FARMER will learn how to do this. We have an article in another place in this week's paper from the pen of Prof. Shelton on this subject. Read it, learn what has been done and what may be done in that line.

Dairying in Kansas.

This year will demonstrate the adaptability of Kansas climate, soil, and productions to dairying. A considerable number of new establishments have been started and the report is favorable from all of them. Probably one of the principal difficulties in the way of successful dairying in Kansas will be found to be in the lack of running water in some portions of the State. This can be remedied by the use of wells and wind pumps. There is no serious trouble about getting water in wells anywhere in the State and at a reasonable depth. In all of the eastern counties wells of excellent water have been made at a depth ranging from twelve to fifty feet, the average will not exceed twenty feet, and in nearly all cases where good water is obtained it is permanent. The writer of this knows of many wells less than twenty feet deep which have furnished large quantities of water continuously during all of the dry seasons of the last three years. With such a supply to draw from there need be no fear on account of water.

The next important matter with many farmers who prefer to do their own dairying would be to procure cool storage. This can be arranged by making a building partly under ground, or more properly speaking, partly below the surface, so that a draft of air may be passed through on a lower plane. A heavy covering which will be sun-proof will preserve a moderately-cool atmosphere in the low basement. Vessels containing water may be placed on the floor so that the passing air may be saturated with water and thus assist in cooling the premises. With the exercise of care, diligence and good business tact, there is nothing in the way of successful dairying in Kansas.

Prof. Alford says: Looking over my records I find that with cows of like age and breeding, those which calved in September and October gave from 800 to 1,000 pounds of milk per year more than those that were fresh in the spring. I also find that the winter milk is considerably richer than that made from succulent pastures of the spring

and early summer, and from one to two quarts less of it is required to make a pound of butter. I estimate that two pounds of butter will bring as much money in winter as three pounds in summer.

Management of Incoming Cows.

The profit from a cow depends very much upon the management for some time previous to the calving. The best cows are always threatened by that usually fatal disease, milk fever, unless care is exercised to avoid the danger. The average cow which escapes this disorder needs equal care to secure the greatest product of milk for the longest time; and in a business dairy where the calf is to be reared, its value will depend upon the manner in which the cow is managed. Docility is a considerable element in the value of a cow, and this is to be looked to as much as a large milk yield. So that there are three important points to be considered—the safety of the cow which, from her large development of udder and her rich milk yield, runs the most risk from the reaction consequent upon the disturbance of her system due to the calving; the judicious feeding of the cow whose system is to be stimulated rather than depressed; and in all cases the training of the calf for its future usefulness. Heavy milkers should be kept on spare diet for at least a month previous to the calving. No grain should be given. Good hay is sufficient at this season. Some cows hold on to their milking so persistently that it is difficult to dry them off; but it should be done at least three weeks before the time expires. It is a great mistake to encourage the flow of milk up to too late a period, for the purpose of beating of the character of the cow. The frequency of milk fever with such cows is nature's protest against this misuse of the animal and the breach of natural laws. The flow of milk should be reduced first by feeding only dry hay, and second by partial milking only, always leaving some milk in the udder, and gradually lessening the quantity taken. If the cow has ever been attacked by milk fever, occasional doses of a pound of Epsom salts will tend to avert inflammatory action which results in this disease. To stimulate the average cow, which is rarely in danger of this kind, the food should be judiciously regulated in regard to her condition. If she is thin, bran mash, or some cut roots with bran, may be given with safety, but in no case should corn meal, and still less cotton seed or linseed oil meal, be fed. Good hay with three or four pounds of bran steeped in warm water will be sufficient as a daily ration. This food for a month previous to the calving will nourish the cow and very much help the calf.

It is wise to separate all incoming cows from the herd a week before the calf is expected. This is easily to be known by the appearance of the cow, and every cow should be watched in this regard. It is not only a barbarity but a strong provocative of trouble, due to nervous excitement, to permit a cow to drop a calf while fastened in a stall, or in stanchions, and it is an inexcusable wrong for a dairyman to neglect his cow so as to let this be possible. It indicates such a general looseness of management as to account for the losses which make the dairy business so commonly unprofitable. For many years my plan has been to have a comfortable, roomy stall in a retired part of the building (such as a tool or wagon house) set apart for this purpose, in which the cow may be either tied or left loose. This stall is seven by nine feet, with a feeding trough and water box, and is made so that it can be seen without opening the door. Here the cow is kept for a few days and well attended to. When the calf appears, it is removed quietly to a distant part of the yard where the calf pens are, and is left alone until the cow is milked, which is in six hours if in the day, or in the morning if the calf appears in the evening. The cow is given a drink of luke-

warm gruel of bran or oatmeal, and the milk is taken from her and at once given to the calf, which is taught to drink it. The absence of the calf is rarely noticed by the cow, which is tied as soon as the calf is removed. If anything is wrong with the milking or the cow, she can be attended to with little trouble, and if any serious difficulty is apprehended a dose of Epsom salts, followed by a dram of tincture of aconite in a little gruel, may be given without delay.

I have never had any trouble, not even in the delivery of the afterbirth, since this plan of isolating the cows and the preparatory attention has been adopted, and have never lost a cow or a calf or had any experience personally in my own dairy with milk fever. But I have seen enough in other dairies to know that troubles of various kinds might have been easily averted had this kind of careful management been in practice—Henry Stewart, in *American Agriculturist*.

The Busy Bee.

Bee Notes.

[From the Western Apian, Placerville, Cal.]

With Italian bees it is quite easy to discern an Italian queen, they stay on the comb much better than the common bees, and do not run like a drove of sheep every time the hive is opened.

Let your aim be to have every pound of your honey first-class. Have it all put up in neat attractive packages; honey poorly put up makes a poor market. Comb honey, as you all know, is sold largely by its appearance, and a poor article, well put up, sells better than a good article poorly put up.

Every one who has a liking for the bee business should be encouraged to take a hand in it. An active man can do well in any business he is qualified to push. There are too many drones in the human hive already. If you think you are suited to the vocation of bee-keeping be sure to select a good location, as a great deal depends on a good location. You should especially look well to the flora of the country.

A good bee magazine is a bee-keeper's best friend. Every bee-keeper in this country should take a bee paper of some kind. I never saw a bee paper yet that did not pay well for a careful perusal. Without it a bee-keeper is working at a disadvantage; he does not know what improvement is made outside his own county, and continues to go in the same old ruts year after year. Not so his neighbor who reads a bee journal; he is on the watch for improvements, new ideas, new inventions, etc. This man will succeed. He has no difficulty in disposing of his honey at a good price. People buying honey always inquire for this man's product.

Who has not watched the honey bee as she goes forth at sunrise to kiss each opening flower, to sip the dews of early morn, and gather the delicious nectar that has been distilled during the quiet hours of night. What is more beautiful to behold than the graceful movements, and curves, that are made on her journey; when she has marked her location and its surroundings, she makes a bee-line to some flowery dell or sweet-scented meadow, to gather her load of honey and pollen. Who has not been impressed by the wonders to be found inside a bee-hive. What well-appointed commonwealths; where each adds to the stock of happiness for all! Wisdom's own forums; whose professors teach eloquent lessons in their vaulted hall! Galleries of art; schools of industry; stories of rich fragrance; orchestras of song! What marvellous seats of hidden alchemy! How oft, when wandering far, and erring long, man might learn truth and virtue from the bee.

Did you notice that fine head of hair at church last Sunday? That was Mrs. B.—. She never permits herself to be out of Hall's Hair Renewer.

California Excursions.

Are you going to California? If so, read the following, and find out how much it will cost you, and what you can get for your money: The *Santa Fe Route* runs weekly excursions (every Friday) from Kansas City and points west to San Francisco, Los Angeles, San Diego and other Pacific-Coast points. The ticket rates are the regular second-class rates—\$35—from the Missouri River the principal California points. Pullman Tourist Sleeping-Cars are furnished. These cars run through, without change, from Kansas City to destination. The charge for berths is remarkably low, being \$3.00 for a double berth from Kansas City to California. The Pullman Company furnish mattresses, bedding, curtains and all sleeping-car accessories, including the services of a porter with each car. The parties are personally conducted by experienced excursion managers, who give every attention to passengers, insuring their comfort and convenience. For more complete information regarding these excursions, rates, tickets, sleeping-car accommodations, dates, etc., address

GEO. T. NICHOLSON, G. P. & T. A.,
A. T. & S. F. R. R.,
Topeka, Kansas.

Colorado Tourist Rates.

With the approach of the summer's heat, many people will seek a "cooler climate." Colorado, with its high altitudes, furnishes an abundance of "climb," and is a favorite summer resort. The *Santa Fe Route* has placed on sale at all coupon ticket offices round-trip tourist tickets, at reduced rates, to Denver, Colorado Springs, Pueblo, and Trinidad. Excursion rates from junction points in Colorado to all mountain resorts. Tickets are good going 30 days; returning, 5 days; final limit, October 31, 1889. Through Pullman Sleepers daily to Denver, Colorado, Springs, Pueblo and Trinidad. Call on nearest *Santa Fe Route* ticket agent for rates and tickets.

GEO. T. NICHOLSON, G. P. & T. A.,
A. T. & S. F. R. R.,
Topeka, Kansas.

"Bally Round the Flag, Boys!"

The Grand Army Reunion to be held at Milwaukee (August 26 to 31, inclusive,) will, in many respects, be one of the most noteworthy of commemorative events. There will be no lack of distinguished speakers. But the most attractive features will be the "tie that binds" men who have fought, starved and bled for a sacred cause, the renewal of old-time associations, the rehearsal of war experiences, and the rekindling upon the altar of patriotism of undying devotion to "one flag and one country." Veterans and their friends will be pleased to know that from all stations on the Chicago, Rock Island & Pacific Railway, on its main lines and branches both east and west of the Missouri river, the price of tickets has been placed for this occasion at one fare for the round trip, while children under 12 and over 5 years of age will be charged only one-half this excursion rate, or one-quarter the regular fare for the round trip. Tickets will be for sale at all principal stations on the Rock Island Route, August 21 to August 28, 1889, inclusive, good for continuous passage to Milwaukee at any time between these dates, and good for return passage, leaving Milwaukee on any date between August 27 and September 5, 1889, inclusive. Holders of such tickets who desire to make side excursions from Milwaukee to points beyond, in any direction, can, by surrendering their return coupon tickets for safe keeping to the Joint Agent at Milwaukee, have them honored to original starting point where ticket was purchased (by proper indorsement), on any date not later than September 30, 1889.

A Summer Vacation.

At this time of year nearly every one begins to think of a summer vacation, or an outing of some kind for a little recreation. For those who desire to visit the summer resorts of the East—Niagara Falls, the White Mountains, Old Point Comfort, and numbers of others, there is no line which offers better facilities or lower rates than the Burlington Route. If the trip is to be by way of Chicago, the Hannibal & St. Joseph's fast vestibule train, "Eli," has no peer; leaving Kansas City in the evening, the traveler takes supper and breakfast on the dining car, arriving in Chicago in time for all connections east. If he desires to go by the way of St. Louis, he leaves Kansas City after supper and arrives in St. Louis for an early breakfast and eastern connections. Both of these trains are luxurious in every respect and equipped with Pullman Palace sleeping cars and free reclining chair cars.

For a short trip there is probably no more delightful summer resort than Spirit Lake, Iowa, or one of the other countless lakes in northern Iowa and Minnesota. Here again the traveler finds he cannot do better than take the morning train of the K. C., St. J. & C. B. R. R., leaving Kansas City at 11:15 a. m., and arriving in St. Paul and Minneapolis next morning for breakfast. From these points he can make direct connections for summer resorts in all directions. This train has one of Pullman's finest buffet sleeping cars through between Kansas City and St. Paul. This also is the train to take for Spirit Lake, but one change being made, and that early in the evening into a through sleeper to the Lake, arriving at destination at 7:15 in the morning. The above trains run daily.

Write for all information, tourist circulars, etc., to H. C. Orr, General Southwestern Passenger Agent, 900 Main street, Kansas City, or A. C. DAWES, General Passenger and Ticket Agent, St. JOSEPH, Mo.

SILOS AND ENSILAGE.

From Bulletin No. 6, Kansas Experiment Station—Prof. Shelton, Director.

The question of fodder-making from corn is intimately associated with that of silaging. If it can be shown that corn forage is equal in value to corn after silaging—that the fodder can be made and handled as cheaply and fed as economically as silage made from the like material—then it is futile to make further argument for the silo; for silaging is an expensive process, and one that goes naturally with intensive farming and accumulated capital in farming. It seems necessary, therefore, in the outset, to consider the question of

FODDER-MAKING

as preliminary to a statement of facts and experiments bearing on the question of silos and silage.

Every practical man familiar with the facts understands that corn fodder in Kansas is a very different thing from the article of the same name raised in New England and the middle States. Here, the corn plant in all its parts reaches a development quite unknown in regions of shorter summers and poorer soils. Moreover, the proportion of leaves and blades (edible fodder) is doubtless much less with the Kansas corn than with the small-growing Eastern sort, due to the habit of the plant in part, and to the whipping action of the blades in our prairie winds. Kansas corn fields are weak in the fodder product for other reasons: the ripening period is a very brief one, allowing very little time in which to cut and shock the corn. The subsequent tying and shocking of the bundles of fodder at the time of husking is always, except on "wet days," a difficult task, due to the nearly always dry and brittle condition of the stalks, and to their bulk. Even when all this has been done with the most painstaking care, a very large proportion of the valuable corn blades will be found to have been crushed and broken and scattered about the base of the shocks, from which it can scarcely be recovered. When we attempt to gather the remnant of our fodder, now literally "stalks," into shape such as to make it water-proof, either by close shocking, stacking, or hauling to the barn, we encounter difficulties, growing out of the coarse, bulky character of the materials, that we have never been able to overcome.

For these reasons chiefly, and because of the cost of cutting up the corn and the added cost of husking from the shocks, we have ceased, upon the College farm, to attempt further to grow corn and fodder in the same field. The same facts have compelled us to look to the silo as a means of utilizing the wealth of vegetation which is otherwise largely wasted in our corn fields.

After we have cut our corn in the best possible state, shocking it carefully and husking with equal care, there is still a very great waste in feeding it, that few farmers estimate. For three years we have, during a considerable portion of each "feeding" season, fed a number of cows, greater or less, upon corn fodder alone, and in various conditions, *i. e.*, chopped into different lengths and fed whole, and mixed with grain in various proportions. Below is given in tabular form our more recent experiments to test this question of the amount of corn fodder "wasted" or rejected by the animals before which it was placed.

[We omit the details, giving only the tabulated summary.—EDITOR]

	Amount fed—lbs.	Total waste, of lbs.	Pr ct. waste.
Fodder uncut.....	540	185	30
Fodder cut in two (2) inch lengths.....	1,258	412	33
Fodder cut in one (1) inch lengths.....	1,252	398	31
Fodder cut in one-half (½) inch lengths.....	1,738	449	26
Fodder cut in one-fourth (¼) inch lengths.....	1,462	340	23
Fodder cut in one-fourth inch lengths and fed with meal.....	528	71	13
Av'ge of all fodder fed.....	7,688	2,390	31

This table is interesting and instructive, albeit to some extent misleading because of the impossibility of stating the exact quality and condition of the fodder.

The table seems to show that the shorter the lengths into which fodder is chopped, the smaller the proportion rejected by the animals; and this, I believe, is generally true of fine fodder of the first quality. That it is not true of all classes of fodder is shown by many of the feeding periods of the table, in which the fodder cut in shortest lengths shows the largest proportion of waste. Moreover, in an experiment made in 1886 we demonstrated that the finer the fodder was cut up the larger the proportion of waste; but in this case the fodder used was coarse and uniformly poor. I am abundantly satisfied from accurate experiments made to test the point, and from a large general experience, that the chief, almost only, value

of cutting fodder is found in the fact that such chopped fodder can be placed in the manger and generally handled much more conveniently than the unchopped.

The addition of meal to the cut fodder diminished the waste greatly without a doubt, although it may well be questionable whether cattle are benefited by consuming a large amount of indigestible, woody fiber to which they have been tempted by a very small amount of adhering meal.

The striking fact is that even with the very excellent fodder used in this experiment, and fed as it was in a tight manger, the cattle rejected 31 per cent. of all placed before them. Consider for a moment what would likely—certainly, I may say—be the case with ordinary, coarse fodder fed on the ground in the field or yard and often necessarily in the mud!

THE LOSS OF CORN IN FODDER MAKING.

There is yet another phase of the fodder question that must not be lost sight of. If we make fodder of any real value the corn must be cut up while it is yet green. At what stage of ripeness the corn plant yields the best and largest amount of fodder has not yet been definitely determined, but all agree that the corn plant must be "green" at the time of cutting. Now the experiments of last season, made at this station, seem to show as conclusively as one trial can show anything, that the loss of corn when cut even slightly green is very great.

This will be readily seen in the following facts, embodied in the last report of the station:

To still further test the question of the best time to cut standing corn with the view of securing the largest yield of corn and fodder, without much reference to varieties, a series of careful cuttings, and afterwards accurate weighings, was made in field E. Here rows of corn exactly equal as to length, and made by thinning exactly alike as to number of plants in a row were measured off on opposite sides of the field. At one side, occupied by a yellow medium dent, four cuttings were made when the corn was in as many different degrees of ripeness. On the opposite sides of the field, occupied by the King Philip sort—a greatly modified flint—five different cuttings were made of corn in as many different stages of ripeness, as explained further on. The results obtained with the yellow dent are stated in double rows, while the statements in reference to the King Philip are given by the single row. The plan was to have adjoining rows (or double rows) cut when the corn was in very different degrees of ripeness, so that any difference in the yield of the different rows would clearly be due to different times of cutting and not to differences in soil. Thus, rows 1 and 2 were cut at the first cutting, 3 and 4 at the fourth, 5 and 6 at the second, 7 and 8 at the fourth again, and 9 and 10 at the third cutting. This plan was occasionally varied slightly, but only when errors seemed certain to result from following it too closely.

First cutting, August 8—Corn in "milk" state.

Second cutting, August 15—Corn in "dough" state.

Third cutting, August 20—Corn in hard "dough" state.

Fourth cutting, August 14 (King Philip)—Corn glazed and firm; September 4 (yellow dent)—Corn hard, stalks drying up.

Fifth cutting, September 4 (King Philip)—Corn hard, stalks drying up.

The corn was shocked as fast as it was cut, and remained undisturbed until it was thoroughly dry, when (October 13) it was carefully husked, and after a few days' exposure to the sun, corn and stalks were weighed with results as stated in the table following:

[Tables omitted, a synopsis being stated below.—EDITOR]

We find * * * in nearly every case that adjacent rows, cut at intervals of seven to twenty days, show variations, with only two or three exceptions, in seventy odd cases almost exactly proportionate to the difference in the time of cutting; the largest yield of the best quality of corn, going with the row cut latest. Indeed, we are plainly taught here that corn continues to improve in weight until the very last—after the blades of the plant have been dried up, and quite likely blown away, and seemingly until the juices of the stalks have been completely sucked up. It is hard to resist the conviction that this cannot be a mere coincidence; that, in short, these figures point to a real principle in the growth of the crop which the farmer cannot afford to ignore. * * * Considering then all the facts—the great labor of husking corn from the shock as compared with "picking" it from the standing stalks, the great difficulty in tying, hauling and stacking or otherwise securing

the fodder crop, and the great waste of fodder in the field and ultimate loss in feeding (which we have demonstrated time and again to amount to 26 per cent. of the stalks)—it is perfectly clear to me that we must raise corn for corn, with no thought of fodder, and corn again which has no higher purpose than the production of fodder. We must, in short, have two corn fields on every farm, receiving radically different treatment, to correspond with the different purposes for which they are cultivated.

This seems to me to state with sufficient fullness the argument against the attempt to get grain and fodder from the same field. The great Kansas staples, corn and sorghum, are unsurpassed fodder plants when grown and harvested with the single object of making "hay." I have come to think, after three years of careful experiment with the silo upon the College farm, that it is a necessary part of the machinery of the corn field. The argument for this view is given in what follows.

SPECIAL VALUE OF THE SILO TO KANSAS.

Corn and sorghum are, and are likely to remain, to Kansas farmers, the principal sources of stock food. With either of these crops cultivated for the sole purpose of fodder-making, and considering them from the standpoint of bulk or quality, two or three times as much stock food can be produced as from an equal area of timothy, clover, orchard grass, or millet. That bulky foods like corn and sorghum may be harvested easiest, cured best and with least loss, and handled with the least waste when their destination is the silo, and when there, are stored in the smallest space, are facts that go without argument with me. Moreover, a crop of rich corn fodder or sorghum is always a possibility in Kansas. In 1874 a magnificent crop of fodder corn bearing ten bushels of nubbins to the acre was consumed by grasshoppers because we had no silo in which to store it. In the drought year of 1887 our crop of sorghum was an excellent one. Last season (1888) we grew a good crop of fodder bearing thirty-five bushels of corn to the acre, the seed of which was planted on July 6. Almost every season, in this section of the State, an excellent crop of fodder may be grown after the wheat crop has been harvested, where the seed has been listed in upon wheat stubble ground.

The expensiveness of ensilage as compared with the common method of fodder-making in the field is often urged by those unfamiliar with it. A comparison of the successive steps necessary in both methods does not, however, show a heavy balance of labor against the silo. In both methods the corn must be cut up and hauled to the barn or feeding place, and the cutting into half-inch lengths is as necessary to one process as to the other. The silaging, too, saves the expensive process of husking from the shock, and the subsequent hauling, shelling and grinding of the corn. In the single item of husking, the silo saves to its owner much more than the increased cost of hauling the green fodder. The overwhelming argument for the silo, in Kansas, is that it furnishes the means by which the greatest of all forage plants, corn and sorghum, may be cut up, cured, and fed in such time and manner as give to the farmer all of value that there is in them. Of course other crops, the grasses, clovers, alfalfa, the non-saccharine sorghums, millet and forages in general, may be used as silage material, but in Kansas corn and sorghum are, and are likely to remain, well-nigh the only silage materials.

THE SILO.

The silo is simply a more or less completely air-tight and cold-proof room or compartment of any nature. It will be made large or small, according to the size of the herd to be fed from it. A large silo is more economically constructed than a small one, and other things being equal, a smaller proportion of spoiled silage will be taken from a large silo than from a small one. Nevertheless I should on no account advise the erection of very large silos, simply because an accident to a large silo means a very large loss in its contents, and besides, a large surface of silage exposed to the atmosphere will in this climate, unless fed out promptly, mold and spoil, often considerably. However large the herd, I should not care to make the silo larger in superficial area than say 30x15 feet. If larger than this, I should certainly divide the silo by one or more cross-partitions. A few figures giving results obtained at the station during the last year may prove suggestively useful to the farmer who is thinking of his first silo. However, we give fair warning that such figures, if taken literally, are most delusive. For example, our herd would quite likely have eaten very much more silage than they did had the season been a cold one, or the

grain ration less, or had the cattle been larger or less comfortably housed.

Our silo No. 2, is, by inside measurement 18'-3" by 13'-3" and 22 feet high. It was filled—eight days having been occupied in the process—with eighty tons of corn silage, omitting a small fraction here as elsewhere. Two days after the filling it had settled two feet. The average weight of each cubic foot of the contents of this silo at that time was a small fraction under thirty-four pounds. Our herd to which silage was fed numbered fifty-six head, all females of four breeds, and ranging from yearling to aged cows. The average daily feed to these cattle, most of which had a small daily grain ration, was nearly thirty-four pounds, or almost exactly a cubic foot of silage as it rested in the silo shortly after filling.

Prof. Samuel Johnson, in the April bulletin of the Michigan Station, estimates that cows of 1,000 pounds will consume a daily ration of sixty pounds of silage. This is considerably more than we have been able to feed. With us only large cows, and those of which extra service at the pail, or in suckling calves, was demanded, consumed a daily feed of sixty pounds of silage and an added grain ration. From outside sources of information, the discussions had at farmers' institutes and the like, as well as from our own experiments, I am inclined to think that the estimate of the consumption of silage per head of cattle, here given at one cubic foot per day, is, with a good quality of silage, and considering herds made up of large and small animals, a very safe basis for an estimate of the size of the proposed silo.

LOCATION OF SILO.

If in the possession of a barn of suitable size, I should prefer a silo erected inside this building to an independent structure, by reasons of cheapness in construction and its usual convenience to the animals to be fed from it. Where the silo occupies a portion of the barn, it should be made to extend the full height of it—from the floor of the basement or cellar to the purline plates. A silo located in a dry bank or bluff side, such that a portion of its height greater or less was beneath the ground, would be most advantageously situated, provided the silage could be withdrawn at the lowest point of the silo. Such a silo would have very decided advantages over one built wholly above ground; it would admit of easier filling, and at a moderate height above ground would give great depth to the silo, which is always an advantage. A silo having a cellar from which the silage must necessarily be hoisted, is wholly inadmissible. The "cellar" portion of the building will ordinarily be constructed of masonry. This should, however, be given a thick coat of cement or plaster, so that the silage is nowhere brought in contact with the stone or brick of the wall.

Our experience with a stone silo has been most disastrous. During the two years we used a silo of exposed stone masonry, our loss of silage must have been nearly or quite 50 per cent. of its contents. Even where this stone work was brushed over with a thick paste of cement and lime, there was found six inches to a foot thick of rotted silage in contact with the masonry. Afterwards the stone work was sheathed over with inch stuff, leaving a two-inch air space between the sheathing and wall. The same silo since has preserved its contents without loss.

Great care should be taken that the location of the silo is such that feeding from it may be done with the least possible outlay of labor. If located in the barn, the silo should be placed as near as possible to the cattle stalls; if outside, it should be given a position adjoining the feed yard or shed, as the case may be. Where the herd is fed in shed or barn, the stalls are likely to be arranged in double tiers, the tiers separated by an alley toward which the cattle are headed. In this case, the silo should be placed adjoining the end of the shed in such manner that the door of the silo will open into this common alley.

CONSTRUCTION OF THE SILO.

The foundation of the silo walls may be a wooden sill slightly imbedded in the ground, but for obvious reasons such a foundation will rarely be used. In making silos as in many other cases the cheapest method is often a very dear one in the end. I advise farmers generally to be extremely shy of the cheap and easy methods of making silage which I see occasionally recommended by amateurs. A nearly air-tight and cold-proof room must be had, and any silo that comes short of this is sure to give the owner a large annual crop of moldy, spoiled silage.

Our practice has been to build a light stone foundation wall, one about 10 inches in the ground, rising no higher than the surface, and about 12 inches thick at the top. At intervals of about 8 feet a bolt of ¼ or ½-inch

iron, threaded at the top and provided with a burr, is built in the masonry. This bolt is made to project above or out of the foundation wall about 3 inches. A foot wide, 2 inch plank which has been previously tarred and bored to match the projecting bolts, is satisfactory as a sill. This is driven down over the bolts to the top of the wall, the corners are halved together, and strongly spiked, the burrs are turned down, and the foundation of our silo is laid.

With a silo 12 feet high, joists 2"x8" set upright every 16 inches are heavy enough; with a higher wall than this I should use 2x10 joists in every case. The walls of the silo must be made strong enough to bear without deflection the great pressure put upon them. If the wall yields to the pressure the silo takes air, and the result is a mass of spoiled silage greater or less according to the amount exposed. With the joists erected and securely "toe-nailed" to the sill and secured by a strong plate at the top, the work of finishing the silo is of the simplest character.

In College silo No. 3, recently finished, the exterior wall shell is composed of shiplap; the inner is made up of two thicknesses of stock boards with one thickness of tarred paper intervening. In selecting materials for the silo wall, care should be taken to avoid pieces with knot-holes, and these much warped or twisted. In boarding up the inner wall shell we have found it cheapest in the end to bring the stock boards to a straight edge with the plane before attempting to nail them up. The tarred paper we put up in horizontal strips, allowing the strips to lap three inches. We have used ten-penny wire nails in sheathing the silo walls, although quite likely 8's would answer the purpose. The two courses of boards should be made to break joints much more completely than is shown in the cut. The top of the silo to prevent spreading ought always to be stayed by a number of cross-ties of plank or wire cable, extending from one plate to the other. The roof of the silo may be made of any materials that will exclude the rain.

THE SILO FLOOR.

Do not attempt to floor the silo with boards or plank. The best and cheapest material for the floor of the silo is common clay, which after having been evenly spread to the depth of three inches should be moistened and worked (puddled) and smoothed with the hoe. One of our silos has a cement floor, the other is floored with clay. For aught that is appreciable to the senses the clay floor is fully equal to the much more expensive one made of cement.

THE COST OF THE SILO

will of course largely depend upon local values of the labor and materials employed in its construction. I am abundantly satisfied that it will be unsafe to calculate the cost of the silo in Kansas upon a lower basis than \$2 to the ton of its contents.

SILAGE MATERIALS.

Any material of value in the condition of hay or fodder is probably suitable for silage. Clover, timothy, alfalfa, millet, Hungarian, cow peas and many other forages have been tested and found satisfactory in the condition of silage. Nevertheless, for reasons stated before, the coarse-growing fodder plants, like corn and sorghum, are sure, in Kansas and generally throughout the West, to be the principal if not only silage crops.

Much is said pro and con of the various sorts of ensilage corn now on the market. With these our experience has been too limited to enable us to offer an opinion. This is certain, that the common dent varieties of corn and the medium-growing saccharine and non-saccharine sorghums are all excellent silage materials. We are strongly of the opinion that in time it will be demonstrated that sorghum is greatly superior to corn as a silage material. We can recommend Late Orange, Goose Neck, and particularly Golden Rod, as being especially valuable for silaging. The sorghums have this great advantage over corn: they are less liable to damage by insects, and they remain green far into the fall, usually until cut by frosts, so that the work of filling the silo may be carried on long after the corn plant has ripened its crop and the stalks have become worthless.

GROWING THE SILAGE CROP.

So far as the corn crop is concerned the tendency in recent years has been strongly in the direction of thinner planting for silage. By many it is maintained that ensilage corn should be planted precisely as though the object was to procure the largest yield of grain of the best quality. I am inclined to think that a like rule holds with ensilage sorghum, and that it should be planted in such a manner as to insure the maximum development of sugar and seed. We plant ensilage corn in drills three and

one-half feet apart, with plants occupying in the rows eight to twelve inches of space. The corn is cultivated and kept clean precisely as corn is ordinarily managed during the growing period. With sorghum designed for the silo we should plant in drills three and one-half feet apart, and grow individual plants in the rows at intervals of six to ten inches. Upon good soil and with fair treatment, corn raised as above will yield twelve to sixteen tons of silage per acre, while the yield of sorghum will often reach twenty tons.

HARVESTING THE CROP.

The tendency has in recent years been markedly towards harvesting corn designed for the silo at an advanced stage of ripeness.

In Kansas it will not be safe to follow Eastern practices in this respect. Here the intense heats and other special climatic influences push the corn crop, when once on the down grade towards ripeness, at a constantly accelerated speed; so that often only a few hours separates the grain which is only "glazed" and that which is ripe to flintiness, and dead and dry in leaf, stem and seed. Moreover, after the corn plant begins to dry up and "fire," the winds act upon the blades and tender parts of the plant most wastefully. For these reasons, and considering the accidents and hindrances likely to arise after the work of filling the silo has fairly begun, this work ought not to be much delayed after the corn is in the early "dough" state.

The simplest and on most accounts best method of harvesting corn for the silo is the common plan of cutting the corn with the corn-knife and gathering it in armfuls, carrying each armful as fast as cut directly to the wagon rack.

It is often necessary to cut the corn and leave it in bunches on the ground hours or even days before hauling. The sweetest and best sample of silage that I have yet seen was made from rather green sorghum which had been cut and left in hundred-pound heaps on the ground during three to five very hot days, before hauling to the silo.

FILLING THE SILO.

Whether the silo should be filled at a continuous operation, or by periods allowing one or two days of rest to follow each day's work of filling, is one of the mooted questions in silage-making. It is argued that the method of slow filling permits free access of air to all parts of the mass of silage, and consequent rapid oxidation and great increase of temperature. This high temperature (140 deg. Fah. and upwards) destroys the germs of acetic fermentation, it is claimed, and thus we have as a result of the slow filling, "sweet ensilage." By others, this theory, and the facts on which it is based, are disputed, and the claim is put forward that sweet ensilage is due to the condition in which the corn is harvested for the silo—well-ripened fodder giving the sweet article of silage, while the green, watery and succulent corn develops a high degree of acidity. In our experience with both plans of filling, the slow method has given what seemed the sweeter silage. I admit, however, that our experience on this point is far from conclusive. It certainly ought not to be a difficult matter for those who have made a study of bacteriology to determine whether a temperature of 140 deg. Fah.—beyond which we have never known the temperature of the silo to rise—is really destructive of vinegar germs.

For practical men this fact remains: we may fill the silo rapidly, or by the slow method, as suits our convenience, with the assurance that no great harm will result in either case. We have used in filling our silo a "13-A" Ross feed cutter having a twenty-four foot elevator. This machine is operated by a ten horse-power engine, which is greatly more power than is really needed. We have usually cut our silage into half-inch lengths, although for aught I know results have been just as satisfactory when the cut was made at one inch, except that the silage cut into inch lengths would not pack quite as closely in the silo as when the materials were cut in smaller pieces.

We have tried treading and packing the silage as the filling progressed, afterward weighting the mass heavily with rocks, and we have filled the same silo without treading, or subsequent pressure of any kind. In the latter case, the silage kept as well and came from the silo, it seemed to me, in much better order than that which had been thoroughly tramped and weighted. In filling, the stream of silage should fall at as nearly as possible the center of the silo, and it is wise to level the mass frequently, treading down the sides and corners, that settling may go on evenly. After the silo is full it may be covered with almost any material that will tend to exclude the air. We have found nothing better than a layer of tarred

paper, covered about eighteen inches deep with green, fine grass, like the aftergrowth of orchard grass, or prairie grass. This caution deserves the attention of every owner of a silo: do not, on any account, after the silo has been sealed up, disturb this covering or the inclosed silage until you wish to feed it. I have had occasion in a number of cases to break the natural seal of the silo, and always have lost heavily, as a result, in spoiled silage.

EMPTYING THE SILO.

The operation of feeding from the silo is usually performed from the door. In feeding it is well to remember that if a silage surface is left exposed to the atmosphere for a number of days, it molds quite rapidly and not unfrequently a considerable loss results. On this account I prefer to feed from the top of the silage, so that more or less of the entire surface can be fed every day. To accomplish this purpose I have planned in the new silo (No. 3) the shoot, over the door of the silo. This consists simply of a 2"x10" spiked on edge securely to the silo, twenty inches from the corner. Twenty-inch pieces lightly tacked to this projecting plank connect it with the adjacent wall, thus forming a 10"x20" shoot which passes through the inner door of the silo. We expect to shovel the silage constantly from the top, emptying the silo through this shoot. As the silo empties, the pieces of shiplap may be removed, thus saving the lifting of silage to the top of the shoot.

Inquiries Answered.

ALFALFA seed is saved from the second cutting, same as red clover seed.

WINE STAINS.—Watch "Notes and Recipes" in our Home Circle for such things.

FARM RECORD.—Books specially adapted to the keeping of farm records are published.

WHEAT DRILL.—We do not know of any drill that will work on first breaking without tearing the sod.

CORN SUCKERS.—It is generally believed that corn suckers result from soil energy produced by the operation of heat and moisture on a fertile soil.

WINTER OATS.—Mr. A. D. Lee, Coldwater, Comanche county, wants the address of any person having winter oats—oats that may be sown in the fall same as winter wheat.

ALLIANCE AND GRANGE.—For information concerning these associations, address B. H. Clover, President Kansas State Alliance, Cambridge, Cowley county, and Hon. William Sims, Master of State Grange, Topeka.

MILLET SEED FOR HOGS.—Millet seed ground and mixed with corn meal and bran makes good food for hogs. If any of our readers have had experience with millet seed used in any way for hog feed, we would like to publish his estimate of its value.

WHAT TREES are they? The trees you describe are probably Ailanthus and honey locust, but you will get the names correctly if you will send some of the leaves to Hon. Martin Allen, Superintendent of Forestry station, Ogalla, Trego county.

GRASS SEEDING.—In Kansas all grass seed ought to be sown in spring and not with grain of any kind. Quantity of seed depends on kind of grass. Ten pounds of red clover seed to the acre is about right, 15 pounds of timothy, 20 pounds orchard grass, 25 pounds of blue grass, and 25 pounds of alfalfa.

FLEAS.—A correspondent wants to know how to get rid of fleas. If you can get them corralled, a dose or two of kerosene will dispose of them. If you can collect a considerable number in old dry straw or hay or grass and set fire to it, that will destroy some. But the best way to be relieved of them in bed at night is to have the bed clothing well aired and shaken in the morning, then bathe the body and change clothing for the night, change in an outer room and leave the clothes there, so as to wear perfectly fresh clothes on the body and sleep in a bed freshly aired and cleaned. This is some trouble in hot weather, but it is not as bad as an army of fleas.

Reservoirs for Irrigation Purposes.

EDITOR KANSAS FARMER:—Enclosed find \$1.00 money order to pay my yearly subscription to your valuable farm paper, which I highly esteem.

While I write I might say a few words, or, rather, ask a few questions, for publication, if interesting in your opinion, to insert in the KANSAS FARMER for its own readers, above my name.

Could not and should not the United States government build reservoirs on the Arkansas river or at its headwaters? First, as we are the leading irrigators of the West, could not the government dam up such cuts as there are at Canon City, Colorado, where the Arkansas river goes gushing through a mountain ridge, and put locks therein to let water run during crop season, thus keep the Arkansas river full of water? Perhaps the D. & M. and A., T. & S. F. railways may not want this done. Then could not the

government find many canon basins on either side of the river that would hold large bodies of water to be let out during crop season, thus give every body water and solve this great question of prior right to water in the river all through the State of Kansas?

We are having abundance of rain and I laid it to the river being nearly bank full, as it has been my observation during my eleven years' residence here that when the river was full we had plenty of rain for crops, etc. Therefore I say, let the reservoir be built quickly and the river kept full of water to evaporate and make rainfall, and there will be no need of irrigation ditches and Kansas will never know another drouth.

We are trying hard to get lower rates on railroads, that our "King Alfalfa" may go to your eastern market and do you good.

H. H. CLEVELAND.

Deerfield, Finney Co., Kas.

Gossip About Stock.

W. A. White, of Plattsburg, Mo., who is so well and favorably known to stockmen, will be in charge of the Fat Stock Show, in connection with the New Era Exposition at St. Joseph, Mo. Mr. W. is the man for the place.

Stockmen, farmers and agents, please notice on our 14th page the advertisement of safety and advertising fence, manufactured by W. I. F. Harden, Hartford, Kas., and then write to Mr. Harden for circular and full description. We believe his patent is something you will find valuable to yourselves.

C. M. T. Hulet, breeder of Short-horns and Poland-Chinas, Edgerton, Kas., writes, in remitting for his advertisement: "I have already sold stock enough through it to pay for it the next five years." He also reports a recent sale of bull calf to a Kiowa county man, also has a fine lot of pigs for the season's trade.

Send for a catalogue of sixty Percherons and Short-horns to be sold at Belleville, Ill., 17 miles from St. Louis, on Tuesday, July 30th. The stock has been raised by Wm. J. Miller, a careful breeder. Also notice advertisement of sale of fine stock to be held at Attica, Kas., by C. S. Jones, on July 28d, 1889. No doubt many fine bargains can be made by our Kansas friends at this sale. Some most excellent registered Holsteins are advertised for sale.

Dietrich & Gentry, of O. tawa, Kas., have favored us with an excellent report of the stock prospects in eastern Kansas. In their letter accompanying same, they say: "Our herd of Poland-Chinas are doing fine—could not wish for better. Have made some very fine purchases which we have added to our herd, and judging from our sales and the reports we received from our customers we will be sold out long before the season is over. Our advertisement in KANSAS FARMER is doing us a great deal of good."

Stockmen and farmers generally are interested in that very useful machine, the windmill. On our first page we give an illustration of a most excellent one manufactured by the Peabody Manufacturing Co., at Peabody, Kansas. Their factory is located in one of the live stock centers of the State, where the company have an excellent opportunity to study the needs of the farmer and stock raiser in the line of their manufacture. They write us as follows: "It has been the aim of the company to manufacture mills that are adapted to this country. The many thousands of these mills sold and erected by us testify as to our success. The Corlies wind engine is made for either deep or shallow wells, and is constructed for long and faithful service. Our facilities for prompt shipment cannot be surpassed." This company is a Kansas institution and, as such, must of course be successful. We believe that those contemplating the purchase of a wind mill will find it to their advantage to correspond with this company, and get their prices and such information as they are ready to give.

Mrs. Belle L. Sproul, Frankfort, Kas., will sell young S. C. Brown Leghorns at way-down prices till September. Write.

Orchards ought to be kept clean of weeds and volunteer grass of every kind. Weeds are escape valves for moisture. No one piece of ground can raise good fruit and good weeds at the same time.

In Summer Days

You can reach the cool and charming resorts of the Northwest, in the new and elegant vestibuled, Family Compartment Sleeping Cars, recently placed in service on the Chicago, St. Paul & Kansas City railway. Round trip tickets at reduced rates. Time two and one-half hours quicker from St. Joseph to St. Paul and Minneapolis than any other line. For further information, address Geo. C. Knocke, Passenger Agent, 122 North Third street, St. Joseph, Mo.

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.

Some Day of Days.

Some day, some day of days, treading the street,
With idle, heedless pace,
Unlooking for such grace,
I shall behold your face!

Some day, some day of days, thus may we meet.

Perchance the sun may shine from skies of May,

Or winter's icy chill
Touch lightly yale and hill;
What matter, I shall thrill

Through every vein with summer on that day.

Once more life's perfect youth will all come back,

And for a moment there
I shall stand fresh and fair,
And drop the garment care;

Once more my perfect youth shall nothing lack.

I shut my eyes now, thinking how 'twill be,
How, face to face, each soul
Will slip its long control,
Forget the dismal dole

Of dreary fate's dark, separating sea.

And glance to glance, and hand to hand in greeting,

The past with all its fears,
Its silence and its tears,
Its lonely, yearning years,
Shall vanish in the moment of that meeting.

—Elizabeth Stuart Phelps.

Sad toiler, weary worker in the field
Of ever-changing life, should it be thine,
When broken with thy load of cares, to yield
To nature and the piping voice of Time;

And rest thee, where the mighty ones have lain,
In the broad bosom of the teeming earth,
Ere thou hast walked the well-allotted time
That thy frail race is given for its span;

Or yet before thou hast accomplished ends
Best in thy sight for the best good of man—
Despair thou not. 'Tis the decree all-wise:
"No thought that has grown into deed of good
Has ever died, or can, or will, or shall."

They soften, and they strengthen, and they build
High stepping-stones for others who will mount
To that high state which is the aim divine:
Do good to others—bless thy fellow-man.

—Percy Shell, Jr.

Out on the ocean whose billows are roses,
While robins, blithe sailors, are piping their tune,
Along down the sunbeams, while angels stand watching,
God launches from heaven the fair ship of June.

—William C. Sheppard.

THE MOTHER'S STATUS.

When I think of the exact and deferential demeanor required of our grandparents toward their parents, I would like to have some of the modern boys and girls contrast their own demeanor with that which was required so long ago. I take it for granted that they have heard of the "good old times;" if not, inquire into the matter of some grandmother or grandfather, who will be sure to tell all about how "girls and boys don't behave as they used to."

With regard to the way I have seen some young people behave in this day and generation, I remember some incidents which I would like to relate for the purpose of giving other young people an opportunity to judge for themselves if there is in them any reflection upon their own conduct.

One hot Sunday a few summers since I attended a religious service in a district school house. Among the people gathered together I noticed three coming in an open spring wagon. An elderly lady was sitting upon the front seat, driving; her daughter, supposed to be a young lady, and her "best man" were sitting on the back seat. The happy couple was shaded by an umbrella held by the "gallant." Both of the young people were apparently oblivious to the fact that the mother was sweltering in the hot sun.

My mental comments were something after this fashion: "Is that young man in a very delicate state of health that he permits his would-be mother-in-law to sacrifice her comfort and dignity in this manner? Is the girl afraid to drive that she isn't ashamed to be seen so comfortably sheltered while her mother serves her in such discomfort? Does the mother care that the young people upon the back seat have forgotten her existence, or do not seem to care that she is warm, tired and dusty? I almost think I can see a look of sadness upon her sunburned features. I am sorry for her if she does care; but sorrier if she does not. She should have retained her sense of what is befitting her sufficiently to give her daughter a lesson in propriety, upon her return home, or to warn her of the treatment awaiting her when she shall have become toll-worn, and the man who is now forgetting to be chivalrous shall neglect to shade her also.

I once attended a country picnic on the

Fourth. It was quite a grand affair; some one brought an organ; a quartette of young folks sang very well. The young ladies who sang were well dressed and carried themselves with ease, even although they were the observed of all observers, from the prominent part they were taking.

I saw an old, homespun man and wife listening to the music with lively interest. She was dressed as plainly as a dark cotton dress and plain, dark sunbonnet could make her. They were near me, on a hard board seat. I asked some one who they were. "They are Mr. and Mrs. So-and-so, father and mother of the young ladies who are singing."

"Indeed!" I remarked to myself. "Haven't you girls sense enough, or kindness, perhaps, to see that your mother comes into notice, as your mother, with clothing befitting such an occasion?"

The singing—something about an unwillingness to "mortgage the farm"—appeared less significant and less sweet as the girls warbled on. Their confident manner assumed the more unpleasant appearance of assurance. There seemed to be, as there was, ill-breeding in the stylish costumes. My interest went over to the plain father and mother who were showing such unselfish, unreserved pride in their children. They had, literally, taken a back seat, and expected no attention from the ones who should have been glad to honor them. It was painful to see the look of meek contentment upon their faces. An opportunity presented itself to become acquainted with one of the singers; it was convenient to decline the honor without rudeness. I would gladly have shaken the toll-worn hands of the self-forgetful father and mother; but they did not appear to be in society; at least no one proffered me the pleasure.

I might have been uncharitable; the girls might have been thoughtless, and the lovers upon the back seat, under the shade of the umbrella, might have misconstrued the old adage, "All is fair in love." Then, too, these may be extreme cases not to be met with at every country picnic nor even at times when the state of the emotions might excuse a lapse of good sense.

But I must not forget another incident of a pleasanter character connected with that picnic. Another mother with her several daughters were together in a confidential group. The elder lady's apparel was appropriately becoming and of as good material as that of her daughters. They were upon such good terms with each other—the mother "the fairest of her daughters." She was smiling and happy and there was no doubt as to her status in the hearts of her girls. I know that those girls prepared their mother's wardrobe and admired the work of their hands. I do not believe, had the mother been clad in mean apparel and her daughters in a contrasting fashion, there could have been that good-fellowship between them. Why shouldn't girls—as girls average—be ashamed of one who takes on the appearance of an inferior instead of assuming her rightful queenship?

The two or three illustrations of my subject need no pointing of the moral; any bright girl can see for herself that it is a disgrace for any other girl to be lax about honoring her mother. As has been observed in substance before, there is a lack of breeding where a mother permits herself without protest to step down and out while her child takes the place of honor. Here I assume that it is the mother's own fault, and in many cases it is; but, girls, if your mother has been so mistakenly unselfish as to dethrone herself in your favor, honor the thought which prompted it by reinstating her. Do it for decency's sake if not for a higher motive.

As in all other matters, rules for good breeding have their foundation upon those higher laws found in the Bible. Among the laws laid down for our profit is one which says, "Honor thy father and mother."

—PHEBE PARMALEE.

A Word to Correspondents.

We have to again ask our correspondents not to prepare articles in the line of fiction for publication in these columns. We have several reasons for this, all of which seem to us to be good ones, but will mention only two. First—Our space is limited so that we cannot spare much room for any one department of the paper, and fiction is always longer necessarily than the mere statement of common facts. Second—The average writer is not a good composer in fiction. Peculiar taste and talent are required in this department of literature. The tendency of young authors, that is to say, authors who have not been long in practice, is to use a great many figurative expressions, and that leads them to extravagant

use of language; not only extravagance in the use of words, but erroneous use of figures. For example: In a manuscript before us the phrase "bright-eyed flowers" is used. There is no office which such a phrase can fill, for there is no figure in which it can be made to appear that flowers have eyes. It would be well enough to say bright-faced flowers, because what we see may sometimes at least be called the face, and flowers may be said to have faces.

We want to make this department of the paper useful, and we know of no better way to do it than to use such descriptive, instructive and comprehensive articles as will not only entertain readers but instruct and improve them. We are glad to have communications from our friends, especially our lady friends, on any and all subjects of particular interest in the family. We have had many such in past years and expect to have many more in time to come. Those of our correspondents who are gifted in fiction will find abundant opportunities for exercising their faculties in composing for periodicals devoted to that class of literature.

The Mission of the Rose-Bud.

One morning I opened the garden gate and stood alone with the grand old trees. Passing onward through enchanted bowers, suddenly I espied a tiny rose-bud half hidden among the leafy hedges and quietly peeping up from its imprisonment, not, as I fancied, unlike a redeemed spirit released from its clayey environments in its struggles upward. And so the tiny rose-bud, unconscious of the loving heart that bent above it to place a kiss—the seal of approbation—upon its newly-found appearance there. Could Flora find a lovelier bower in which to place her cherished child? for the dew came nightly there to kiss its upturned face and the glad sunshine by day came lovingly down through the foliage to cheer and gladden the growing flower. Under such favored influence it expanded and flourished, and in the course of time it bloomed; and oh! such a gift were equal to any found within the royal gardens of kings or queens. A little wail, more fairy than child, espied too its hiding place, and stretched out its chubby hands in glad delight for the floral treasure that swayed and nodded and revealed just a little higher than the dimpled hand could reach. Days came and went, and went and came again, and the rose flourished under kindly skies; but little fair hair drooped, and one day the death angel came and carried away the household pet to bowers where roses bloom not on loftier stems than her little hands can grasp. Love's heart bled sore for the loss of the child, but the mission of the rose-bud had been spared until the fairy form had been laid to rest. Down deep in the casket of the dead darling was buried away from sight forever and for aye the half-blown rose and the beautiful clay.

But another rose bud came to fill the place of that one plucked from its green old haunts, and as its sister had done, so the new one flourished until, one day at noon, all worn and weary in his journeyings, foot-sore and travel stained, a traveler chanced to pass that way and stopped for a rest in the shady embrace of the grand old garden and to drink from a fountain near. Glancing at the perfect flower, a gladdened spirit arose within the traveler's soul, sanctified and strengthened. "Surely as He marks the sparrow's fall, He will attend my journeyings until I have done with the dusty by-ways of life." He now recalls the old rose bush at home, that in his innocent boyhood years clambered up to his chamber window with its wealth of roses and their welcome perfume. How vividly now came back to his view the dear old home and the loving hearts centered there; the father, aged before his time, mother with her heart of love, and sister with a wealth of devotion which no brother could forget. These and a thousand other recollections came, and he resolved to return once more to the dear old home. Wicked deeds had hardened him; but now he thought of better things. A prayer, such as he had not uttered since a child at his mother's knee, escaped his lips, and God, ever ready to hear the cry of the penitent, there gave him strength for his good resolution. Who may know, since his good resolve, what a flood of light comes to his sin-warped soul through the mission of the rose? God placed flowers along our way to cheer the faint heart, raise up the fallen, give courage to the lagging and hope to the faltering. This is the mission of the rose-bud.

—MYSTIC.

Potash water is the quickest cure for wasp or bee stings. A small quantity should be kept in a glass-stopped bottle. Open the sting with a needle and put on one drop of potash water.

Notes and Recipes.

Plain moonstone faces are at present much worn for scarf pins.

Silver link purses, with American \$1 pieces for tops, are popular among the ladies.

Clover leaves formed by two pearls and a diamond are a recent successful ornamentation for side combs.

Among the latest novelties in silver is a match-case having two dials and indicators for the use of whist players.

Fastened in the spokes of a toothed wheel a compass, containing a fine pearl, makes an appropriate scarf-pin for mechanics.

A tomato-shaped, handsomely-decorated porcelain salt-cellar, with satin-finished silver cover, has taken the place of the Easter egg design.

A Summer Soup.—A knuckle of veal stewed in milk, with rice, very delicately flavored with lemon peel, makes a nourishing broth when beef tea is disliked.

To test jelly drop a little into cold water or on a cold plate, stirring it for a few seconds. If it coagulates it is done. The best jelly requires only five minutes' boiling.

In ironing, have a piece of sandpaper, such as carpenters use, lying on the table handy; it removes the stickiness of starch from the iron perfectly with only a rub or two across it.

Fried Cakes.—One pint buttermilk, one and a half cups sugar, two tablespoonfuls sour cream, one teaspoonful soda, a little salt and spice to suit the taste, flour sufficient to make a soft dough.

Tea stains are difficult to get out if neglected. They should be soaked in either milk or warm water as soon as possible, and then soaped and rubbed out. The next washing will efface them wholly.

To take creases out of drawing paper or engravings, lay the paper or engraving face downward on a sheet of smooth, unsized white paper, cover it with another sheet of the same, slightly damp, and iron with a moderately warm flat-iron.

Frosting Without Eggs.—To one cup of granulated sugar take five tablespoonfuls of milk; boil four minutes without stirring after it begins to boil. Take from the stove, set the dish into one of cold water, and beat until thick and white; flavor and spread before it sets.

A Dainty Dessert.—A pint or more, according to quantity desired, of sweet milk thickened with cornstarch to the consistency of paste. Stir in a generous lump of butter, and shaved chocolate to color a rich brown. Turn into cups, and when cold, eat with sweetened cream, flavored with vanilla.

Care of the Nails.

Vaseline rubbed on the nails after washing the hands will do a deal of good to dry nails. Manicures first bathe the hand a long time in hot water, then with scissors and knives clean and cut the nails, remove the superfluous skin about the onyx, then polish the nails with buckskin and fine powder, washing the hand again in hot water with soap. After drying, the nails are polished with a fine brush and are finally rubbed with a rosy unguent to give them a shell pink.

A correspondent of the Massachusetts *Ploughman* says: "I once saw a row of currant bushes some ten rods long, where one-half the row was completely bare of leaves, while the other half was in full foliage. Where the leaves were the ground was sowed with coal ashes, and there were no worms on the ashes. Where there were no ashes there were no leaves on the bushes. The use of ashes is a cheap way to secure a crop of currants."



BEAUTY
Skin & Scalp
RESTORED
by the
CUTICURA
Remedies.

NOTHING IS KNOWN TO SCIENCE AT all comparable to the CUTICURA REMEDIES in their marvelous properties of cleansing, purifying and beautifying the skin and in curing torturing, disgusting, 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 from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

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

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Dull Aches, Pains, and Weaknesses Instantly relieved by the CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

The Young Folks.

The Harvest.

I watch the golden billows awaiting the sickles keen,
While the corn stands waiting yonder, a splendid, glittering sheen;
I hear the reapers coming with merry shout and song,
Then I see the billows falling in solid ranks along.

The grain not only falling, but the tender flowers, too,
And with them tares and thistles are scattered through and through;
For the reaper reaps a harvest that is heavy for the blade,
While the voice of the Master calleth, "It must not be delayed!"

And thus is the mighty harvest in all our glorious land,
The reaper blithe and happy, there is joy on every hand;
For toil is sweet to the faithful, reward will come at last,
So the reaper sings and labors until daylight hours are past.

I see the harvest over, and mountains of golden grain
Await the thresher's pleasure, and it shall not wait in vain;
For I hear the hum of engines and clatter of turning wheels,
Let us wait a moment—linger—and see what this reveals.

You know what we see, good farmer, in fields now brown and bare;
Where the grain is kept from the thistles—from thistle and from tare;
And only the grain is wanted, the thistles are cast away,
While the flowers that died and withered shall bloom another day.

I see another harvest in the grain fields of this life,
The wheat is bent and shaken with labor sore and strife;
But the reaper cometh often, with footsteps soft as air,
He takes the grain and flowers, the thistle and the tare.

The harvest is ever ripening to the reaper's subtle breath,
To the knife of this silent reaper, whose mystic name is Death;
And we know not the hour of his coming, whether at night or day,
Nor why he should spare the thistles and take our flowers away.

In this living and mighty harvest we are grain or worthless chaff;
We cannot serve two masters.—God wants no work by half.
And I pray, when the harvest is over, at the garnering of the wheat,
I, with the grain and flowers, may kneel at the Master's feet.

—Good Housekeeping.

POSTAL FACILITIES.

The Almost Marvelous Progress Made During the Past Fifty Years.

There is no department of the government with which so large a part of the people has to do, and none with which the people has to deal so often, as the Postoffice. On an average, every man, woman and child in the United States both sends and receives something by mail—a letter, a newspaper, a package, once a week throughout the year. Indeed, hardly any feature of the modern civilization is more striking to one who can divest himself of the feeling that the post-office is a matter of course, than the development and present extent of communication by means of the mail.

When we remember that fifty years ago it cost 25 cents to send a single piece of paper, written or printed, from Washington to Boston; that the railroad system was in its infancy, and that letter-sending was a luxury not to be indulged in without consideration, we may see what a vast change half a century has wrought. At present every one who can write at all sends letters. Children are encouraged to begin correspondence with relatives and friends as soon as they can "print" words. Business men are hardly more sparing of postage stamps than their wives are of pins. And this modern idea of the constant use of the post-office is wholly the growth of fifty years.

Let us compare 1838 and 1888. Fifty years ago the mails were carried on only 1,900 miles of railroad in the United States—400 miles less than are now operated in the territorially small State of Massachusetts. Now the mails are carried on 140,000 miles of railroad. There were, in 1838, 57,000 postoffices against 12,000 in 1888. The revenue of the department was \$4,250,000 in 1838, and more than \$52,500,000 in the year ending June, 1888.

Statistics were not kept of the number of letters and other parcels mailed fifty years ago, but in 1887-88 the letters transmitted numbered almost 1,720,000,000; the postal cards 372,000,000; the newspapers and periodicals 1,063,000,000, and the packages 373,000,000—a total of 3,578,000,000 pieces, and an average of almost sixty to each person of the 60,000,000 inhabitants of the United States.

American postage rates are by far the cheapest in the world. The English penny rate on letters is the same as the 2 cent rate, but the distance traversed by letters here is

greatly in excess of that in the United Kingdom. Moreover, Great Britain has nothing to compare with the American system of sending newspapers to subscribers at a rate of 1 cent a pound. It costs a half penny—1 cent—to send each paper in England—at least six times as high a rate as that in the United States, even if no account be taken of the greater distances here.

The English parcel post is, however, cheaper than the American. Packages of merchandise can be sent at the rate of 3 pence—6 cents—for a single pound, and at a rate growing smaller as the weight increases, until at eleven pounds the charge is only 18 pence—or about 3½ cents a pound. The United States rate is uniform at 1 cent an ounce. A four-pound package—the limit of weight, would cost 64 cents; in England it would cost 15 cents.

No doubt this country will in time overtake and surpass its greatest rival in this department of the postal service, as it has already done in other departments. There is no conceivable limit to the expansion of this service, and as the service grows in amount it may grow cheaper. It is probably too soon to think of a 1 cent rate for letters, but in a very few years, at present rates, the department will overcome the deficiency between receipts and expenditures—it was nearly \$5,500,000 during the past year—and then the 1-cent rate will come, as surely as the 3 cent rate superseded the 5, and the 2 the 3 cent rate. Whether or not any of the other dreams of those who favor extending the postal service—postal telegraphs, savings banks and the like—are to come true, is a question for the future to answer.—*Youth's Companion*.

A Medley of Marvels--The Making of Flint-Glass.

Flint-glass is the general term for all the multifarious utensils and ornaments (apart from windows and dark bottles) which make glass an omnipresent blessing in modern life. The distinctive peculiarity of flint-glass is the presence in it of lead, which imparts a brilliancy unlike that of most other glass. The lack-lustre surface of all the old objects of glass made before the English invention of a lead formula is noticeable. Lead oxide was originally used only in most expensive glass prepared from calcined flints. But gradually it has crept into many grades, down to the most common material for household and fancy wares, and for all transparent bottles, giving them all a finer lustre than was otherwise obtained until the recent invention of lime glass. And the costliest of all glass, that used for optical lenses and imitation gems, still gains its extraordinary weight and refractive power from lead. The honors of skill in flint-glass production are broadly divided among the nations, England taking the lead in the crystal or purest flint-glass used for cutting; Italy (Venice) in colored designs more brilliant than any made in the days of the republic, when flint-glass was not known; Switzerland in imitation gems; Germany in cheap vases; France in lens disks, and America in pressed glass and cheap tableware. Recently a cheaper flint-glass has been introduced into American pressed ware, in which lime is substituted for lead, yet which retains much of the lustre and clearness of lead flint.

Flint-glass is either blown, moulded, or pressed, and frequently all three methods may be seen together in the same establishment.

A flint glass factory is a most entertaining medley of marvels. As you enter the great building that surrounds the huge chimney the first impression is that you are in a human ant-hill rumbling with inordinate activity. Or perhaps the sensation is better described as a plunge into a purgatorial chamber of industrious demons. In the center the openings in the gigantic furnace dazzle you like glaring eyes from a soul of fire; but the glow comes really from molten glass in the dozen "monkey-pots" about the blaze. Scores of workers, boys, youths and men, throng in restless confusion. It looks as if every one were running about on some implied deed of his own fancy. But stand still and watch closely, and you will see it is all a great system of human clock-work, each movement fitting nicely into the whole effect. The men at the furnace, who seemed at first to be the devils thrusting pitchforks into the blazing depths to toast their victims, are only gathering metal on their punties. When a sufficiently large lump has been collected the man wanders off with it. You think he will certainly burn some one with that burning ball of fire, they are all bustling about him so incessantly. But follow him carefully and you see him silently hand the

tube to an older man, who blows the glass into a large globe, and sits down to play with it at a bench which has a horizontal iron bar on each side of him to roll the tube on. Back and forth he rolls it like a toy, and the glass keeps curiously changing its shape. He has made a hole in the globe and has enlarged it into a symmetrical opening, and now the glass is cooled so that he can do nothing more. Will anybody in all that hurrying crowd help him! Instantly a young man appears, and without a word he holds up to the cool glass his long tube with a disk of red hot glass on the end, which fastens to it. The man at the bench scratches the globe, jars it, and leaves his bar. Off the other man runs with it to the "glory-hole," where the broken end is quickly heated again into softness. Then he hurries back with it to the bench man, who renews his play. A couple of minutes more and suddenly you perceive that he has made a perfect lamp shade, which a stroke detaches from the iron rod into a small bed of sand. A small boy carries it off on a stick to the annealing furnace, and now the gatherer is on hand again with a fresh lump of metal to begin the process again. Turn to the next man sitting at his work, and you notice him finishing a smaller charge into a lamp chimney, shaping the top by a mould. Here is a man amusing himself with a small bunch of soft glass on his rod. You are sure he can have no serious purpose in turning and bending it into those ridiculous shapes. Quickly a boy seizes it from him, and you cannot trace him. It has gone over to a fancy vase, where it was needed to complete the ornament. So each bench has its own little task of skill, and keeps repeating it over and over, and each boy of the multitude (there are two or more to every man) has his own particular duties. He pops up always in the moment and place where he is needed. All the workers are busy as their wits can make them, for they work by the piece, and the number of things made determine their wages. They are grouped into sets or "shops" of three or four, who work together and share profits together on a well understood grade of division. Generally four constitute a shop, the most skillful workman (the blower) at the head, the gatherer (a young fellow) next, and two boys, one handling moulds or tools, and the other carrying the products to the annealing oven. The only way to learn the glass trade is through long apprenticeship in these four stages. And no apprentice is permitted to enter the full privilege and wages of a master-workman without the consent of the order. By this severe means of apprenticeship the glass-workers keep the skill of their trade in their own control, much like the Venetian artisans, and practically dictate their own prices to employers.—*Harper's Magazine for July*.

FREE READING!

If you are desirous of receiving papers, catalogues, samples, etc., send 10 cents to have your name inserted in our Agents' Directory, which goes to publishers all over the U. S. Address R. E. ELLIOTT, Dawsonville, Ga.

AN EASY WAY TO MAKE MONEY!

AGENTS can make from \$100 to \$150 a week, representing The Consumers' Supply Association. No Capital! No Samples! No Trouble! Write for particulars to The Consumers' Supply Association, 155 & 157 Broadway, New York.

SAFE INVESTMENT FARRAND & VOTEY ORGANS DETROIT, MICH. U.S.A.

In writing to advertisers, please mention the KANSAS FARMER.

State Agricultural College

Free Tuition. Expenses Light.
Endowment, \$500,000. Buildings, \$120,000
Grounds and Apparatus, \$100,000.
20 INSTRUCTORS. 500 STUDENTS.
Farmers' sons and daughters received from Common Schools to full or partial course in Science and Industrial Arts. Send for Catalogue to MANHATTAN, KANSAS.

Southwestern Business College

WICHITA, KAN. — WRITE FOR CATALOGUE.
The only business college in Wichita. The largest institution of its kind west of Chicago. Nearly 800 students in attendance last year. Board \$1.90 per week. Write for circulars.

CHICAGO Veterinary College.

FOUNDED 1883.
The most successful college of this continent. For further particulars address the Secretary, J. H. HUGHES, M. R. C. V. S., 2537-2539 State Street, Chicago, Ill.

Lawrence Business College

By attending the Lawrence Business College, a live, progressive, high-grade practical school for ambitious and industrious young men and women who wish to qualify thoroughly for the active duties of life. The oldest, largest and best equipped institution of its kind west of the Mississippi. Our large 64-page illustrated catalogue, finest published, will be sent free to any address. Be sure and write us before going elsewhere. E. L. McILRAVY, Pres't, Lawrence, Kas.

WASHBURN COLLEGE.

TOPEKA, - - KANSAS.



FOR BOTH SEXES. Collegiate and Preparatory courses.—Classical, Scientific, Literary; also an English course, Vocal and Instrumental Music, Drawing and Painting, Oratory and Elocution. Fourteen instructors. Facilities excellent. Expenses reasonable. Address PETER MOVICAR, Pres.



BETHANY COLLEGE.

Under care of the Protestant Episcopal Church. For GIRLS AND YOUNG LADIES, exclusively. Boarding and Day Pupils.

Twenty-six Officers and Teachers.

Faithful Maternal oversight for all entrusted to our care. ALL BRANCHES TAUGHT—Grammar and Collegiate, French, German, the Classics, Instrumental and Vocal Music, Elocution, Drawing, Painting.

THE MUSIC DEPARTMENT—Employs ten teachers, and twenty-four pianos and three organs.

In the ART DEPARTMENT, the Studio is well equipped with casts, models and copies.

Send for Catalogue to T. C. VAIL, Bursar, or BISHOP T. H. VAIL, President, Topeka, Kansas.

EMPORIA BUSINESS COLLEGE

—EMPORIA, KANSAS.—

PROF. O. W. MILLER,

PRESIDENT.

THE STATE NORMAL SCHOOL,

EMPORIA, KANSAS.
enrolled 930 pupils last year. It is the great teachers' training school of Kansas. In equipment and faculty it ranks among the best schools of the kind in this country. For circulars and catalogue, address A. R. TAYLOR, President, Emporia, Kas.

KANSAS FARMER.

ESTABLISHED IN 1883.

Published Every Wednesday by the
KANSAS FARMER COMPANY.OFFICE:
KANSAS FARMER BUILDING,
Corner Fifth and Jackson Sts.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

An extra copy free fifty-two weeks for a club
of six, at \$1.00 each.
Address **KANSAS FARMER CO.,**
Topeka, Kas.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate, (four-
teen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements
will be received from reliable advertisers at the rate
of \$5.00 per line for one year.Annual cards in the **Breeders' Directory**, con-
sisting of four lines or less, for \$15.00 per year, in-
cluding a copy of the **KANSAS FARMER** free.Electros must have metal base.
Objectionable advertisements or orders from unre-
liable 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.Last week's business reports were
about all favorable.The **KANSAS FARMER** will be sent on
trial thirteen weeks to new subscribers
for 25 cents.Business failures reported last week
numbered 209, against 202 the preceding
week, and 215 the corresponding week
last year.Sergeant Jennings says the average
rainfall in Kansas for the entire month
of July, 1887, was 1.72 inches; in 1888
it was 2.64, and for the single week end-
ing Friday, the 12th day of July, 1889,
the average for the State was 1.18, and
it was well distributed.Four mammoth trusts were reported
last Saturday, with an aggregate capital
of \$219,183,000, viz.: Lead, capital, \$83,-
018,800; sugar, capital, \$49,856,500; cot-
ton seed oil, capital, \$42,162,200; distil-
lers and cattle feeders, capital, \$30,726,-
600; American cattle, capital, \$13,396,-
100.The Territories of Dakota, Montana,
and Washington are now preparing for
admission as States under the late act
of Congress. The two Dakotas are Re-
publican, Montana is Democratic, while
the political complexion of Washington
is not yet determined. Wyoming also
has called a constitutional convention
and will apply for admission at the next
session of Congress.We are in receipt of a brief prepared
by ex-Governor Crawford and his asso-
ciate counsel, representing the interest
of Arapahoe and Cheyenne Indians, be-
fore the commission lately appointed
by the President, to negotiate for In-
dian lands in the Indian Territory.
It is an interesting document, chiefly
for the reason that it contains a great
deal of historical information relating
to the history of Indian lands in that
region.

A Good Idea.

Mr. Secretary Rusk has adopted an
excellent plan for the distribution of
information useful for farmers. It is
the establishment for a new division
charged with the duty of editing the re-
ports and bulletins issued by the various
divisions of the Department. Many of
these reports are prepared by scientific
and professional men, who treat every
subject elaborately, saying many things
that the average reader cares nothing
about. The object of this work is to
select and condense the most important
features of the reports, just what the
people at large want, and give them
out in that form. This will save a great
deal of printing and a great deal of
carrying in the mails, at the same time
conveying to the public all needed in-
formation.A FOOL AND HIS MONEY ARE SOON
PARTED.Our article of two weeks ago called
forth the following letter:

MUSCOTAH, KAS., July 5, 1889.

KANSAS FARMER COMPANY:—The editorial
in your last issue in favor of protection—rob-
bing farmers to enrich manufacturers—dis-
gusts me. You are not the farmer's friend,
but as this editorial proves to my mind
conclusively, the paid advocate of the pro-
tectionist robber system. Even the *New York*
Tribune (see editorial in May 24th issue) admits
that the protection to sugar enables the sugar
trust to rob the people of \$93,000,000 a year,
and demands that Congress give the matter
immediate attention.I have paid for the **KANSAS FARMER** for a
year, less the time it has been received, but I
will not have in my house a paper that will
sell me and my neighbors and our interests
out for a consideration. Stop the paper and
keep the money. Yours, etc.,
A. J. GROVER.The author of that letter is an aspiring
man, was a candidate for Congress last
year, and he may therefore reasonably
be presumed well informed. We present
his letter to our readers in order that
his range of acquaintance may be ex-
tended, and in order further, to afford
him an opportunity to answer a few
practical questions through our columns
—questions relating to matters of great
concern to farmers, and thus give addi-
tional evidence of his familiarity with
this subject.1. What are the prices, any time this
years past, in London, England, and
Chicago, Illinois, of the following named
articles, each and all of good and like
quality, viz.: Farm wagons, plows,
cultivators, threshing machines, reap-
ers, mowers, self-binders, and generally
of all farm implements, including axes,
shovels, forks, rakes, etc.2. What are the prices in London and
Chicago of the following articles and
classes of articles: Stoves, nails, com-
mon window glass, bureaus, bedsteads,
tables, common chairs, lumber—pine
oak and walnut?3. What are the comparative prices
of tinware and furniture in the two
cities named above? That is to say,
how do the prices of these two classes
of articles compare in the two cities
named.4. What are the prices in the two
cities named of fence wire, common salt,
and bituminous coal; what is the cost
of transporting a pound, a hundred
pounds, or a ton of wire, salt or coal
from London to Chicago, and what is
the price of home-made salt at Hutch-
inson, Kansas?5. What are the prices, in the cities
named, of building materials and tools,
as brick, lumber, glass, nails, screws,
locks, hinges, saws, files, hammers, etc.?6. Given any number of Kansas
farmers—say in Shawnee county, they
send 50,000 or 100,000 bushels of wheat
in charge of an agent by the cheapest
route to Liverpool, England, and there
dispose of it in the open market for
cash, invest the proceeds in farm sup-
plies, including groceries, dry goods,
shoes, hardware, tinware, carpets, fur-
niture, farm implements and machinery
—just such things as Kansas farmers
need and use, bringing them back to
Topeka and there distributing them,
would the transaction be profitable, and
if so, how much money would be saved
by it?7. What were the prices of steel rails
in London and Philadelphia in the years
1867, 1870, 1875, 1880, 1885, and in June,
1889, and what is the cost of carrying a
ton of steel rails from Philadelphia to
Chicago and to St. Louis?8. What were the prices of horses,
cattle, hogs, wheat and corn in Chicago
in 1859 and 1860?9. Say a farmer in January, 1859, or
1860, invested the proceeds of the sale
of an average farm horse, ox and hog,
fifty bushels each of wheat, corn and
oats, 100 pounds each of butter and
cheese, and 100 dozen eggs, in farm
supplies, including a farm wagon, a
spring wagon, a reaper or mower (or
both), and other farm utensils, a stove,
clothing, shoes and groceries; and say
the same farmer thirty years later soldthe same numbers and quantities of like
articles at the same place and for the
same purpose, which of the two trans-
actions netted the farmer most profit?10. Will \$1 or \$10 or \$100 worth of
farm products in general—stock, grain,
fruit, vegetables, etc., in 1889 go as far
in purchasing supplies for the farm and
family as a like amount did thirty years
ago?11. How do present prices and those
of 1859 or 1860 compare as to the follow-
ing named articles in Philadelphia or
New York city, viz.: Calico, muslin,
common wool cloth, ready-made cloth-
ing of cotton and wool, shoes, glass,
tableware, cutlery and hardware in gen-
eral?12. If farmer A purchase the follow-
ing named articles in Chicago or St.
Louis, viz.: One farm wagon, one
spring wagon, one self binder, one hay
fork, one shovel, one axe, one stove, one
table, one bureau, one set dinner or
breakfast dishes, one suit ready-made
clothing of wool for himself and a bolt
of prints, a bolt of unbleached muslin,
and two dress patterns of gray flannel
for his wife, a bolt of red flannel for the
children and one dozen pairs of shoes
for the family; and if at the same time
farmer B purchase similar articles of
like grade and quality in Liverpool,
England, which of the two farmers
would pay out the most money in the
transaction?Mr. Grover, having given the tariff
question a great deal of study, will have
no difficulty in answering all of these
questions promptly, and correct answers
from him will aid all of us in reaching
satisfactory conclusions concerning the
protective policy.THE DRESSED MEAT QUESTION IN
COURT.Readers of the **KANSAS FARMER** will
remember, on suggestion, that we called
attention some time ago to a question
which might be and probably would be
raised relating to the constitutionality
of a law which attempts to prohibit the
introduction and sale of healthy dressed
meats in any state or city brought from
another state or city. On submitting
our views to an earnest friend of the
inspection idea his reply was something
like this: We are not far enough along
yet to make it either prudent or neces-
sary to consider that phase of the sub-
ject at all; it is our present business to
get rid of the dressed meat combination
and its unfair competition in our local
towns.About a month ago an agent of a
Chicago dressed beef establishment was
arrested in Indiana and fined \$50 for
selling dressed meat in violation of the
inspection law of that state. He re-
fused to pay the fine and was impris-
oned. On the hearing of a petition for
his release, Judge William Johnston of
the Porter county circuit court decided
against the constitutionality of the law
on the ground that it interferes with
interstate commerce, and on the further
ground that jurisdiction over this sub-
ject is given by the constitution of the
United States to Congress exclusively.
The judge's opinion is elaborate. We
make two extracts so that the reader
may see the drift of the judicial mind:In Webster's Unabridged Dictionary "com-
merce" is defined as "the exchange of mer-
chandise on a large scale between different
places or communities." This embraces two
distinct ideas: First, that of exchange in its
largest sense, including barter, the giving of
one commodity for another, and sale, the ex-
change of an article of property for money,
the representative of values. From this
definition it will be seen that there can be no
commerce unaccompanied by exchange or
sale. The other idea embraced in the defini-
tion is that of transportation, for to consti-
tute commerce the exchange must be between
different places or communities; and any law
that either prevents the transportation or
sale of merchandise totally destroys com-
merce by the exercise of that power alone.
Commerce, then, involves the idea of carrying
the commodity intended for exchange to an-
other place, where, we may say, the market is
to be held and the sale accomplished. Hence,
without both transportation and liberty of
sale there can be no interstate-commerce. ***
It seems apparent that the purpose
of the act was to exclude foreign dressed
meats from the city markets of Indiana; and
if such be the case, a consideration of the
police powers of the State is unnecessary.
Nor can the legislation be sustained as a mere
inspection law. The State of Indiana need
not admit to her markets meat which is unfitfor human food, and she may take such steps
as are necessary to ascertain whether or not
it is so. When she has ascertained that it is
non-commercial, she may exclude it; but no
declaration, however solemn, and no pretext,
however suspicious, will authorize her to ex-
clude a product which is pure and harmless.
It does not provide for the inspection of the
commodity for the purpose of ascertaining its
quality. It proceeds upon the theory that
uncured meat is noxious and injurious to
health. It excludes it in advance and without
examination to ascertain its condition. It
pronounces judgment without a hearing. All
uncured meat is condemned, interdicted, ex-
cluded. It has never been regarded as within
the legitimate scope of the inspection laws to
forbid trade in respect to any known article
of commerce, irrespective of its condition
and quality, merely on account of its intrinsic
nature and the injurious consequences of its
use or abuse. The very meaning of inspec-
tion is that there should be an examination,
and not an exclusion without a hearing. The
object of inspection laws is to improve the
quality of the articles produced by the labor
of a country, to fit them for exportation, or it
may be for domestic use. They act upon the
subject before it becomes an article of for-
eign commerce or of commerce among the
States, and prepare it for that purpose.The judge calls attention to the fact
that dressed meat has become an im-
portant article of commerce, that it is
extensively shipped from one State to
another as well as into foreign countries.
It is well known that many of our cities
are supplied largely with fresh meat
shipped to them from adjoining States,
and being so the traffic in dressed meats
comes within the definition of inter-state
commerce. He also called attention to
the legal proposition that what has been
a long time recognized as a legitimate
business, in no sense hurtful to the
health or morals of the community, is
to be regarded as legitimate trade, and
in that view of the case, he is of the
opinion that a State Legislature cannot
lawfully interfere with the traffic. In
his opinion inspection laws are for the
purpose of determining the quality and
lawfulness of articles of food.As we suggested some time ago, this
subject is now before the courts, and it
will be determined according to the law
in such cases. If it be decided that the
inspection law is not good for the pur-
pose intended, we will have to fall back
upon our original proposition to declare
all such combinations as the beef com-
bine to be criminal conspiracies, pun-
ishable as other great crimes, and every
community must establish a packing
house for itself where all the animal
food needed may be prepared.

A Railroad Trust.

It is proposed to organize the railroad
companies of the country into one or
more consolidated bodies, having con-
trol of all the rail transportation of the
country. The proposition is made by
John McCook, a railroad manager of
New York, in a circular, part of which
we quote as follows:As the inter-State commerce bill has abol-
ished the pooling arrangements heretofore
existing between the trunk and other pool
lines, necessity for some system of regulating
and controlling their traffic appears to be as
great, if not greater, than ever before, and
some new plan must at an early day be devised
therefor. Such a plan to be effective, should
cover the following points:1. Maintain all the equities, not only between
the railway companies themselves, but also
between their respective stockholders' inter-
ests.
2. Continue the legal and all other relations
of the respective railway companies to the
United States and the several States under
which they are organized at present.
3. Secure a unity of interest upon an abso-
lutely equitable basis in the ownership, opera-
tions and earnings of all the lines. This being
accomplished, the weak elements of all pool-
ing arrangements and the temptation to the
companies to cut under or destroy the same
will have been removed and the power of
large shippers to play off one line against
the other, will be reduced to the minimum, if
not destroyed.This is doing by the railroad com-
panies themselves what the inter-State
commerce law was intended to effect.
The owners and managers of roads
must accommodate their business to
the interests of the people or the gov-
ernment will do it for them. The
growth of farmers' associations will
hasten the work materially.

United States Crop Reports.

The June crop report of the Depart-
ment of Agriculture at Washington
shows an increase in the area planted in
corn of about one and one-third million
acres. The total area in corn is over
seventy-seven million acres; the largest
increase is west of the Missouri river.
The condition of the crop is only
medium, lower than usual at this stage
of its development. Cold weather and
cut worms have interfered with the

growth of the plant in some places, particularly in the Ohio valley, though worms were worse farther west. May and early June were cold in the region of Wisconsin and Dakota and have interfered some in that region. The general average condition of the corn crop is given at about 90. Kansas and Nebraska lead with 97 and 98. Kansas leads also in wheat, the average condition of the State being put at 98, Missouri coming next at 94. Speaking generally, the wheat crop is good and the prospect for corn is fair.

WORDS OF EMINENT STATESMEN CONCERNING PROTECTION.

A friend sends us the following request with inclosures:

PROTECTION.

EDITOR KANSAS FARMER:—If you will kindly publish the following extracts from the writings of eminent statesmen, you will confer a favor on many of your readers.

F. Agriculture, manufactures and navigation, the four pillars of our prosperity, are most thriving when left most free to individual enterprise. Protection from casual embarrassment, however, may sometimes be seasonably interposed.—*Jefferson's first annual message.*

Do not allow yourselves, my fellow citizens, to be misled on this subject. The federal government cannot collect a surplus for such purposes without violating the principles of the constitution and assuming powers which have not been granted. It is moreover a system of injustice, and if persisted in will inevitably lead to corruption and must end in ruin. There is but one safe rule, and that is to confine the general government rigidly within the sphere of its appropriate duties. It has no power to raise a revenue or impose taxes, except for the purposes enumerated in the constitution; and if its income exceeds these wants, it should be forthwith reduced and the burdens of the people so far lightened.—*Jackson's farewell address.*

All experience has demonstrated the wisdom and policy of raising a large portion of revenue for the support of government from goods imported. The power to lay these duties is unquestioned, and its chief object, of course, is to replenish the treasury. But if in doing this an incidental advantage may be gained by encouraging the industry of our own citizens, it is our duty to avail ourselves of that advantage. A high tariff can never be permanent. It will cause dissatisfaction, and will be changed.—*Fillmore's first annual message.*

I am in favor of such tariff reform as will lead to ultimate free trade.—*J. A. Garfield.*

Certainly. We publish them with pleasure, and wish every one of our readers would read and study the extracts carefully. They are full of good sense. In addition to them we give below some other extracts from the same eminent statesmen:

Extract from letter of Thomas Jefferson to Benjamin Austin, discussing the protection act of 1816.—"We have experienced what we did not then believe—that there exists both profligacy and power enough to exclude us from the field of exchanges of other nations, that to be independent for the comforts of life we must fabricate them ourselves. We must now place our manufacturers by the side of the agriculturist. The farmer question is now suppressed, or rather assumes a new form. The grand inquiry now is, shall we make our own comforts or go without them at the will of a foreign nation? He, therefore, who is now against domestic manufactures must be for reducing us either to a dependence upon that nation or to be clothed in skins and live like beasts in dens and caverns. I am proud to say that I am not one of these. Experience has taught me that manufactures are now as necessary to our independence as to our comfort."

Extract from letter of Andrew Jackson to Dr. L. H. Coleman, August 26, 1824.—"Heaven smiled upon and gave us liberty and independence. The same Providence has blessed us with the means of national independence and national defense. If we omit or refuse to use the gifts which he has extended to us, we deserve not the continuance of his blessing. He has filled our mountains and our plains with minerals—with lead, iron and copper—and given us a climate and soil for the growing of hemp and wool. These being the great materials of our national defense, they ought to have extended to them adequate and fair protection, that our manufacturers and laborers may be placed in a fair competition with those of Europe, and that we may have within our country a supply of these leading and important articles so essential to war. * * * In short, sir, we have been too long subject to the policy of British merchants. It is time we should become a little more Americanized, and instead of feeding paupers and laborers of England, feed our own; or else, in a short time, by continuing our present policy, we shall be paupers ourselves."

Extract from President Fillmore's third annual message, December 6, 1852.—"Without repeating the arguments contained in my former message in favor of discriminating protective duties, I

deem it my duty to call your attention to one or two other considerations affecting this subject. The first is the effect of large importations of foreign goods upon our currency. Most of the gold of California, as fast as it is coined, finds its way directly to Europe in payment for goods purchased. In the second place, as our manufacturing establishments are broken down by competition with foreigners, the capital invested in them is lost, thousands of honest and industrious citizens are thrown out of employment, and the farmer to that extent is thrown out of a home market for the sale of his surplus produce. In the third place, the destruction of our manufactures leaves the foreigner without competition in our market, and he consequently raises the price of the article sent here for sale, as is now seen in the increased cost of iron imported from England."

Extract from a speech of James A. Garfield in House of Representatives June 4, 1878.—"Two days after the votes for President were counted, and long before Washington was inaugurated, James Madison rose in the first House of Representatives, and, for the first time, moved to go into committee of the whole on the state of the Union, for the express purpose of carrying out the theory of the constitution, to provide for the common defense and the general welfare, both by regulating commerce and protecting American manufactures * * * Our fathers had been disciplined in the severe school of experience during the long period of colonial dependence. The heavy hand of British repression was laid upon all their attempts to become a self-supporting people. The navigation laws and commercial regulations of the mother country were based upon the theory that the colonies were founded for the sole purpose of raising up customers for her trade. They were allowed to purchase in British markets alone any manufactured article which England had to sell. In short, they were compelled to trade with England on her own terms; and, whether buying or selling, the product must be carried in British bottoms at the carrier's own price. In addition to this, a revenue tax of 5 per cent. was imposed on all colonial exports and imports. The colonists were doomed to the servitude of furnishing, by the simplest forms of labor, raw materials for the mother country, who arrogated to herself the sole right to supply her colonies with the finished product. To our fathers independence was emancipation from this servitude * * * They determined, therefore, to make their emancipation complete by adding to agriculture the mechanic arts, which in their turn would carry agriculture and all other industries to a still higher development, and place our people in the front rank of civilized and self-supporting nations. This idea inspired the legislation of all the earlier Congress."

MONEY, PRICES AND BUSINESS.

EDITOR KANSAS FARMER:—I have been reading the recent money discussions in your columns with much interest. I commend, and have always commended the KANSAS FARMER for its liberality in giving all sides a hearing. In my mind that is the shortest and best way to find the truth.

One can hardly read the communication, "A False Cry," in the FARMER of July 3, without a smile at the writer's innocence and self-confidence. He says prices are lower to-day than a few years ago, hence less money is needed to do business. He might have added, however, that monetary obligations have not decreased, hence as much money as ever is still needed, else it will take double the property to pay a given obligation. The way to keep up prices is to add dollars to the circulation as commodities increase. It is a simple sum in long division:

Divisor, commodities; dividend, volume of money; quotient, prices.

That simple statement covers the case. For more than twenty years we have been swelling the divisor by the increase of population and commodities, and decreasing the dividend by the various devices of destroying, retarding and suppressing money; hence the continual fall of the prices of commodities, and the increasing value of money and monetary obligations.

Your correspondent says money is superabundant right here to-day, because it is piling up in the banks. He is deceived. As money cannot be invested at a profit in commodities during a period of falling prices, it piles up in the banks, seeking investment in monetary obligations, even at low interest. Let it be understood that the

volume of money is being permanently increased, and the "money to loan" offices will all be changed to "investment offices." Money will then be in demand. Money will seem to be scarcer, but prices will be better, and men with property to sell can get money without borrowing. It will be a change from bad times to good times—from a period of debt making to a period of debt paying.

Your correspondent runs into the usual error of assuming that ninety-nine hundredths of all business is done with checks, drafts, orders and other private forms of credit; and that bills, checks drafts, orders and private credit multiply the power of money a thousand times. That must be wild guessing where a man's statements in the same article differ so much. There is no use of guessing at all. The facts are well known and plainly stated in the official tables. From 93 to 97 per cent of clearing house business is done with checks, drafts and other forms of private credit, which may be styled the *money of conditional payment*. From 3 to 7 per cent. of all clearing house business is done with some form of legal or unquestioned money. This, for convenience, may be called the *money of final payment*. Then, on the average, for every hundred dollars worth of business done there must be used about \$5 of the money of final payment. To suppress, retire or destroy \$1 of real money kills about \$25 worth of business; and as men do not see this cause when it occurs they go on risking as before, approaching the danger line of bankruptcy. Should contraction continue thousands must pass the danger line into bankruptcy, in spite of themselves. Business cannot be done with less than 3 per cent. of real money which is accepted as final payment; and that small percentage is dangerous. Six or 7 per cent. of real money are safer figures. When money is plenty the safer figures are used and bankruptcies are few. When money is scarce and growing scarcer a small percentage is used and bankruptcies are frequent.

I do not make these assumptions and statements unadvisedly. They are sustained by the facts of history and by the best authorities of Christendom.

In March, 1888, Senator Plumb said: "The country to-day is in distress for lack of money which the treasury has locked up. * * * The contraction of the currency during the last three years has been 5 per cent. of its volume. This means the depreciation of property of the country \$3,000,000,000. Debts have not only increased but the means to pay them have diminished in proportion as the currency has been contracted. * * * We are dealing with a question which has more to do with the welfare of the people of the United States, which is of more concern to them than any other thing that is pending—the volume of the circulating medium of the country, the value of its property, the difference between debt and bankruptcy on the one hand, and freedom from debt with prosperity on the other."

Speaking of the long continued depression existing in 1874, Senator Logan said: "It is a money famine and nothing else."

The United States monetary report of 1877, respecting the depression of industry then existing, said:

The true and only cause of the stagnation of industry and commerce now everywhere felt, is the fact now everywhere existing of falling prices caused by a shrinking volume of money. This is the great cause. All others are collateral, cumulative, or really the effect of that cause.

Senator John Sherman, in 1869, said:

The contraction of the currency is a far more distressing thing than Senators suppose. Our own and other nations have gone through that process before. It is not possible to take that voyage without the sorest distress; to every person except a capitalist out of debt, a salaried officer, or an annuitant, it is a period of loss, danger, lassitude of trade, fall of wages, suspension of enterprise, bankruptcy and disaster. To attempt this is to impose upon our people, by arresting them in the midst of their lawful business, and applying a new standard of value to their property without any reduction of their debts or giving them any opportunity to compound with their creditors, or to distribute their losses, and would be an act of folly without an example for evil in modern times.

Wm. H. Crawford, Secretary of the United States Treasury, in 1820, said:

All intelligent writers on currency agree that when it is decreasing in amount, poverty and misery must prevail.

John Stuart Mill, the great English economist, states:

If the whole money in circulation was doubled, prices would double. If it was increased one-fourth, prices would increase one-fourth.

Ricardo, of England, says:

That commodities would rise and fall in price in proportion to the diminution of money, I assume as a fact that is incontrovertible; that such would be the case, the most celebrated writers are agreed.

We call special attention to the following from the report of the United States Monetary Commission, 1877:

Primarily, then, prices must have been entirely controlled by the volume of money unaffected by credit. * * * There can never

occur a universal fall of prices and a general withdrawal of credits without a preceding decrease in the volume of money. * * * As the volume of money shrinks prices continue to fall. * * * When money is decreasing in volume prices have no bottom except a receding one, and they are inexorably ruled by the volume of money. * * * In the whole history of the world every great and general fall in prices has been preceded by a decrease in the volume of money. * * * At the Christian era the metallic money of the Roman empire amounted to \$1,800,000,000. By the end of the fifteenth century it had shrunk to \$200,000,000. During this period a most extraordinary and baleful change took place in the condition of the world. Population dwindled, and commerce, arts, wealth and freedom all disappeared. The people were reduced by poverty and misery to the most degraded condition of serfdom and slavery. The disintegration of society was almost complete. The conditions of life were so hard that individual selfishness was the only instinct consistent with self-preservation. All public spirit, all generous emotions, all noble aspirations of man shriveled and disappeared as the volume of money shrunk and prices fell. * * * That the disasters of the Dark Ages were caused by decreasing money and falling prices, and that the recovery therefrom, and the comparative prosperity which followed the discovery of America were due to the increasing supply of the precious metals and rising prices, will not seem surprising or unreasonable when the noble functions of money are considered. Money is the great instrument of association, the very fiber of social organism, the vitalizing force of industry, the pretoplasm of civilization, and as essential to its existence as oxygen is to animal life. Without money civilization could not have had a beginning—with a diminishing supply it must languish and, unless relieved, finally perish.

Sir Richard Allison, the great English historian, corroborates this testimony to the fullest extent, and says:

The two greatest events in the history of mankind have been brought about by a successive contraction and expansion of the circulating medium of society. The fall of the Roman Empire, so long ascribed to ignorance to slavery, to heathenism and to moral corruption, was, in reality, brought about by a decline in the silver and gold mines of Spain and Greece. And as if Providence intended to reveal in the clearest manner possible the influence of this mighty agent in human affairs, the restoration of mankind from the ruin this cause had produced, was owing to the directly opposite set of agencies being put in operation. Columbus led the way in the career of renovation; when he spread his sails to cross the Atlantic he bore mankind and its fortunes in his bark. The annual supply of the precious metals—of money—for the use of the globe was nearly trebled, before a century had passed the price of every species of produce was quadrupled. The weight of debt and taxation insensibly wore off under the influence of that prodigious increase; in the renovation of industry society was changed, the weight of feudalism cast off and the rights of man established.

The great Peter Cooper stated that, during his long business life, he had witnessed ten disastrous industrial depressions, always from the same cause; always and uniformly from a destruction or suppression of the money of the country. And English history informs us that a law for the suppression of the currency of that country was passed in 1820. At that time the country was prosperous, and the British people were employed and contented. Under the influence of the Peel contraction bill, four-fifths of the land-holders of England, through bankruptcy and forced sales, lost their lands. The people were without employment and were suffering everywhere for the commonest necessities of life. The suffering country was relieved by five money bills introduced in a single night by Lord Castlereagh, and passed under a suspension of the rules as matters of urgent necessity. Every bill was designed to increase money facilities. The relief was sudden and effective.

My excuse for this long letter is, because, in the language of Senator Plumb, the money question is the most important thing that is now pending. In fixing the prices of all commodities, the volume and easy circulation of money must be considered! Its importance equals that of every other subject of business, trade and commerce!

Respectfully, JOHN DAVIS.
Junction City, Kas., July 5, 1889.

Legal Definition of Trust.

A bill was introduced into the Legislature of Michigan lately to define trusts and punish violations of the law. The bill was drawn by an able lawyer, Judge Christianity, who probably is as competent in that direction as any other man. Following is the definition of trusts as written out in the bill:

"All contracts, agreements, understandings and combinations made, entered into, or knowingly assented to by and between any parties capable of making a contract or agreement which would be valid at law or in equity, the purpose, or object or intent of which shall be to limit, control or in any manner to restrict or regulate the amount of production or the quantity of any article or commodity to be raised or produced by mining, manufacture, agriculture, or any other branch of business or labor, or to enhance, control or regulate the market price thereof, or in any manner to prevent or restrict free competition in the production or sale of any such article or commodity, shall be utterly illegal and void, and every such contract, agreement, understanding, and combination shall constitute a criminal conspiracy."

Horticulture.

Culture of Small Fruits.

A farm is not complete without at least a small area devoted to the growth of small fruits. The farmer, of all men, ought to be well supplied with everything in the fruit and vegetable line which are useful, healthful, and can be grown successfully in the region which he lives. A very small piece of land is sufficient to raise large quantities of small fruits, such as strawberries, blackberries, raspberries, currants, and the like. No farmer's wife would think of supplying the table without the products of a good garden.

Fruits are quite as healthful, quite as useful, quite as economical in every way as vegetables, and they can be grown as easily and as abundantly as vegetables; half a dozen good grape vines will supply an ordinary family with grapes, and the ground occupied by them does not exceed six square rods. Blackberries and the other berries named can be grown in quantities sufficient to supply the family on still less ground than grapes. One square rod will produce more strawberries than one who does not know anything about it would believe. Every farmer should see to it that his place is well supplied with small fruits. Our readers by carefully watching the columns of the KANSAS FARMER may learn how to cultivate and to take care of everything in the fruit line which grows in this latitude.

About Budding Fruit Trees.

It is about time for those persons who intend to bud their trees to commence the work for this season. Budding may be done in this latitude any time between the 10th day of July and the 15th day of August, provided always that the season is regular. What we mean by regular is a season without special characteristics, as drouth or extreme wetness. In order that budding may be successfully done it is necessary to attend to it when the bark will slip easily.

The bud to be used must be of the present year's growth, and it must be put into a branch or stock of this year's growth. First, have a small-bladed pocket knife—blade with sharp and smooth edge; remove the bud by placing the knife blade immediately above it, cutting under and downward so as to take a small portion of the wood with the bark, making the bud slip about three-fourths of an inch long; cut off the upper part immediately under the top of the bud smoothly; cut across the twig or stock intended to be budded an incision deep enough to just go through the bark without cutting the stock; then cut a slit downward along the stem about one inch, beginning at the middle of the cross cut; raise the bark where the incisions intersect, and slip the bud under so that the smooth upper edge of the bud will exactly meet and join with the cross incision; then press the lips of the bark down over the bud firmly, tie with a woolen string and the work is done.

It is well to cut off the branch just beyond the bud. If that is not done immediately after the budding, see that it is done late in the fall or early next spring before the new growth comes, so that the growing process will not be wasted on a part of the tree which is not needed.

Plainsman, Plant a Tree.

At a meeting of the American Nursery Association, held at the city of Chicago, last May, some excellent papers were read on various departments of nursery work. Mr. Charles A. Green, Secretary of the association, kindly sent out advance sheets of the report, from which we take the following article off forestry, by Mr. G. J. Carpenter, of Nebraska:

"We have learned in growing forest trees that the soil should be thoroughly pulverized to the depth of at least

twelve inches. Also that none but sandy or loam soil can be used successfully, as clay soil is liable to crust over so that winged forest tree seeds cannot break the crust.

"The seed should be planted thickly, so that they can help each other through the ground, then if a heavy rain should fall after the seed is planted and before it is up it is often necessary to go over the rows lightly with an iron-tooth rake and break the crust. The rows should be two feet apart. They should be cultivated with a harrow-tooth cultivator drawn by a steady horse, at least once a week.

"As we use nothing but new land we are obliged to weed the young plants but once or twice.

"All cultivation should cease by August 1, that they may have time to ripen before freezing weather sets in.

"We have found the Whitney seedling digger to be the best machine with which to dig seedlings, and that tarred twine is the best tying material, as willows and wool twine are liable to rot during the winter. We always tie in bunches of one hundred, and find it cheaper to count and grade during the winter, labor not costing us as much as in the fall or spring.

"Our friend Douglas has told you how to plant, but I will add that we have found a judicious mixture of varieties in planting to be very beneficial; for instance, light foliage trees like ash should be planted with heavy foliage trees like box elder, it being always an object to shade the ground as soon as possible to prevent weeds from growing and to produce humid atmosphere under the trees.

"We have learned that the German theorist who occupies the position of Commissioner of Forestry, aided by our Eastern journals, spends more time in procuring statements in regard to planting trees in Europe than in preparing statistics relative to the work in the United States.

"We copy from a leading New York journal as follows: 'It is to be regretted that the United States is doing so little toward replenishing the fast disappearing forests. Last year, according to the statistics procured from Washington, Great Britain planted 4,287,000, France 6,400,000, and Germany 13,000,000 deciduous forest trees.' As seen from the foregoing, these three great empires planted 23,687,000 trees, while the books of the nursery I represent will show an actual sale for the year ending April 20, 1889, of over 25,000,000—enough if planted four feet apart to make a timber belt around the globe, overlapping the three greatest European countries by over 1,000,000 trees.

"There are several other firms in Southern Nebraska whose sales run up into the millions, and there are to-day growing in three southern Nebraska counties, Saline, Fillmore and Jefferson, over 100,000,000 forest tree seedlings for the fall and spring trade.

"We mention these facts because we have learned that even in forestry planting the United States leads the world, and that the State of Nebraska alone leads all Europe, for her citizens have a motto, which is, 'Plainsman, plant a tree.'"

The Ivy Plant.

The ivy is my most popular house and out-door plant, and I naturally spend a great deal of time in studying its needs and conditions. It is a plant that will easily adapt itself to new surroundings, and it will grow almost anywhere under ordinary favorable conditions. I have it for a house plant in the winter time, hanging from a large basket suspended from the ceiling, and in the summer months I let it wind and twine around the pillars of the front porch. It also grows up over a small trellis work on the north side of the house, where it makes a pretty appearance winter and summer. For its beauty and constant greenness I cherish it above all other running vines. It will

grow in shady locations, even in rooms, where a dry atmosphere, dust, gas and light from coal stoves are in sufficient quantity to kill anything else in the plant line. In such a room it can be trained around pictures and along the ceiling, looped up here and there to prevent it from falling. It gives a cheerful appearance to a room, and in the winter reminds one of the freshness of spring.

The ivy needs but little care to keep it green and fresh. When allowed to grow at will out of doors it usually demands no attention from any one; but occasionally the scale attacks it and ravages leaves and vines. The scale attacks it oftener when growing in the house than when it is outside. As soon as these insects make their first appearance on the leaves, the entire branch should be washed with soap-suds, a tooth brush being used to scrape the scale from its hold. After every branch and leaf is thus washed, the whole should be syringed with clear water. If the vines are subjected to such treatment twice a year, the scales will not attack it, and the leaves will have a smooth, shiny appearance. The best soil for the ivy is garden loam and sand, with a liberal supply of bone meal mixed in. This is better than any special fertilizer for the plant and no amount of "fuss" will do the plant half so much good as these simple plans.

Wash it twice a year with soap-suds, and give it a good supply of bone meal for food, and nature will take care of the rest.—Helen Wharburdon, in Farm and Vineyard.

Sawdust is recommended as an excellent mulch for the gooseberry, which requires protection of that kind. The ground should be rich, but highly manured with fresh manure.

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.

Rheumatism
LUMBAGO • BACKACHE
HEADACHE • TOOTHACHE
SORE THROAT
SWELLINGS • SPRAINS
FROSTBITES • PROMPTLY AND PERMANENTLY CURED BY
St. Jacobs Oil
• BALTO-MD. THE CHAS. A. VOGELER CO.

HOROZONE!

The invariable destroyer of

Hog Cholera and Swine Plague

A discovery in Nature, certainly killing the cholera poison, without destroying the animal. In genuine hog cholera, which is an infectious bacterial disease, HOROZONE and this poison life and growth cannot live together in the same animal ten minutes until HOROZONE attacks it, feeds on it, and within four days has consumed every remaining particle of it.

It is the only form of life on which HOROZONE has a fatal action.

The owners of HOROZONE have been for many years large raisers of hogs in the West, in connection with both cattle and dairy interests, and always finding medical skill of slight avail in hog cholera, and believing that somewhere Nature held a cure, have been searching for it till they found it. For one year it has been submitted to every test from Pennsylvania to Colorado, and has never yet lost a single case of genuine cholera, where given within four days of first sickness.

HOROZONE will not cure measles or anything but just what it claims to cure.

Many letters from merchants of high standing in the country, leading farmers and hog buyers describing what they actually saw HOROZONE accomplish, what they have submitted to the editors of the KANSAS FARMER, and refer to them in corroboration for any statement made herewith. Free samples to breeders. Manufactured by

THE HOROZONE COMPANY,
General Office, 145 Broadway, New York.

Satisfactory terms will be made with responsible, energetic parties for local control and sale of HOROZONE.

Humphrey's Veterinary Specifics,

Condition Powders, and all Drugs, Lubricating Oils of all kinds. One of the best places to get these is of H. M. WASHBURN, Druggist, 223 Kansas Ave., Topeka, Kas.

CECIL'S FRUIT FARM AND NURSERY.
J. F. CECIL, Prop'r, North Topeka, Kas. Fruit and Ornamental Trees, Vines, Plants and Shrubs. Cherry Trees and Small Fruits a specialty.

KANSAS HOME NURSERY

OFFERS
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. GRIEBA, Drawer 28, Lawrence, Kas.

Hart Pioneer Nurseries

FORT SCOTT, KAS.
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.

Red Cedars! Hardy Catalpas!

FOREST TREE SEEDLINGS—all kinds, Fruit Trees and Plants, Mammoth Dewberry; Black Walnuts, \$1 per barrel. Lowest prices, largest stock! Write for free Price Lists.
Address **GEO. C. HANFORD**,
(Successor to Bailey & Hanford),
Makanda, Jackson Co., Ill.

POTTED AND LAYER STRAWBERRY PLANTS.

Haverland, potted, \$2 per 100; Jessie, Bubaeh No. 5, Warwick and Parry, \$15 per 1,000, potted. Windsor Chief, Capt. Jack, Crescent, Minor's Prolific, Jas. Vick, May King, Chas. Downing, potted, \$10 per 1,000. Layer plants, \$2 per 1,000.
H. H. KERN, Manager,
Bonner Springs Nurseries, Bonner Springs, Kas.

1889. 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. Correspond.

A. C. GRIEBA & BRO., Lawrence, Kas.

LA CYGNE NURSERY.

MILLIONS

Fruit Trees, Shade Trees, Small Fruits. Vines, Ornamental Trees, Etc.

TEN MILLION FOREST TREE SEEDLINGS.

ONE MILLION HEDGE PLANTS.

ONE HUNDRED THOUSAND TWO-YEAR APPLE TREES—Grown from whole root grafts.

FIVE THOUSAND IRISH JUNIPERS—Two-feet, SPLENDID WALNUTS, and other forest tree seeds and nuts, prime and fresh.

Full instructions sent with every order, and perfect satisfaction guaranteed. Send for full list and prices. Address

D. W. COZAD
Box 25, LACYGNE, LINN CO., KANSAS

BLAKE'S ANNUAL

WEATHER PREDICTIONS FOR 1890,

According to Mathematical Calculations, based on Astronomical Laws, will be ready for mailing in August, 1889. This will be a larger book than any I have heretofore issued. It will contain tables giving the maximum, minimum and mean temperature, in degrees Fahrenheit, for each month in the year. Other tables give the probable amount of precipitation in inches for each month in the year for each State and Territory, all of the large States and part of the Territories being subdivided into districts with a separate calculation for each, making 153 districts. The weather for part of Canada and the principal States in Europe is also given. The main features of my predictions have proved correct for the last fifteen years, though I cannot always make all the details correct. But they are sufficiently so to enable farmers to know what crops to plant and when so as to insure best results. My advice last year to seed extensively with winter wheat on account of a favorable winter and spring, and because this summer would be too dry for corn, has proved entirely correct. The planetary situation for both this year and next will be such as to produce great extremes, with only short spells of ordinary weather. Neither farmers nor merchants can conduct business successfully without knowing in advance what these extremes will be. To these ordering the book now I send by return mail a confidential letter of two pages giving the main features of the weather for 1890, as it will take me from two to three months to complete the details for the book; while many wish to know the main points now, so as to know whether or not to prepare for fall seeding and as to what plans for the future it is best to form. In future the weather predictions will be found exclusively in these books, and for that reason the Annual for 1890 will be very full and complete, with advice as to crops and prospects in each State. Price of the Annual for 1890 is \$2 per copy, and price of Weather Tables for 1889 is 50 cents per copy. Address

C. C. BLAKE, Topeka, Kansas.

IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice lime-stone soil; abundance of pure water; a delightful climate all the year; almost continuous sunshine; altitude 3,500 feet; healthiest locality in the U. S.; no consumption, no malaria. 20 acres will yield a competency. Write for particulars, naming this paper, to Pecos Irrigation & Investment Co., 24 Monroe St., Chicago, Ill.

The Poultry Yard.

Wattles versus Dakin.

In the matter of the dispute between H. A. Wattles, Baynesville, Kas., and W. O. Dakin, poultry breeder of Toledo, Ohio, the reader will remember that Mr. Wattles, in a communication to the KANSAS FARMER some weeks ago, said that some eggs which he had purchased from Mr. Dakin as pure Wyandotte, had hatched out not uniformly. To that communication the editor of the Toledo Blade, as the friend of Mr. Dakin replied, setting forth that Mr. Dakin thought there was something wrong somewhere on the part of Wattles, but that in order to set himself right had offered to send other eggs to correspond to the order of Wattles—pure Wyandotte.

Replying to the letter of the Blade man, Mr. Wattles sends in to the KANSAS FARMER office the correspondence between him and Mr. Dakin—copies of his two letters, and the original of Mr. Dakin's letter. He says he received only one letter from Mr. Dakin—the one sent here.

We have read all the correspondence on both sides, together with an affidavit of Mr. Dakin that his communication to the KANSAS FARMER is true in every respect. Mr. Dakin's letter having been referred to by his friend of the Blade, no confidence is violated by publishing it, so that readers may judge for themselves whether he proposed to forward other eggs. Here is the letter, word for word, as it was written.

TOLEDO, OHIO, May 7, 1889.

H. A. WATTLES, BAYNEVILLE, KAS.—Dear Sir:—I have deferred answering your letter, as I was having Wyandottes come off, to see how they were going to hatch. I cannot understand why you should have the result you claim to have. The day I received your letter I had twenty-two come off and not one single comb or feathered leg among them, and since then I have had twenty-nine more come off with the same results. Will you write me what number was on the eggs. There has been such good results from the eggs I have sent out and I consider myself still the reliable breeder that I am known as such all over the country. I have bred the Wyandottes long before they became so popular. I think your knowledge of them is not more than mine. Please do not task your brain too hard in writing articles for the various papers, as I can assure you by more than one judge in the country that there is no other birds any better of the kind than I keep.

Yours respectfully,

W. O. DAKIN.

Questions Concerning Poultry.

EDITOR KANSAS FARMER:—Can any of your readers tell me what is the trouble with my young turkeys and prescribe a remedy? They seemed all right when hatched, but in a few weeks would get a kind of rheumatism in their legs and feet, begin to draw up until they could not walk at all, and finally die, as the disease had reached the vital parts. They would eat heartily until the last. Had the best of care, and were never out until the dew was off. The later hatch seems to do better, so far at least.

What color should a bronze turkey be? Some say a light brown, others a jet black. My old ones are both nearly black, but some of the young ones are white, and have no others with them. Will some one please explain, and greatly oblige,

A CONSTANT READER.

Cayuga Ducks.

It seems strange that this valuable breed of ducks have been so long neglected. When it is better understood by breeders it will surely receive the attention it deserves. In point of economic merit it is equal to any other variety, and when in full plumage it is very handsome indeed. It is said to have been found in North America, and though for a time there were doubts as to its purity, some thinking it to be a cross between the Black East India and the Ruen, it has been now generally accepted as a distinct breed. It is in almost every respect the same as the

small variety just named, the exception being in point of size, for whereas the Black East Indian is a very small duck, the Cayuga is large, ranging from seven to ten pounds in weight, according to the sex and the manner of feeding. They are prolific layers, good feeders, and have the very obvious recommendation of being "stay-at-home" birds, not having the predilection for wandering away which characterizes some of the other varieties. The plumage is brilliant black throughout, and in carriage, shape and general appearance, they are regarded as one of the handsomest races of the duck tribe. The Cayuga duck is a good sitter, but a somewhat careless mother, and therefore it is regarded as the better plan to use hens for hatching out the eggs.

Prices of Good Poultry.

The buyer of poultry for breeding purposes should look to some things besides prices, whether they be high or low; something besides show records or score cards. If possible he should ascertain the breeder's methods and aims, whether his show record is the result of careful breeding or of judicious buying. Many a "clean sweeper" has been bought for a song because his ancestors were culls, and because in all probability his posterity will be culls also. Good records, high scores and fine feathers are valuable, but do not always indicate good breeders any more than a shiny hat indicates a fine brain or a large bank account. Oftentimes the would-be purchaser is anxious to secure birds of a certain strain, which is all right if he knows where to get them; but he should not overlook the fact that in too many cases the only claim that specimens have to a strain is that they roosted for a few nights in a certain breeder's poultry house. To establish a strain requires years of study and careful mating.

As a rule, the soil that suits wheat best is not that which we call new ground in a timbered country, but lime soil, after the excess of vegetable matter has been taken out by cultivation. The best wheat land is usually called limestone or clay soil. This soil is composed of say, one-third clay, one-third sand, one-third vegetable mold; this makes a good soil for almost anything. Wheat is a small feeder of lime, yet, strange to say, it does best on such lands. The prairie lands of the West bring the largest crops of wheat when freshly broken. This is largely owing to the freshness of the supply of potash.

TO MONTANA, OREGON AND WASHINGTON.

If you are going West, bear in mind the following facts: The Northern Pacific railroad owns and operates 987 miles, or 57 per cent. of the entire railroad mileage of Montana; spans the Territory with its main line from east to west; is the shortest line to Helena; the only Pullman and dining car line to Butte, and is the only line that reaches Miles City, Billings, Bozeman, Missoula, the Yellowstone National Park and, in fact, nine-tenths of the cities and points of interest in the Territory.

The Northern Pacific owns and operates 621 miles, or 521 miles, or 58 per cent. of the railroad mileage of Washington. Its main line extending from the Idaho line via Spokane Falls, Cheney, Sprague, Yakima and Ellensburg, through the center of the Territory to Tacoma and Seattle, and from Tacoma to Portland. No other transcontinental through rail line reaches any portion of Washington Territory. Ten days stop over privileges are given on Northern Pacific second-class tickets at Spokane Falls and all points west, thus affording intending settlers an excellent opportunity to see the entire Territory without incurring the expense of paying local fares from point to point.

The Northern Pacific is the shortest route from St. Paul to Tacoma by 207 miles; to Seattle by 177 miles, and to Portland by 324 miles—time correspondingly shorter, varying from one to two days, according to destination. No other line from St. Paul or Minneapolis runs through passenger cars of any kind into Idaho, Oregon or Washington.

In addition to being the only rail line to Spokane Falls, Tacoma and Seattle, the Northern Pacific reaches all the principal points in northern Minnesota and Dakota, Montana, Idaho, Oregon and Washington. Bear in mind that the Northern Pacific and Shasta line is the famous scenic route to all points in California.

Send for illustrated pamphlets, maps and books giving you valuable information in reference to the country traversed by this great line from St. Paul, Minneapolis, Duluth and Ashland to Portland, Oregon, and Tacoma and Seattle, Washington Territory, and enclose stamps for the new 1889 Rand-McNally County Map of Washington Territory, printed in colors.

Address your nearest ticket agent, or CHAS. S. FEE, General Passenger and Ticket Agent, St. Paul, Minn.

PAINLESS BEECHAM'S PILLS EFFECTUAL

For Weak Stomach—Impaired Digestion—Disordered Liver.

SOLD BY ALL DRUGGISTS.
PRICE 25 CENTS PER BOX.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.
B. F. ALLEN & Co., Sole Agents

FOR UNITED STATES, 365 & 367 CANAL ST., NEW YORK.
Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—but inquire first. (Please mention this paper.)

Dr. WHITTIER

ORIGINAL Dr. Whittier in Kansas City.
OLDEST Dr. Whittier in Missouri, and
Dr. Whittier in Kansas City who has
ONLY practiced medicine over 15 years.
CURES Syphilis, Scrofula, Rheumatism, Gout, Eczema, etc., causing ulcers, eruptions, pain in bones, swelling of joints, enlarged glands, mucous patches in mouth, falling hair, and many other symptoms. All poison thoroughly and permanently eradicated from the system by purely Vegetable Treatment.
Spermatorrhea, Impotency, Nervous Debility, etc., resulting from youthful indiscretion, excesses in matured years, and other causes, inducing some of the following symptoms, as dizziness, confusion of ideas, defective memory, aversion to society, blotches, eruptions, exhaustion, Varicose, etc., etc., are permanently cured.
URINARY, KIDNEY and BLADDER troubles, Weak Back, Incontinence, Gonorrhea, Gleet, Stricture, etc., are quickly and perfectly cured.
Consult the OLDEST DR. WHITTIER in person or by letter first. No promises made that age, integrity and experience do not justify. Medicines sent anywhere by mail or express, secure from observation. Consultation free and invited. Office hours, 9 to 5, 7 to 8; Sunday, 10 to 12.
NO FEE UNTIL CURED, from responsible persons.
NEW BOOK free. Address, H. J. WHITTIER, M. D.,
10 W. Ninth St., Kansas City, Mo.

The Western School Journal,

TOPEKA, KANSAS.

OFFICE STATE SUPT. OF PUBLIC INSTRUCTION,
TOPEKA, KAS., January 16, 1889.

To County Superintendents:—I have this day designated the Western School Journal as the official organ of this department, through which medium, by agreement with the editor of the Journal, I shall in each issue reach Superintendents, teachers and many school officers. This designation is complete evidence of my confidence that the Journal can be safely entrusted by Superintendents as a paper which should be in the hands of every teacher.

Very respectfully yours, GEO. W. WINANS,
State Supt. Public Instruction.

The Western School Journal publishes monthly all the opinions and decisions of the State Superintendent, Attorney General, and Supreme Court on questions relating to our schools. These opinions and decisions will be worth much more than the cost of the Journal to any school officer. According to an opinion given by the Attorney General, school officers have the power to subscribe for an educational journal and pay for it out of the district funds. Our regular rate is \$1.25 a year, but to district boards, if three copies be taken, we can make the rate \$1.00. Please remit by money order, postal note, or registered district order. Address
WESTERN SCHOOL JOURNAL,
Topeka, Kansas.

We can send the Journal and KANSAS FARMER one year for \$1.50; three subscriptions to the Journal and one to the FARMER for \$3.70.

Special Club List.

A SAVING OF 25 TO 50 PER CENT

Prices given below are for both Papers.

The KANSAS FARMER, one year, and the Breeder's Gazette—both.....	\$3.00
Kansas Democrat (Topeka).....	1.50
Home Breeder's Journal.....	2.00
Weekly Capital-Commonwealth.....	1.75
Weekly Kansas City Times.....	1.75
Poultry Monthly.....	2.00
Popular Gardener and Fruit-Grower.....	1.50
National Horse Breeder.....	1.50
Ladies' Home Companion.....	1.25
The Home Magazine.....	1.25
National Economist.....	1.50



Tickets

ON SALE

TO ALL

PRINCIPAL POINTS

EAST, WEST,

NORTH and SOUTH

—AT—

TOPEKA, KANSAS.

J. F. GWIN,
Depot Agent.

F. A. LEWIS,
City Ticket Agent,
525 Kansas Avenue.

A MAN

UNACQUAINTED WITH THE GEOGRAPHY OF THE COUNTRY WILL OBTAIN MUCH INFORMATION FROM A STUDY OF THIS MAP OF THE



Chicago, Rock Island & Pacific Ry.

Including Lines East and West of the Missouri River. The Direct Route to and from CHICAGO, ROCK ISLAND, DAVENPORT, DES MOINES, COUNCIL BLUFFS, WATERTOWN, SIOUX FALLS, MINNEAPOLIS, ST. PAUL, ST. JOSEPH, ATCHISON, LEAVENWORTH, KANSAS CITY, TOPEKA, DENVER, COLORADO SPRINGS and FUEBLO. Free Reclining Chair Cars to and from CHICAGO, CALDWELL, HUTCHINSON and DODGE CITY, and Palace Sleeping Cars between CHICAGO, WICHITA and HUTCHINSON.

SOLID VESTIBULE EXPRESS TRAINS
of Through Coaches, Sleepers, Free Reclining Chair Cars and (East of Mo. River) Dining Cars daily between CHICAGO, DES MOINES, COUNCIL BLUFFS and OMAHA, with FREE Reclining Chair Car to NORTH PLATTE (Neb.), and between CHICAGO and DENVER, COLORADO SPRINGS and FUEBLO, via St. Joseph, or Kansas City and Topeka. Splendid Dining Hotels west of St. Joseph and Kansas City. Excursions daily, with Choice of Routes to and from Salt Lake, Portland, Los Angeles and San Francisco. The Direct Line to and from Pike's Peak, Manitou, Garden of the Gods, the Sanitariums, and Scenic Grandeur of Colorado.

Via The Albert Lea Route.
Solid Express Trains daily between Chicago and Minneapolis and St. Paul, with THROUGH Reclining Chair Cars (FREE) to and from those points and Kansas City. Through Chair Car and Sleeper between Peoria, Spirit Lake and Sioux Falls via Rock Island. The Favorite Line to Watertown, Sioux Falls, the Summer Resorts and Hunting and Fishing Grounds of the Northwest.

The Short Line via Seneca and Kankakee offers facilities for travel to and from Indianapolis, Cincinnati and other Southern points.

For Tickets, Maps, Folders, or desired information, apply at any Coupon Ticket Office, or address

E. ST. JOHN, JOHN SEBASTIAN,
Gen'l Manager. Gen'l Tkt. & Pass. Agt.
CHICAGO, ILL.

STATE LINE

To Glasgow, Belfast, Dublin and Liverpool

FROM NEW YORK EVERY THURSDAY.

Cabin passage \$35 to \$50, according to location of stateroom. Excursion \$65 to \$80. Steerage to and from Europe at Lowest Rates.

AUSTIN BALDWIN & CO., General Agents,
58 Broadway, New York.
JNO. BLEGEN, Gen'l Western Agent, 164 Randolph St., Chicago.

ROWLEY BROS., Agents at Topeka.

JOB PRINTING!

Quick Time. Reasonable Prices.
Large Line of Chromo Cards, \$2.50 per 1,000 up.

RUBBER STAMPS.
Every Kind and Style.

STEEL STAMPS AT 15¢ PER LETTER.

Check Protectors and Perforators.

Notary and Corporation Seals.

BAKING & DOUGLASS, Topeka, Kas.

Alliance Department.

This Department of the KANSAS FARMER has been designated as the authorized official State organ of the Farmers' Alliance and Co-operative Union for the State of Kansas.

It is also the official department of the District Alliance of Shawnee, Jefferson and Jackson counties.

"OBJECTS OF THE ALLIANCE."

Under the above title our worthy president of the State Alliance publishes an article in the FARMER of June 27 which though embodying much food for reflection, yet we apprehend stops short of the mark at which it is aimed. The writer seems to fear that he is treading on treacherous and uncertain ground, and hesitates to positively and unequivocally set forth the absolute purposes of the order and the means by which they may be attained. He hopes that "such of the brethren and others who do not fully agree with him will remember that, 'To err is human, and to forgive divine.'"

He may rest assured that if this article bears evidence of any sin that merits forgiveness it is one of omission rather than commission. Farmers and laboring men all over this great land of boasted liberty are painfully conscious of the existence and power of the combinations of capital that have monopolized nearly every industry except that of agriculture; and while they have reduced the price of raw material they have at the same time advanced that of the matured product to the material detriment of all classes of consumers. They are conscious that existing laws are framed in the interest of these monopolies, and that State and national Legislatures, and too frequently the judiciary, are influenced by selfish interests to maintain this unnatural and unjust supremacy of capital. These are facts of common knowledge, and the masses of the people groaning under these seemingly legalized oppressions, are anxiously scanning every movement that seems to promise any hope of relief. Hence the "flood of inquiries that are pouring in upon the officers of the Alliance."

It would seem that under these circumstances the response to these inquiries should have no uncertain sound, and that it should be characterized by an assurance that will prompt such a rally to our standard as this world has never witnessed before, preliminary to any proposed peaceful revolution. We should proclaim to the world that the great, fixed and unalterable purpose of the Farmers' Alliance and Co-operative Union of America is the absolute overthrow of all monopolies and legalized systems of robbery and oppression, the restoration of industrial pursuits to a competitive basis, the emancipation of the producing and laboring masses, and their elevation to the legitimate plain to which the dignity of their avocations entitles them. All other objects are merely subsidiary to these. Brother Clover dwells at some length upon the educational features of the order. These are all very good and eminently proper, but it should be stated in this connection that the object of this educational system is to awaken the understanding of our membership to the necessity and the eminent propriety of availing ourselves of the means within our power for the attainment of the desired means of relief.

The limits of this article will not permit a detailed discussion of existing methods of extortion, or the available means of relief. It is sufficient for our present purpose to briefly indicate what may be more elaborately detailed in the future. The first essential to the success of the Farmers' Alliance is the absolute and irresistible force of numerical strength. Farmers outside of the order in too many instances are waiting to see what the Alliance shall accomplish before they unite with it, and members of the order are many times too impatient to see something done to justify their hopes of relief. It should not be forgotten for a moment

that until the great mass of the farmers and laboring men are enrolled, and present an unbroken front to the enemy, we cannot hope for victory; and all measures attempted prior to such enrollment, though they may yield some good results, can only give promise of partial success.

Let the farmers in all unorganized counties awaken from their lethargy, and bestir themselves in this matter. Let our members who know the objects and purposes of the order exert themselves to extend its limits. Let Kansas take her stand beside those States that are now practically solid in this organization, and we will not have long to wait for results. By the invincible force of numbers we must succeed. Do you ask by what means we are to attain our ends? These are too numerous to be more than hinted at within the limits of this article. By the establishment and maintenance of an exchange we may hope to control and market the products of the farm independent of the knaves and gamblers who have for years manipulated the grain and stock markets of the world. We may likewise hope to impart some wholesome lessons to the obtuse understanding of professional politicians and the official (servants?) of the dear people. I can imagine that I hear tremulous murmur of the non-partisan character of the Alliance, at the mention of any political action. The order is most unquestionably non-partisan in its character, in the strictest sense, but not therefore necessarily non-political. It would be well for politicians to discern the significance of this distinction. It is in its strictly non-partisan character that its great political strength consists; and when the proper time shall come it will make itself manifest in no uncertain manner. We must have no weak knees in the political arena. The officials elevated to responsible positions by the 80,000 majority of the dominant party in our State have many of them failed to redeem the pledges given to their constituents before the election. This is signally true of the legislature, and it is incumbent upon the people to see that the next representative body that assembles at the Capital to enact laws for the general weal shall be chosen from the ranks of the masses whose interests they are to represent. The writer of this article has always been a republican, and voted with that party at the last election, but in view of the signal failure of our last legislature to enact any measure looking to the relief of the people from their many burdens, former party affiliations sink into insignificance in relation to any future contest; and in this declaration I am confident that I voice the sentiment of a majority of the people in this district, at least. Our national legislature has yet to act for the redemption of its pledges; and if another adjournment of that body ensues with no effectual enactment for the suppression of the greedy monopolies that have paralyzed the industries of the nation, and are practicing systematic robbery upon the people, it is safe to predict that the next election will witness such a political revolution as this country never witnessed before. The Farmers' Alliance and the kindred orders that have been consolidated with it under the general title of the Farmers' and Laborers' Co-operative Union now numbers, in the aggregate over 3,000,000 members. The various labor organizations of the country with kindred interests number undoubtedly as many more. These all unite in a common demand of existing authorities for redress of existing wrongs; and the "powers that be" will do well to observe the significance of this just demand.

This theme is too large for the space it can reasonably claim in the FARMER at this time, and the reader may pursue the thoughts herein suggested at his own leisure and by his own methods. It is hoped that enough has been said to awaken increased interest in the

W. B. WILHELM & CO., WOOL Commission Merchants.

All goods sold on day of arrival, unless otherwise instructed. Account sales and checks mailed promptly.

WOOL HIDES, FURS, SHEEP PELTS, ETC. CONSIGNMENTS SOLICITED.

W. B. WILHELM & CO., Formerly HAGEY & WILHELM, Wool Commission Merchants.

4 and 6 North Commercial St., ST. LOUIS, MO.

References:—Boatmen's Saving Bank, Dunn's Mercantile Agency, Bradstreet's Mercantile Agency.

growth of the order and prompt to renewed effort of its members for its extension into unorganized counties.

S. M.

Weather-Drop Bulletin

Of the Kansas weather service in co-operation with the United States Signal Service, for the week ending Saturday, July 13, 1889.

Precipitation.—Good rains have fallen in all portions of the State this week. An excess occurs in the extreme southwest, culminating in Meade and Clark, where four inches fell. This excess extends diagonally across the State to and through the northeast counties, culminating again in Brown and Atchison where three inches, and over, fell. Three inches also fell in Stafford, Pratt, and the contiguous portions of Kingman, Barber and Harper. A belt of heavy rainfall, one inch and over, extends also through the northern counties. There is a deficiency in the central counties of the western division, and in Lincoln, Saline, Ottawa, Clay, northern part of Riley, and Pottawatomie, also in the southeastern counties.

Temperature and sunshine.—The temperature ranged above the average the first days of the week, and hot winds prevailed on the 5th, 6th and 7th as far east as Reno and Ellsworth, heating wood, metals, etc., above the temperature of the human body. The rains of the 7th, 8th and 9th reduced the temperature below the normal; on the 11th it again rose above the normal, but the 12th found it generally below again. There has been slightly less than the usual amount of sunshine this week in Stafford, Sumner, from southern part of Woodson to the north line of the State and from Ottawa to Nemaha and Brown. An excess in Jewell, from Gove to southern part of Lincoln, in Haskell, Edwards, Butler and Montgomery, elsewhere an average amount prevailed.

Results.—The general effects of the meteorological conditions this week are favorable. The hot winds of the 5th, 6th and 7th began to affect vegetation in localities, but the general rains which followed returned the crops to their proper condition and color. The wheat harvest is about over, the oats harvest nearly so. Threshing has begun in all parts of the State. Corn is tasseling in all parts of the State, is silking as far north as the Smoky Hill and the Kaw, while in the southern counties it is in the "roasting ear" stage; in all sections it has a healthy dark green color, the upland presenting even a better color than the bottom corn.

A very excellent quality of peach is now ripening in the central and more northern counties. Potatoes are generally of good size and quality. This week is generally reported "a splendid week." Corn has made a magnificent growth. Rust has lightened oats crop in places.

T. B. JENNINGS,
Signal Corps, Asst Director.

THE MARKETS.

(JULY 13.)

	GRAIN.		LIVE STOCK.			
	Wheat.	Corn.	Cattle.	Hogs.	Sheep.	
New York	83 1/2	42 1/2	10 1/2	10 1/2	10 1/2	
Chicago	83 1/2	42 1/2	10 1/2	10 1/2	10 1/2	
St. Louis	83 1/2	42 1/2	10 1/2	10 1/2	10 1/2	
Kansas City	83 1/2	42 1/2	10 1/2	10 1/2	10 1/2	

Patents.

Higdon & Higdon, 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 June 25, 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.

Stump-extractor—Jacob H. Terry, Phillipsburg.
Gauge for saws—Henry Saunders, Perry.
Metal wheel—Louis J. Crenelius, St. Louis.
Incorustation preventive—Davis R. Boogher, St. Louis.
Fence—Marion J. Barrow, New Bloomfield.
Straw-stacker—Pearley J. Sprague, Adrian.
Brake for locomotives—Frank Lansberg, St. Louis.
Coasting-sled—Albert I. Gallway, St. Louis.
Paper file—Robert G. Hearne, Kansas City.
Grain-retarder and regulator for harvesters—Pearley J. Sprague, Adrian.
Tongue for handling merchandise—Albert J. Wood, Kansas City.
Slat-fastener—Andrew Franz, Creighton.
Device for attaching pickets to wire fences—Reuben F. Wilcox, Kansas City.
Steam engine governor—Fremont E. Gaylord, Kansas City.

KANSAS.

Adjustable miter-bevel—Matthias Gates, Wichita.
Car coupling—Austin Elliott, Kansas City.
Kitchen cabinet—Supple Pecord, Concordia.

NEBRASKA.

Account book—Junius Rogers, Fremont.
Handle—Gustav A. Byor, Edgar.
Pruning-shears—Daniel B. Bentley, Geneva.

Kansas Fairs for 1889.

Kansas State Fair, Topeka, September 10-21.
Anderson county, Garnett, August 27-30.
Atchison District, Atchison, September 10-16.
Barber county, Kiowa, October 15-17.
Brown county, Hiawatha, September 3-7.
Chase county, Cottonwood Falls, September 4-6.
Cheyenne county, St. Francis, September 25-28.
Clay county, Clay Center, September 1-4.
Coffey county, Burlington, September 9-13.
Crawford county, Girard, September 24-27.
Ellis county, Hays City, September 10-13.
Ford county, Ford, September 18-20.
Franklin county, Ottawa, September 3-7.
Graham county, Hill City, September 26-28.
Greeley county, Horace, September 24-26.
Harvey county, Newton, September 10-13.
Jefferson county, Oskaloosa, September 10-13.
Jewell county, Mankato, September 10-13.
Lincoln county, Lincoln, September 25-27.
LaCygne District, LaCygne, September 24-27.
Linn county, Mound City, September 16-20.
Linn county, Pleasanton, September 10-13.
Marion county, Marion, October 2-4.
Morris county, Council Grove, September 23-26.
Mitchell county, Cawker City, September 24-27.
Nemaha county, Seneca, September 17-20.
Neosho county, Erie, October 1-3.
Osage county, Burlingame, September 10-13.
Ottawa county, Minneapolis, October 9-11.
Osborne county, Osborne, September 17-20.
Plainville fair, Plainville, September 24-27.
Phillips county, Phillipsburg, September 17-20.
Rawlins county, Atwood, October 1-3.
Reno county, Hutchinson, September 11-20.
Rush county, LaCrosse, September 18-20.
Saline county, Salina, September 24-27.
Sheridan county, Hoxie, September 26-27.
Sherman county, Goodland, September 10-13.
Smith county, Smith Center, September 18-21.
Sumner county, Wellington, August 27-30.
Woodson county, Neosho Falls, August 20-23.

The Cool Resorts of the Northwest

Are most luxuriously and comfortably reached in the celebrated Vestibuled Compartment Cars recently introduced on the popular Chicago, St. Paul & Kansas City railway. The press and public are agreed that these Compartment Sleeping Cars are unequalled by any sleeping cars in the world for luxury, comfort, privacy and perfect ventilation. The berths extend crosswise instead of lengthwise of the car, thereby avoiding the oscillatory and uncomfortable motion peculiar to the old-style sleeping car. One night's ride to or from St. Joseph, St. Paul and Minneapolis, or between any other points reached by this excellent railway, including Dubuque, Des Moines, and many other towns and cities in the States of Illinois, Iowa, Minnesota and Missouri, will convince any person of the superior merits of these cars. You can do a great deal worse, but you cannot do better than to travel over the Chicago, St. Paul & Kansas City railway.—Exchange.

Topeka Weather Report.

For week ending Saturday, July 13, 1889:

Date.	Thermometer.		Rainfall.
	Max.	Min.	
July 7	83.9	70.8	..
" 8	88.9	69.9	.34
" 9	89.4	67.8	1.63
" 10	82.8	63.8	..
" 11	88.8	69.0	..
" 12	87.0	68.0	.77
" 13	92.0	70.6	..

The efficacy of "blood" in brood-mares is quite as noticeable as in the sires, and always will make an important showing in the offspring.

Your soil will produce weeds and grass unless you follow the crops taken off with something else. Turnips, rutabagas and mangel wurzels are reasonable crops to follow many of those that are being gathered, and will add immensely to the health and comfort of the stock next winter.

THE STRAY LIST.

HOW TO POST A STRAY.

THE FEES, FINES AND PENALTIES FOR NOT POSTING.

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

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

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

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

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

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

Any person taking up an estray, must immediately advertise the same by posting three written notices in as many places in the township giving a correct description of each stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

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

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

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

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

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

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

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

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

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

FOR WEEK ENDING JULY 3, 1889.

Pawnee county—James F. Whitney, clerk.

MARE—Taken up by Mathew Wilson, in Keyville tp., June 2, 1889, one bay mare, both hind feet white, star in forehead; valued at \$30.

Chase county—J. S. Stanley, clerk.

MARE—Taken up by W. W. Kurtz, in Diamond Creek tp., P. O. Clements, June 5, 1889, one sorrel mare, 6 years old, no marks or brands; valued at \$50.

Johnson county—W. M. Adams, clerk.

MULE—Taken up by Geo. W. Davison, in Monticello tp., P. O. Holliday, one dark bay mare, 14½ hands high, 4 years old, stripe across the shoulder, and part way along the back.

Crawford county—J. C. Gove, clerk.

PONY—Taken up by J. W. Towery, P. O. McCune, June 18, 1889, one brown mare pony, white face, branded E on left shoulder; valued at \$35.

STEER—Taken up by W. H. Richardson, P. O. Girard, April 25, 1889, one red steer, 1 year old; valued at \$9.

STEER—By same, one red steer, 1 year old, white on head, feet and belly; valued at \$6.

FOR WEEK ENDING JULY 10, 1889.

Johnson county—W. M. Adams, clerk.

HORSE—Taken up by John Marty, in Shawnee tp., P. O. Glenn, one gray horse, 15½ hands high, weight 1,050 pounds, all four feet white, tail light color, forehead light, 7 years old, no marks or brands; valued at \$60.

HORSE—By same, one gray horse, 15 hands high, weight 1,050 pounds, scar on left hip near the rump, about six inches long, all his legs dark color; valued at \$60.

Shawnee county—D. N. Burdge, clerk.

COLT—Taken up by W. H. Oswalt, in Mission tp., June 24, 1889, one bay mare colt, 1 year old, left hind foot white, white on right foot, white spot in face; valued at \$20.

Geary county—P. V. Trovinger, clerk.

STEER—Taken up by Conrad Schmidt, in Junction City, June 4, 1889, one red steer, 2 years old, white spots on belly and right flank; valued at \$12.

HEIFER—By same, one red and white heifer, 2 years old; valued at \$12.

HEIFER—By same, one black and white heifer, 2 years old, right horn broken off; all three branded K on right hip; valued at \$12.

Leavenworth county—J. W. Niehaus, clerk.

2 MARES—Taken up by Thos. Mussett, in Kickapoo tp., (Missouri river bridge), May 18, 1889, two mares, one 15 hands high and the other 12; one bay, small white spots on one side, 4 years old, and the other black, white face, one hind foot white, 3 years old; one branded S.B. on left shoulder, injured in fetlock joints; one valued at \$35, other \$20.

FOR WEEK ENDING JULY 17, 1889.

Anderson county—S. Durall, clerk.

PONY—Taken up by T. A. Osborn, in Lincoln tp., June 19, 1889, one bay horse pony, sharp shod all round, about 10 years old, star in forehead, branded H on left shoulder and W on left side, unknown brand on left jaw, saddle marks; valued at \$35.

Wyandotte county—Frank Mapes, clerk.

MARE—Taken up by T. A. Bales, in Delaware tp., (P. O. Edwardsville), June 6, 1889, one sorrel mare, light mane and tail, blaze face, slit in right ear; valued at \$15.

HORSE—Taken up by C. F. Proebestel, in Shawnee tp., (P. O. Rosedale), June 15, 1889, one bay horse,

blaze in face, left hip down, knot on left hind foot; valued at \$15.

Montgomery county—G. W. Fulmer, clerk.

MULE—Taken up by R. O. Lacy, in Drum Creek tp., June 5, 1889, one roan mare mule, 14 hands high, bad eyes, scar on left fore leg, 15 years old; valued at \$15.

Greenwood county—J. W. Kenner, clerk.

BULL—Taken up by George Felter, in Twin Groves tp., July 10, 1889, one red bull, 4 years old, white spot in forehead, three bars on right hip, horn partly broken.

Notice to County Clerks!

We will regard it a personal favor if each County Clerk will mail us, at the first opportunity, a complete list of breeders (with their postoffice addresses) of thoroughbred horses, cattle, swine, sheep and poultry; also the name and location of every creamery and manufactory in his county. When we have a complete list we will favor you with the directory for the State. KANSAS FARMER CO., Topeka, Kas.

HENRY W. ROBY, M. D.
C. F. MENNINGER, M. D.,

Surgeons.

118 WEST SIXTH AVENUE, TOPEKA, KANSAS.

J. P. LEWIS, M. D.,

519 KANSAS AVENUE,

TOPEKA, - - - KANSAS.

Special attention given to General Orthopedic and Gynecological Surgery.
OFFICE HOURS—10 to 12 a. m., and 2 to 4 p. m.

TOPEKA
Commercial Security Co.,
307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA
Investment & Loan Co.
TOPEKA, KANSAS.

FARM LOANS A SPECIALTY
Low rates of interest. Money paid when papers are accepted. Write for terms.

PATENT
EASY-FITTING
CHAS. BENNETT,
PRACTICAL OPTICIAN
511 Kansas Ave., Topeka.
Carries a full line of Optical Goods. Examination of eyes for glasses, free.

DRS. MULVANE, MUNK & MULVANE.
OF THE
TOPEKA
Medical and Surgical
INSTITUTE

Make a specialty of all Chronic and Surgical Diseases. We have practiced medicine and surgery here for fifteen years, and during that time have treated successfully hundreds of chronic cases which had resisted the skill of local physicians.

WE CURE ALL FORMS OF CHRONIC DISEASES.

Remove tumors, cure cancers without the knife, cure piles without knife or ligature. ALL DISEASES peculiar to women speedily and successfully treated. We remove tape-worm entire in from two to four hours. If you have any chronic or private disease, you will find it to your interest to write us. Correspondence free and confidential.

Refer by permission to Bank of Topeka; John D. Knox & Co., Bankers, Topeka; Citizens Bank, North Topeka; American Bank, North Topeka.

Send for printed list of questions.
DRS. MULVANE, MUNK & MULVANE,
110 W. 6th St., Topeka, Kas.

THE GEO. W. CRANE PUBLISHING Co., Topeka, Kas., publish and sell the Kansas Statutes, Kansas and Iowa Supreme Court Reports, Spalding's Treatise, Taylor's Pleading and Practice, Scott's Probate Guide, Kansas Road Laws, Township Laws, Lien Laws, &c., and a very large stock of Blanks, for Court and other purposes, including Stock Lien Blanks, Conveyancing Blanks, Loan Blanks, &c., &c. For fine printing, book printing, binding, and records for County, Township, City and School Districts, this is the oldest and most reliable house in the State.

TOPEKA BUSINESS COLLEGE
AND
SHORTHAND INSTITUTE
521 & 523 QUINCY ST.
E. E. ROUDEBUSH,
BUSINESS MANAGER.
TOPEKA, KANSAS.
Send for Catalogue and College Journal.

HALL & O'DONALD LITHOGRAPHING CO.,
Lithographers, Printers and
Blank Book Manufacturers.

A full line of Conveyancing and Justices Blanks in stock. Lithograph Bonds and Certificates of stock a specialty. Stock Catalogues got out on short notice. Write for samples and prices.

110 and 112 EAST EIGHTH AVE., TOPEKA, KAS.

THE ANGLO-KANSAN LAND INVESTMENT CO.
521 Kansas Ave., Topeka, Kansas.

Improved and Unimproved Lands in Eastern and Central Kansas bought and sold. We invite the particular attention of all whose circumstances are such that they MUST SELL FOR CASH within the coming six months. Quick sales assured if prices named are bargains. Send us full description and plat of farm. Must have exclusive sale for four months.
C. R. SMITH, Secretary.

EUROPEAN OFFICES—LIVERPOOL AND LONDON.

- PATENTS -

Obtained in the United States, Canada, and all foreign countries. Official Gazette of the Patent Office received weekly, and all Patent Laws on hand and free for consultation to clients. The largest and best selected Patent Library west of Washington, D. C., embracing a complete list of all patents issued from the organization of the office, 1790, to the present time.

Rejected Cases, Appeals, Re-issues, Caveats, Assignments, Forfeited Cases, Design Patents, Trade Marks, Labels, Copyrights, Interferences and Infringements attended to with skill and fidelity, by

JAMES G. YOUNG,

ATTORNEY AT LAW, NOTARY PUBLIC, SOLICITOR OF PATENTS, and UNITED STATES CLAIM AGENT,
Office, Rooms 62, 63 and 64 Hall Building, 9th and Walnut Streets,
Kansas City, Mo.
Telephone 1829.

JOHN W. CAUGHEY.
FINE DESIGNING AND ENGRAVING.
HORSES; CATTLE; SHEEP; HOGS & POULTRY A SPECIALTY.
Send for samples of Electrotype we have for sale.
Nothing sells stock as quickly as a fine cut.
49 FIFTH AVENUE, PITTSBURGH, PA.
ENGRAVING for Stockmen, Manufacturers and all who require cuts. A fine line of Electrotype of Horses, Cattle, Sheep, Hogs and Poultry for sale. Send stamp for samples. We have the best and cheapest. Send for prices.

A. J. CHILD,
NO. 209 MARKET STREET,
ST. LOUIS MO.
Pays particular and personal attention to the handling of
WOOL

Consignments solicited and highest market prices given. Prompt remittances made. Circulars, market reports and sacks furnished free. Twine, shears, rock salt and sheep dip supplied.

WOOL!
WESTERN WOOL COMMISSION CO.
ST. LOUIS, MO.
Consignments of Wool Solicited.
Cash returns made within six days after receipt of wool. Liberal Advances made on Consignments.
References: Dun's and Bradstreet's Agencies and Local Banks.
Send for Circular and Price Current.

If you want a **BUGGY, ROAD-CART** or **HARNESS**, write for our Exhibition offer, and see the **BARGAIN** we give regardless of cost, to advertise our goods. It will pay you. Send 6 cts. stamps for full information.
UNION MACHINE CO., Philadelphia, Pa.



H. GIVEN HAGEY, FOUNT P. HAGEY, FOREST HAGEY, BEN M. HAGEY, THOS. J. HAGEY, LEWIS W. HAGEY.
HAGEY BROTHERS,
Successors to
HAGEY & WILHELM,
WOOL
Commission Merchants,
220 N. Commercial St., ST. LOUIS, MO.

General Agents for Cooper's Sheep Dip. References:—Boatmen's Bank, Dunn's Mercantile Agency, Bradstreet's Mercantile Agency. Full returns guaranteed inside of six days.

NO POOL FOR US. We deal direct with the Consumer.

We want to state here that we do not belong to any so-called "Pool" or "Trust," but stand on our own footing and sell our celebrated Oak Brand Harness at live and let live prices. Beat these prices if you can:

Our No. 1 single buggy harness.....\$ 5.75
Our No. 4 single buggy harness..... 9.75
Our No. 16 double buggy harness..... 15.00
Our No. 18 double buggy harness..... 18.00
Our No. 21 double farm harness..... 18.50

All our harness are made from No. 1 Oak-Tanned Leather and are hand-made. Satisfaction guaranteed or money refunded. Address all orders to

H. A. EVERT HARNESS CO.,
513 W. 7th St., Sioux City, Iowa.

NEWSPAPER ADVERTISING
In any part of the U. S. or CANADA, can be done to your ADVANTAGE by sending for our LISTS and PRICES before making your contracts, whether for ONE paper or MORE. ESTIMATES and INFORMATION FREE.
Address **MORTON & BLOOM,** 69 Dearborn St., Chicago, Ill.

W. T. DOYLE, MARYVILLE, MO.

Breeder of choicest strains of **POLAND-CHINA SWINE**. 150 pigs by such noted boars as Bravo C. 287 (S), Spartacus 2839 (A), Maryville's Best 2821 (S), Keno 524 (S), and Goldust 1st 1980 (S), and out of sows, all of gilt-edge breeding. Special express rates. Inspection invited and correspondence promptly answered.

MAPLE GROVE HERD

WM. PLUMMER, breeder and shipper of **POLAND-CHINA SWINE** and Light Brahma Fowls of the best strains. 25 choice sows bred to three first-class boars for the season's trade. Young stock for sale, and eggs in season. Farm three and a half miles southwest of Osage City. **WM. PLUMMER, Osage City, Kas.**

MAINS'
Fountain Head
and
Storm Cloud
Claim this Space.

Mains' Herd of Pure-bred **POLAND-CHINA HOGS**, of as fashionable strains as can be had. All recorded in the Ohio Poland-China Record. Fall pigs of both sexes and spring sows bred and to breed for sale. A large selected herd of sows (most of which were bought in Ohio) new bred for season of 1888 to No. 1 boars of as good royal breeding as there is in the country. **JAMES MAINS, Oskaloosa, Jefferson Co., Kas.**

HIGHLAND HERD POLAND-CHINAS
Deltrich & Gentry, Ottawa, Kas.

Such strains as Corwin, Give or Take, Hoosier Tom, Dutchess, Lady Maid, I. X. L., and others represented. 75 pigs from 6 boars. Orders booked now for spring pigs. Correspondence answered promptly. Mention **KANSAS FARMER**.

THE GOLDEN BELT HERD OF
Thoroughbred Poland-Chinas

Two hundred and fifty choice Spring Pigs new ready to ship, at prices lower than ever. Order new, and secure selections from either sex, or pairs, tries, or small herds, not skin. Stock shipped from here over either the A. T. & S. F. Co. Pacific or St. Louis & San Francisco R. R. All breeders registered in American P. C. Record. Pedigree with each sale. **F. W. TRUEDELL, Lyons, Kas.**

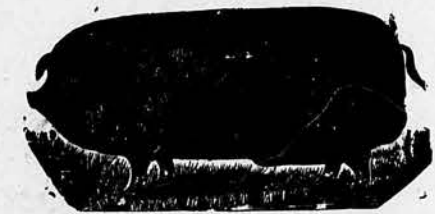
JACKVILLE HERD OF POLAND-CHINAS
J. S. RISK, Prop'r, WESTON, MO.



I have a fine lot of early pigs farrowed January and March. I can furnish very choice pigs not skin. Pigs sired by all different boars. Write for prices or call and see stock.

Rome Park Stock Farm

T. A. HUBBARD,
Rome, Sumner Co., Kansas.



Show yard of Poland-Chinas and Large English Berkshires. I am breeding the best and leading strains, including Gracefuls, U. S., Black Bess, I. X. L., Corwins, Sallies, Bella Donnas, Duchess, Dukes and Champions. The best of blood, with extra size and individual merit. Write or come and see me. Two hundred pigs for sale. Am using thirteen extra good boars.

SELECT HERD OF LARGE BERKSHIRES

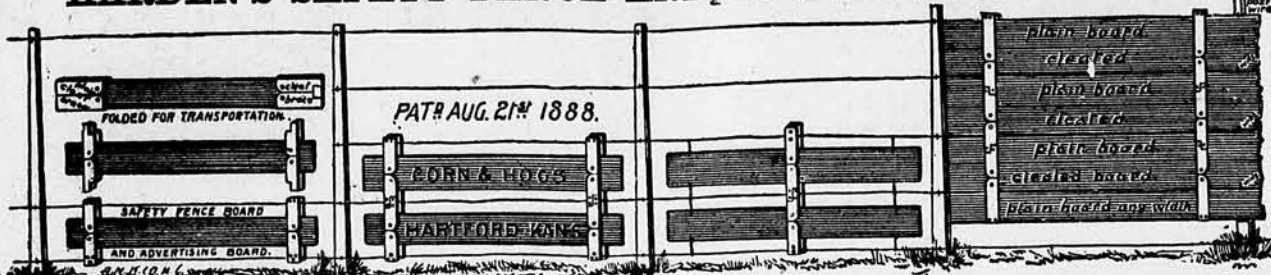
Of the Royal Duchess, Sallie, Hillside Belle, Chamer, Stumpy, Fashion, Queen Betsy, and other families of fine, large, fleshy qualities, with such top breeding as British Champion, Longfellow and Sovereign Duke, and the noted young show boar **PERLESS 18845** at head of herd, the property of **G. W. BERRY, Berryton, Shawnee Co., Kas.** Located on the K. N. & D. R. R., nine miles south-east of Topeka. Farm adjoins station. Write for prices and free catalogue. Orders taken now for spring pigs from show sows.

ENGLISH BERKSHIRES.



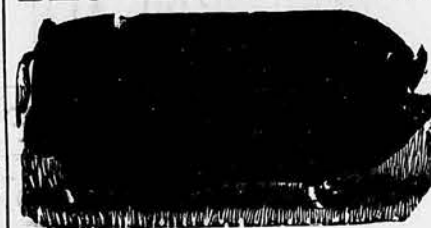
THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated **HOPEFUL JOE 4889**, and has no superior in size and quality nor in strain of Berkshire blood. Also **Plymouth Rock Chickens**. Your patronage solicited. Write. **M. B. KEAGY, Lock Box 784, Wellington, Kas.**

HARDEN'S SAFETY FENCE AND ADVERTISING BOARD.



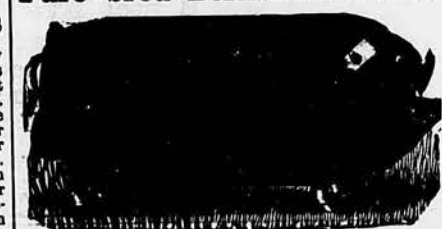
This engraving only shows part of its forms of application. A hatchet, saw, square, brace and bit, and wire nails only are needed in its construction. It is at once economical, complete, easily made, taken down and folded up, and can be put on fence again or stored away, being always ready for use. Whenever it is desired to use these improved attachments in a particular field, they can be applied, and then afterwards changed to another field, so that a farmer having enough for eighty rods of fence can, as circumstances require, practically have his whole farm hog-tight. Circulars free. Agents wanted in every county in the United States. Send one dollar (\$1), with numbers of your land—section, township, range, etc., and receive deed to one farm right. This offer is made for a short time only to introduce it in your neighborhood. As soon as a company is formed and our Agents are at work the price will be \$5 for each Farm Right. **W. I. F. HARDEN, Box 1, Hartford, Kas.**

The Echo Herd.



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

PLEASANT VALLEY HERD OF
Pure-bred Berkshire Swine.



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

Holstein-Friesian Cattle.

I have a choice herd of these justly-celebrated cattle of all ages. Also some nice grades, for sale at reasonable prices. Personal inspection invited. Call on or address **JNO. D. PRYOR, Winfield, Cowley Co., Kas.**

HOLSTEIN PARK.



WM. A. TRAVIS & SON, North Topeka, Kas., breeders of the best strains of **HOLSTEIN-FRIESIAN CATTLE**. Five registered young bulls for sale cheap on easy terms, from 1 month to 2 years old, and other sex when wanted.

SHANNON HILL STOCK FARM.

GLICK & DEVIN, Atchison, Kansas, Breed and have for sale Bates and Bates-topped **SHORT-HORNS.**

Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane, and other fashionable families. The grand Bates bulls imp. 8th Duke of Kirklevington No. 41798 and Waterloo Duke of Shannon Hill No. 89879 at head of herd. Choice young bulls for sale now. Correspondence and inspection of herd solicited, as we have just what you want and at fair prices. Address **LUTHER DEVIN, Manager, Atchison, Kansas.**

Walnut Grove Stock Farm

Western Headquarters for **ENGLISH SHIRE** Stallions and Mares and **HEREFORD CATTLE**. These animals have been selected with the greatest care by ourselves from the most noted studs and herds, both in England and this country. Any one wishing first-class animals should give us a call. Terms favorable and prices low. Will trade for steers. Farm two and a half miles northeast of town and 100 miles west of Topeka on Santa Fe railroad. Write for particulars to **MAKIN BROS., Florence, Marion Co., Kas.**

MORGAN HORSES Western Headquarters for Stallions of high breeding, and Grade Fillies. **Dr. A. W. HINMAN, Dundee, Ill.**

E. Bennett & Son,

TOPEKA, - KANSAS,

The Leading Western Importers of

CLYDESDALE, PERCHERON, CLEVELAND BAY

—AND—
French Coach Horses.

AN IMPORTATION OF 125 HEAD,
Selected by a member of the firm, just received.

Terms to Suit Purchasers. Send for illustrated catalogue. Stables in town.

E. BENNETT & SON.

30 HORSES **CHAMPION PRIZE-WINNING STUD OF THE WEST.** **70 PRIZES**
RIX & GOODENOUGH,
TOPEKA, KANSAS,

IMPORTERS AND BREEDERS OF **PERCHERONS, CLYDES, SHIRES AND CLEVELAND BAYS.**

GOOD HORSES, LONG TIME, LOW INTEREST, MODERATE PRICES. No other firm in America sells to stock companies under the same perfected system that we do, which insures to companies square dealing, successful breeders and absolute success. Illustrated catalogue free. Farm and Stables—Two miles east of Highland Park, **TOPEKA, KANSAS.**

Champion Gold Medal Stud.

250 CLEVELAND BAYS AND ENGLISH SHIRES!

Of the highest breeding and most popular strains. We carry a large stock of young, vigorous stallions and mares at all seasons, imported young and matured on our farms, thus fully acclimated, and sure breeders. Prices low and terms easy. **150 HOLSTEIN-FRIESIANS** at exceptionally low prices. Grand opportunity to secure foundation stock at low figures. Send for Illustrated Descriptive Pamphlet. Mention this paper. **GEO. E. BROWN & CO., AURORA, ILL.**

IMPORTERS AND BREEDERS OF
ENGLISH SHIRE AND SUFFOLK PUNCH HORSES

—AND—
RED POLLED CATTLE.
We have on hand a very choice collection, including a recent importation of horses, several of which have won many prizes in England, which is a special guarantee of their soundness and superiority of form and action. Our stock is selected with great care by **G. M. SEXTON, Auctioneer to the Shire Horse Society of England.** Prices low, terms easy, and horses recorded in respective stud books and guaranteed. **SEXTON, WARREN & OFFORD, Maple Hill, Kansas.**

Wanted
NEW SUBSCRIBERS

A Big Premium!

Given away to everybody who will send us only two new subscribers at \$1 each. First—We will send Blake's Weather Tables and Predictions to any one sending us two new subscribers and \$2. Second—We will mail the valuable dairy book, "A B C Butter-Making," to any one sending us two new subscribers and \$2. Third—We will send the *Home Magazine*, a splendid monthly ladies' home journal, one year, to any one sending us only two new subscribers and \$2. These valuable premium offers are open to every reader of this paper. Send in the names, and mention which premium you wish. Address **KANSAS FARMER CO., Topeka, Kansas.**

Tutt's Pills

Regulate The Bowels.

Costiveness deranges the whole system and begets diseases, such as **Sick Headache, Dyspepsia, Fevers, Kidney Diseases, Bilious Colic, Malaria, etc.** **Tutt's Pills** produce regular habit of body and good digestion, without which, no one can enjoy good health. **Sold Everywhere.**

TANSY PILLS!

Safe and Sure. Send 4c. for "WOMAN'S SAFE GUARD." **Wilcox Specific Co., Phila., Pa.**

MANAGER WANTED on SALARY \$2000 per YEAR
To open a branch office in your locality. Business purely mercantile. One that will inspire you with pride, pleasure and profit. Trade established. No peddling. **J. E. SHEPARD, Cincinnati, O.**



WELL DRILLS
for all purposes.
Send 20 Cts. for mailing catalogues with full particulars.
CARPENTER ST. AND CARROLL AVE.

JONES, HE PAYS THE FREIGHT.
5-TON WAGON SCALES, \$60.
BEAM BOX
BRASS TARE BEAM.
Freight Paid.
Warranted for 5 Years.
Agents Wanted. Send for Terms.
FARMERS'
Barn and Warehouse Scales.
JONES OF BINGHAMTON, Binghamton, N. Y.



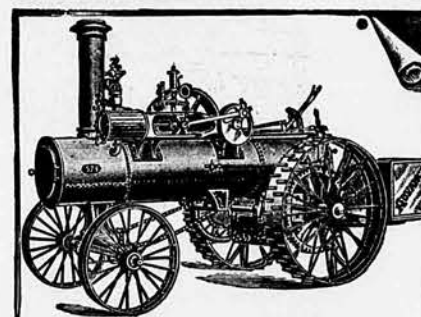
No good Windmill can be manufactured and sold for
LESS MONEY
than we are now selling this Mill.
Write for circulars containing full descriptions.
PEABODY MANUFACTURING CO.,
Peabody, Kansas.



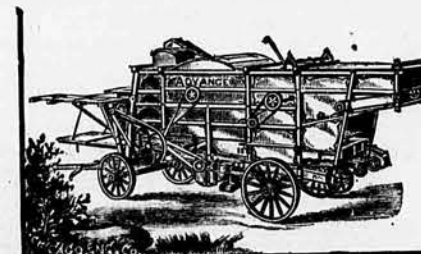
Greatly improved with swinging shackles on one side. Easiest riding vehicle made. The springs lengthen and shorten according to the weight put on them. Adapted equally well to rough country or fine city drives. Will give you best satisfaction.



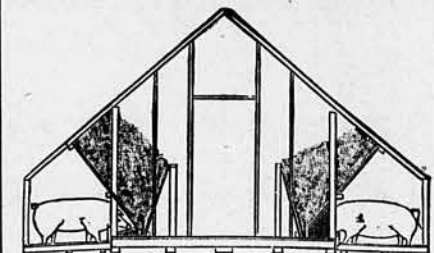
Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices.
Ask Hardware Dealers, or address, mentioning this paper,
SEDGWICK BROS. Richmond, Ind.



ADVANCE
THRESHERS AND ENGINES
Manufactured by the
ADVANCE THRESHER CO.
Factory and Main office, Battle Creek, Mich.
Write for full information to the factory, or to
KANSAS CITY, MO.



The Hog Sanitarium!



See Terms and Description in Next Number of this Paper.

TESTIMONIALS:

WALTON, KAS.—I have no hesitation in saying that I believe the man who would raise the best hogs, for the least outlay of time, labor and money, is the one who will intelligently use your Sanitarium. Of the many who have come to see mine, none have offered a disparaging remark after seeing it. Some have twitted me on the way to the yards, but the tune has invariably changed to: "I'll have one, too," or "I'll have one as soon as I can raise the money to build," etc. So it is making many converts, and when times get easier here I think you can confidently look for many orders from this section. My hogs would not wait for an invitation to eat, but were on hand ready for their rations as soon as feed was put in the hoppers.
J. S. HACKNEY.

HUBBELL, NEB., May 4, 1889.—I built the Crummer Hog Sanitarium about February 1, 1889. Have fed shelled corn mixed with oats, chopped rye and small amount of oil cake. I am pleased to say that my most sanguine anticipations have been more than realized in using it. I never before had hogs fatten so evenly and rapidly as with this Sanitarium. In extra fattening, and saving of feed and labor, the first eighty head now feeding out, will more than repay the first cost of the Sanitarium complete, above what I could have done, feeding on floors or in troughs.
W. A. COULTER.

NIWENSON, RENO CO., KAS., May 1, 1889.—I have been using the Crummer Hog Sanitarium for several months past, and without hesitation recommend it to all hog-feeders. It is all Mr. Crummer claims for it, and more, for it saves all expense of feeding. My hogs keep healthy, fatten rapidly and evenly, and there is no man that can feed them so regularly and economically as this feeder. The satisfaction a man gets in knowing that his fattening hogs are fed regularly and with perfectly clean feed, is worth a great deal. It is pronounced, by all who see it, the thing long wanted by hog-feeders. I would not think of doing without it, not for four or five times its cost.
E. C. MARKS.

GUILFORD, KAS., April 4, 1889.—I have used the Sanitarium since January 10, 1889. It works like a charm, and is all you claim for it. I have used it for all hogs and pigs as I wished to full-feed. Have used whole feed and ground feed, mixed and unmixed feed, salted sufficiently to be palatable. When mixed in the proportion of twenty bushels of corn to five bushels of oats, and fed in the Sanitarium, about one bushel of ground oil cake meal, ten pounds salt and one pound sulphur added, and fed in the Sanitarium, with plenty of pure water at hand, hogs will fatten to beat anything I ever saw.
A. Z. BROWN.

Send for circulars, to
E. M. CRUMMER, Patentee,
Belleville, Kansas.

KIRKWOOD WIND ENGINE

MADE BY THE
KIRKWOOD MANUFACTURING CO.,
Arkansas City, Kansas.

The following are a few of the advantages we claim for the Kirkwood Wind Engine, over all others:
1. Being built entirely of iron and steel, it cannot shrink, warp or shake loose by exposure to weather, as wooden wheels will. 2. It is the most powerful, as it has more wind surface, the vanes covering the entire face of the wheel and shaped so as to receive the wind to the best advantage. 3. It requires less wind, and running at a greater speed, it will pump more water than any other wheel in use. 4. It has the best automatic governor arrangement of any in use. 5. As it has a very narrow edge, being less than six inches in a ten-foot wheel, it presents less resistance than any other iron wheel in a storm. 6. It is the only engine that has an equalizing arrangement for keeping the edge of wheel in line with the wind, making it perfectly safe in a storm. 7. Owing to the principle of construction it can be built lighter and run with less wind and greater speed than any other wheel in use. 8. No clogging. 9. It will run in light winds. 10. An 8-foot Kirkwood wheel will do as much work as a 10-foot wheel of any other make. 11. It is not only the most durable, most powerful and symmetrical engine made, but also the most beautiful.

FRUIT QUEEN STEAM

EVAPORATOR for Cook Stove. New, novel, perfect.
THE ZIMMERMAN MACHINE CO., Cincinnati, Ohio.

CIDER PRESSES

Send for Catalogue to **C. H. STEWART,**
121 W. Washington St., Chicago, Ill.

TO ADVERTISE and meet with success requires a knowledge of the value of newspapers, and a correctly displayed advertisement. To secure such information as will enable you to advertise **JUDICIOUSLY** CONSULT **LORD AND THOMAS** NEWSPAPER ADVERTISING, CHICAGO, ILLINOIS

RUPTURE--RUPTURE

A new and sure method for the relief and cure of rupture. Every case guaranteed. Recommended by leading physicians and hundreds of patients from all parts of the Union as far superior to all other methods of treatment. Patient is made comfortable and strengthened for work at once, and an early and permanent cure assured. No operation, pain or hindrance. Send 10 cents in stamps for 96-page pamphlet on Rupture and its Treatment, with numerous statements from physicians and patients.
DR. D. L. SNEDIKER,
511 Commercial St., Emporia, Kas.

YOUNG AND MIDDLE AGED MEN

Suffering from the effects of Youthful Follies, Indiscretion, Excess or Indulgence, producing Nervousness, Debility, Dimness of Sight, Self Distrust, Failing Memory, Physical Decay, Pimples on Face, Aversion to Society, Loss of Ambition, Unfitness to marry, Dyspepsia, Stunted Development, Pains in Back, Milky Urine, Night Losses, Unnatural Drains and Lost Manhood, you can be CURED TO STAY CURED. Relief at once, all exhausting drains stopped, weak parts strengthened and enlarged. Treatment tested 32 years and in thousands of cases. Send stamp for Question List No. 1, in plain envelope. Add. **JAMES WHITTIER, M. D., 215 W. Ninth St., KANSAS CITY, MO.**



AN ENTIRELY NEW DEVICE.

An Automatic or Self-Regulating Stock Waterer.

Can be attached to barrel, tank or pond. Keeps on hand a constant and regular supply of water. One tank or trough especially for hogs. For detailed description send for circular. Correspondence solicited. Agents wanted. Territory for sale.

Manufactured by **PERRY & HART,**
P. O. Box 391, Abilene, Kansas.

PUBLIC SALE!

PERCHERONS AND SHORT-HORNS! I will offer at public sale, Illinois, **TUESDAY, JULY 30, 1889,** twenty-five head of pure-bred and high-grade Percheron Horses, Mares, Fillies and Young Stallions, and thirty-five Crickshank and Crickshank-topped Short-horns. All the stock is well bred, good color, and of desirable ages.
TERMS:—A credit of twelve months or a discount of 5 per cent. for cash.
Catalogue now ready. **WM. J. MILLER, Belleville, St. Clair Co., Illinois.**
COL. L. P. MUIR, Auctioneer.

EVERY FARMER

Who is obliged to borrow, should do so on the best possible terms. Write direct to the lender and save Agent's Commissions. Money always ready when papers are signed. **NO DELAYS! NO EXTRAS!**

Russell & Metcalf, Lawrence, Kas.

IT CAN BE DONE! Butter and Cheese Factories

Built, furnished, equipped and put in operation on easy terms in any town in the United States by giving

Davis & Rankin

Sixty days' notice. Work completed and in operation before a dollar is asked. Experienced men furnished with each factory to operate all machinery.
OVER 2,000 NOW IN OPERATION.
Cost of complete factories range from \$2,000 to \$8,000, according to the style of building and grade of machinery. Controllers of new patent machineries. Also, old styles at a very low price.
240 to 254 WEST LAKE ST., CHICAGO, ILL.

CONSIGN YOUR CATTLE, HOGS & SHEEP TO

Larimer, Smith & Bridgeford,
LIVE STOCK COMMISSION MERCHANTS,
Kansas City Stock Yards, Kansas City, Kansas.

Highest market prices realized and satisfaction guaranteed. Market reports furnished free to shippers and feeders. Correspondence solicited. Reference:—The National Bank of Commerce, Kansas City.

EVANS-SNIDER-BUEL CO.,

(INCORPORATED)

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,** Correspondence always has prompt attention.
CHICAGO, ILL.

DIRECTORS: A. G. EVANS, President. M. P. BUEL, Vice President. C. A. SNIDER, Treasurer. A. T. ATWATER, Secretary. F. W. FLATO, JR. IKE T. PRYOR.
NATIONAL STOCK YARDS,
ST. CLAIR CO., ILL.

LIVE STOCK COMMISSION MERCHANTS.

The Kansas City Stock Yards.

Are by far the most commodious and best appointed in the Missouri Valley, with ample capacity for feeding, weighing and shipping Cattle, Hogs, Sheep, Horses and Mules. They are planked throughout, no yards here are better watered, and in none is there a better system of drainage. The fact that higher prices are realized here than in the East is due to the location at these yards of eight packing houses, with an aggregate daily capacity of 3,300 cattle and 27,200 hogs, and the regular attendance of sharp, competitive buyers for the packing houses of Omaha, Chicago, St. Louis, Indianapolis, Cincinnati, New York and Boston.

All the sixteen yards running into Kansas City have direct connection with the yards, affording the best accommodation for stock coming from the great grazing grounds of all the Western States and Territories, and also for stock destined for Eastern markets.

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

Kansas City Stock Yards Co. Horse and Mule Market.

FRANK E. SHORT. | **FRANK E. SHORT & CO., Managers.** | **CAPT. W. S. TOUGH.**
This company has established in connection with the yards an extensive Horse and Mule Market known as the **KANSAS CITY STOCK YARDS COMPANY HORSE AND MULE MARKET.** Have always on hand a large stock of all grades of Horses and Mules, which are bought and sold on commission or in carload lots. In connection with the Sales Market are large feed stables and pens, where all stock will receive the best of care. Special attention given to receiving and forwarding. The facilities for handling this kind of stock are unsurpassed at any stable in this country. Consignments are solicited with the guarantee that prompt settlements will be made when stock is sold.
C. F. MORSE, General Manager. **E. E. RICHARDSON,** Treasurer and Secretary. **H. P. CHILD,** Superintendent.

- CANCER! -

The only institution in the world where Cancers and Malignant Tumors are permanently removed without using knife, ligature or caustics, and in all cases a permanent Cure is Guaranteed. Consultation free. Call or address
KOEHLER CANCER HOSPITAL CO.,
1430 Grand Ave., Kansas City, Mo.

FULL LEATHER TOP. DIRECT TO CONSUMER.
SAVING 25 TO 40%
NO MIDDLEMEN'S PROFITS NOR EXPENSES OF TRAVELING MEN
CATALOGUE & FREIGHT CHARGE TO YOUR PLACE ON APPLICATION
PIONEER BUGGY CO.
COLUMBUS, O.

BREEDERS' DIRECTORY.

Cards of four lines or less, will be inserted in the Breeder's Directory for \$15.00 per year, or \$5.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

NORRIS & CLARK, of Malden and LaMoille, Ill., are going to close out their entire stud of imported Clydesdale and Shire horses—ninety-two head—at bottom prices. Send for catalogue.

PROSPECT FARM—H. W. McAfee, Topeka, Kas., breeder of Thoroughbred Clydesdale Horses for sale now. Write or call.

M. D. COVELL, Wellington, Kas., breeder of Registered Percherons. Acclimated animals, all ages and sexes. At head of stud, Theophile 2795 (3749), black, imported by M. W. Dunham, and sired by his celebrated Brilliant 1271 (735).

CATTLE.

MAYES & COX, Peabody, Kas., breeders of pure-bred Hereford cattle. Horace Wilton (29186), grandson of Lord Wilton, at the head of herd. Young bulls and heifers for sale. Write or come and see.

M. E. MOORE, Cameron, Mo., breeder of pure-bred Holstein-Friesian cattle only. The home of Gerben 4th, who has a better record of thirty-two pounds in seven days.

GEO. M. KELLAM & SON, Richland, Shawnee Co., Kas., breeders of Galloway Cattle and Hambletonian and Morgan Horses.

THOS. J. HIGGINS, Council Grove, Kas., breeder of pure-bred Hereford cattle. Choice young bulls and heifers rich in Wilton, Grove 3d and Anxiety blood for sale at reasonable prices. Correspondence and inspection solicited.

ABE BOURQUIN, Nekoma, Illinois, breeder of BROWN SWISS CATTLE.

NORWOOD HERD OF SHORT-HORN CATTLE, V. R. Ellis, proprietor, Gardner, Johnson Co., Kas. Herd is headed by Baron Biggs 4th No. 4476, a pure-bred Rose of Sharon. Stock of both sexes for sale.

JOHN P. HALL, HOLSTEIN-FRIESIAN CATTLE. EMPORIA, KANSAS

ENGLISH RED POLLED CATTLE—Young bulls for sale, pure-bred and grades. Your orders solicited. Address L. K. Haseltine, Derchester, Greene Co., Mo. (Mention Kansas Farmer.)

VALLEY GROVE HERD OF SHORT-HORN—For sale choice young bulls and heifers at reasonable prices. The extra fine Cruickshank bull Earl of Gloster 74523 heads the herd. Call on or address Thos. P. Babst, Dover, Kas.

L. A. KNAPP, BREEDER, } SHORT-HORN CATTLE
DOVER, KANSAS, } and BUFF COCHIN POULTRY
FOR SALE.

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

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

EARLY DAWN HEREFORD HERD—Apply to owner, George Fowler, Kansas City, or to foreman, G. I. Moyer, Maple Hill, Kas.

W. E. GOULD, MARSHALL, Mo., breeder of Thoroughbred and Grade Holstein-Friesian Cattle. Calumet 3853 H. B., heads herd—a choice butter-bred Netherland bull. Stock for sale.

W. M. BROWN, LAWRENCE, Kas., breeder of Holstein-Friesian and Jersey Cattle of noted families. Correspondence solicited.

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

OAKWOOD HERD OF SHORT-HORN CATTLE—All recorded. Choice-bred animals for sale. Prices low. Terms easy. Imported Earl of Gloster 74523 heads herd. C. S. Eichholtz & Son, Wichita, Kas.

C. E. DAVIS, WELLINGTON, SUMNER CO., KANSAS, breeder of A. J. C. C. Jerseys from the greatest progenitor butler families. Bull calves for sale or to trade for heifer calves. I am also a breeder of STANDARD-BRED registered males and horses. Correspondence solicited. Mention KANSAS FARMER.

CATTLE AND SWINE.

C. H. SEARLE, Edgar, Clay Co., Nebraska, breeder of Thoroughbred Holstein-Friesian cattle and Duroc-Jersey and Poland-China swine. Breeders recorded. Farm one mile west of town.

SAVED—By getting my prices before buying Short-horn CATTLE and Poland-China Hogs. Good individuals and pedigrees. PLYMOUTH ROCK fowls of most noted strains. Eggs \$1 per thirteen. C. M. T. Hulett, Edgerton, Johnson Co., Kansas.

JOHN LEWIS, MIAMI, Mo., breeder of Short-horn Cattle, Poland-China Hogs, Cotswold Sheep, Light Brahmas and Bantam Chickens, Bronze Turkeys, Pekin Ducks and White Guineas. Young stock for sale. Eggs in season.

M. H. ALBERTY, Cherokee, Kas., breeder of Registered Holstein-Friesian cattle and Poland-China swine.

J. J. MAILES, Manhattan, Kas., breeder of Short-horn cattle, Berkshire and Poland-China hogs. Fine young stock of both sexes for sale. Examination or correspondence always welcome.

J. L. TAYLOR & SON—Englewood Stock Farm, Lawrence, Kas., breeders of Holstein-Friesian Cattle and Poland-China Hogs. Stock for sale. Terms easy.

HILLSIDE STOCK FARM—W. W. Walmsire, Cardonville, Kas., importer and breeder of Chester White swine and Short-horns. Pigs for sale now.

A. B. DILLE & SON, Edgerton, Kas., breeders of choice Poland-China hogs, Short-horn cattle and thoroughbred Poultry. Choice young bulls and boars for sale cheap.

SWINE.

Z. D. SMITH, Greenleaf, Kas., breeder and shipper of fine Poland-China Swine. Also Jayhawk strain of Plymouth Rock Fowls. Write for prices.

THE GOLD DUST HERD OF POLAND-CHINAS—Established 1880. Are premium hogs of very best strain. They please visitor's eye. Stock, both sexes, for sale, and a few choice sows ready bred. Your patronage solicited. Address J. M. McKee, Wellington, Kansas. Also Fancy Poultry.

SWINE.

MAHAN & BOYS, Malcolm, Nebraska, breeders of pure Essex Swine.

JOHN BUCHE, breeder of Poland-China Swine. Stock of all ages for sale. Young pigs ready to ship May 1st. Pleasant View Farm, Miltonvale, Kas.

KAW VALLEY HERD POLAND-CHINAS—Tat's Sample at head. All breeders fine individuals. Also fancy poultry. Inspection invited. Correspondence promptly answered. M. F. Tatman, Rossville, Kas.

LONGVIEW HERD OF POLAND-CHINAS. Pigs of either sex for sale at all seasons. All breeders recorded. Correspondence promptly answered. Walter Ferguson, Valley Falls, Kas.

THE PIONEER HERD—Of Pure Duroc-Jersey Swine, Partridge Cochins and State Turkeys. A. Ingram, proprietor, Perry, Pike Co., Ill. Showed at seven fairs in 1888 and won 60 premiums. Orders promptly filled.

SCOTT FISHER, Holden, Mo., breeder of the very best strains of Poland-Chinas. Pigs from five noted boars. Can furnish small herds not skin. Sell nothing but first-class stock. Over 100 pigs for this season's trade. Write me and mention this paper.

V. B. HOWEY, Box 103, Topeka, Kansas, breeder of Thoroughbred Poland-Chinas and English Berkshire swine. Stock for sale. Also fancy poultry eggs; \$1.25 for 13; \$2 for 26.

POLAND-CHINA SWINE—From No. 1 breeding stock. All stock recorded or eligible to record. Personal inspection solicited. Correspondence promptly answered. Satisfaction guaranteed. Henry H. Miller, Rossville, Kas.

THOS. C. TAYLOR, Green City, Mo., breeds best strains of Poland-China pigs; also Langshan fowls. Write for prices of pigs and eggs.

PEDIGREE POLAND-CHINAS—At prices that will sell them. Well loaded with Cornish blood and other popular strains. Marion Brown, Nortonville, Kas.

POULTRY.

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

MRS. A. B. DILLE, Edgerton, Kas., breeder and shipper of the finest strains of Plymouth Rocks, Wyandottes, Brown Leghorns and Mammoth Bronze turkeys. Stock for sale, and eggs at \$1 per thirteen, \$2 for thirty. Turkey eggs at \$2 per eleven.

KANSAS POULTRY YARDS—Fifteen eggs for \$2 from Silver Wyandottes, Plymouth Rocks and Light Brahmas. Stock strictly first-class. J. H. Siemmer, Abilene, Kas.

1880. MRS. EMMA BROSIUS, TOPEKA, KANSAS. Yards established in 1880. Four miles southwest of city. Breeder and shipper of highest class fancy poultry. Eggs—Light Brahmas, \$3 per 13, \$5 per 26; Silver Wyandotte, \$2.50 per 13, \$5 per 26; Pekin duck, \$1.50 per 13, \$3 per 26; M. Bronze turkey, \$3 per 9. Breeders first class in every respect.

S. C. BROWN LEGHORNS EXCLUSIVELY—At S. Evergreen Fruit Farm. Whoever purchases a setting of eggs or a fowl, receives a good poultry monthly for a year. Eggs \$1.50 per setting from prize-winning birds, scored into the 90's by I. K. Felch. Mrs. Belle L. Sprout, Frankfort, Marshall Co., Kas.

CAPITAL POULTRY YARDS—A. D. Jencks, Prop'r., North Topeka, Kas., box 853. Breeder of high-scoring Plymouth Rocks. Eggs, \$1.50 per 13.

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

PRAIRIE LAWN POULTRY YARDS—Contain the best strains of Golden Polish, Brown Leghorns, Light Brahmas, Plymouth Rocks—two yards, Bronze Turkeys, Toulouse Geese and Pekin Ducks. Eggs in season. Also proprietor GOLD DUST HERD OF POLAND-CHINA Hogs. J. M. McKee, Wellington, Kas.

G. C. WATKINS, Hiawatha, Kas., originator of the G. Sandover strain of Plymouth Rocks. Largest size and good layers. Eggs \$2.00 per thirteen. Express prepaid.

E. E. FLORA, Wellington, Kas., breeder and shipper of pure-bred poultry—Partridge Cochins, Plymouth Rocks, Single-comb Brown and White Leghorns, Rose-comb Brown Leghorns, Wyandottes, Light Brahmas, Buff Cochins, Langshans. Eggs \$1 per 13, \$2 per 26. Pekin duck and Hongkong geese eggs 10 cents each. Bronze turkey eggs 15 cents each. Stock next autumn.

PLYMOUTH ROCK EGGS—One dollar per thirty. Plymouth Rock cockerels, two dollars each. Mark S. Salisbury, Independence, Mo.

JOHN C. SNYDER, Constant, Gowley Co., Kansas, breeds PLYMOUTH ROCKS and BROWN TURKEYS. No fowls for sale. Eggs in season. Write for terms or send for circular, and mention this paper.

RICH. E. HANDEL, Topeka, Kas., breeder of fine Plymouth Rocks. Eggs \$1.25 for 13. My Poultry Powder will cause an increase of eggs; also prevent and cure cholera, roup, gapes. Try it. Price 25 cents.

EXCELSIOR POULTRY YARDS—C. E. Masters, Prop'r, Irving Park, Ill., breeder of the leading varieties of Poultry. Also Ferrets, Rabbits, Pigeons and Pets. White Leghorns, White Wyandottes and White-Face Black Spanish a specialty. "Excelsior" is my motto—the very best is none too good. Eggs in season \$2. Send for circular, giving full description.

JAMES ELLIOTT, ENTERPRISE, Kas.—Proprietor of the Enterprise Poultry Yards, composed of the following varieties: Silver and White Wyandottes, White and Barred Plymouth Rocks, Light and Dark Brahmas, White and Buff Cochins, Langshans, R. C. White and Brown Leghorns, B. B. Red Games and Mammoth Bronze Turkeys. Breeding fowls strictly No. 1. Eggs \$1.50 and \$2 per 13. Also breeder of pure Berkshire Swine and Cotswold Sheep. Swine, sheep and poultry for sale. Your patronage solicited. Golden rule guarantee. Mention the "Kansas Farmer."

TOPEKA WYANDOTTE YARDS—Breeder of Silver-Laced, White and Golden Wyandottes, S. S. Hamburgs. Pen No. 1—eggs, \$3 for 13; pen No. 3—\$2 for 13; Hamburgs, \$2.50 for 13. A. Gandy, 624 Kansas Ave., Topeka, Kas.

MISCELLANEOUS.

W. L. LAYSON LUMBER CO.—Farmers, call and get prices. Yards, First and Jackson streets, Topeka.

F. P. ZIMMERMAN, Lunch Counter and Meat Market, 116 Sixth St. East, Topeka. Farmers and everybody call.

DETECTIVES—We want a man in every locality to act as Private Detective under our instructions. Particulars free. Central Detective Bureau, Box 195, Topeka, Kansas.

SEEDS

J. C. PEPPARD, 1220 UNION AVENUE, (One block from Union Depot) KANSAS CITY, MO.
MILLET A SPECIALTY.
Red, White, A. White & A. Yellow, Timothly, Blue Grass, Orchard Grass, Red Top, Onion Setts, Tree Seeds, Cane Seed, Etc.

TWO-CENT COLUMN.

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

Special.—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates—cash with the order. It will pay you! Try it!

FOR SALE—Space in this column, to advertisers who wish for results at little cost. Try it?

FAMOUS HIGHLAND TIMOTHY SEED—Quart, 25 cents; peck, \$1. James Thornber, Powellton, Ill.

FARM MACHINERY FOR SALE—One ten-horsepower stationary boiler and engine; one Challenge feed mill; one Challenge six-horse-power; one Erie City feed and silage cutter, A. No. 1, large size. This machinery is all in good condition and will be sold for half what new and no better would cost. J. B. McInturn, Colwich, Kas.

WANTED—To trade, a good sewing machine or organ for a pony or driving horse. Address C. J. Coughlin, northwest corner Huntoon and Clay streets, Topeka.

FOR SALE—FARMS AND MILL PROPERTY—One farm of 240 acres, 300 acres in cultivation, balance fenced to pasture; fruit and forest trees; house with six rooms, good well water, windmill, good barn with stone basement. Farm in high state of cultivation, situated in Ottawa county, six miles from county seat—Minneapolis. One farm of 160 acres, 120 acres in cultivation; stone house with two rooms; fruit and forest trees; school and church facilities convenient; eight miles from Minneapolis. One hundred acres in Lincoln county, five miles from Beverly, a railroad town on the Saline river; four acres in cultivation; small frame house; pasture fenced. Saw and grist mill on the Saline river, three and one-half miles from Lincoln; one of the best water powers in the State; 120 acres of land; plenty of timber; fifty acres in cultivation, balance fenced to pasture and corral; houses, barns and outbuildings; railroad within forty feet of mill door. Any or all of the above property will be sold cheap and on easy terms. Inquire of H. W. Graham, Lincoln, Lincoln Co., Kas.

\$500 CASH—Will buy a first-class ten-horsepower engine and boiler (return due), a J. I. Case separator and a patent straw-stacker. The first cost can be made this year. Apply at once to Harry A. Stanton, Knox Building, Topeka.

FOR TRADE—One hundred and sixty acres in Butler county, Kas. Half bottom, well improved. Worth \$1,800; \$1,800 incumbrance. Unable to stock it properly, and want to trade for smaller farm—eastern Kansas or Missouri preferred. Also one stone store building in Latham, Kas., centrally located. Worth \$2,000, clear. Will trade together or separate, for land, or the building for merchandise. D. L. Dever, Leon, Kas.

EMPORIA PROPERTY TO EXCHANGE—For land. \$15,000 New York farm for clear land. Exchange of all kinds. Farms and ranches for sale. Devon cattle for sale. Rumsey Bros., Emporia, Kas.

FOR SALE—A young Jersey Coomassie bull; dam the only recorded tested Jersey cow in A. J. C. C. butter record. D. D. Perry, Peabody, Kas.

FOR EXCHANGE—Some land, lots and live stock for merchandise, hardware or groceries preferred. Address Box 155, Ness City, Kas.

FOR SALE—Two improved deeded quarters and one timber entry in the famous Bow Creek valley. Box 62, Lenora, Kas.

FOR SALE—Dedrick Hay Press—new size—bale 14x18. Cheap for cash. Address J. Pitney, Laclede, Kas.

AN EXTRA SHEEP RANCH WITH SHEEP—And entire outfit, for sale or trade for property in some good town. Address D. W. Thakham, Brookville, Kas.

FOR SALE—A few choice Jersey bull calves of the blood of Stoke Pogis 5th. Living prices. T. C. Murphy, Thayer, Kas.

STRAYED—From my farm, one bay horse, 8 or 9 years old, strip on nose, spot in forehead, weight 1,000 pounds. Also a gray horse—nearly white, left hock large from cut, branded C on left shoulder and weighs 900 pounds. Both horses have collar marks. \$20 reward for recovery. Address J. A. D. Morgan, Vidette, Shawnee Co., Kas.

FOR SALE AT A BARGAIN—A first-class threshing outfit, consisting of a ten horse-power engine, separator and revolving straw-stacker. All as good as new. Apply to Harry H. Stanton, 111 West Sixth Ave., Topeka, Kas.

FOR SALE—Eggs of W. F. B. Spanish, \$2.50 per setting; P. Rocks, \$1; Pekin ducks, \$2. Each seventh order free. Eggs after May 1 half price. Mrs. Viola W. Griblin, Virgil, Kas.

SHORT-HORNS AND JERSEYS—Males and females, of any age, for sale by John T. Voss, Girard, Kas.

POULTRYMEN!—The Fanciers' Review, Box K, Chatham, N. Y., a 16-page poultry journal, 25 cents year. Three sample numbers 10 cents.

WATER GRIST MILL—Dwelling and ten acres of land to lease or trade for Kansas property. B. N. Turk, Holton, Kas.

WANTED—Gentle horse for light work two months for keeping. Good care. Address "F," KANSAS FARMER office.

WANTED—All those farmer boys who are thinking of attending a business college this fall, to know that we will deduct your railroad fare both ways to and from Topeka to any distance not exceeding 150 miles, from the cost of the fall scholarship if you go to our school. All the finest educators and best business men say we keep the best school for a business education in the State. Pond's Business college, Topeka, Kas.

WANTED—To negotiate with parties interested in starting a cheese factory or separator creamery. Have some means and fourteen years experience as butter and cheese-maker. Address J. L. Abless, 1023 New Jersey St., Lawrence, Kas.

GARDEN TOOLS—A full line of Planet Jr. hand and horse tools. Send for pamphlet. Trumbull, Reynolds & Allen, Kansas City, Mo.

2,000,000 HEDGE PLANTS—125,000 two and three-year-old apples, 500,000 Russian mulberries, catalpas, etc. A full line of nursery stock. Babcock & Stone, North Topeka.

BROOD MARES AND COLTS—One, two and three years, to exchange for milk cows. M. S. Babcock, Nortonville, Kas.

PURE PEKIN DUCK EGGS—Seventy-five cents per thirteen. Would like to exchange for pure Plymouth Rock and Bronze turkey eggs. Mrs. Vina Beeson, Fall River, Kas.

TWO-CENT COLUMN—(Continued.)

SWEET POTATO PLANTS, TURNIP and BEET seed for stock. Soft maple, and all kinds of seeds. Trumbull, Reynolds & Allen, 1425 and 1428 St. Louis Ave., Kansas City, Mo.

Agricultural Books.

The following valuable books will be supplied to any of our readers by the publishers of the KANSAS FARMER. Any one or more of these standard books will be sent postage paid on receipt of the publisher's price, which is named against each book. The books are bound in handsome cloth, excepting those indicated thus—(paper):

FARM AND GARDEN.
Allen's New American Farm Book.....\$2.50
Barry's Fruit Garden.....2.00
Broccoli and Brooms......50
Flax Culture (paper)......30
Fitz's Sweet Potato Culture......60
Henderson's Gardening for Profit.....2.00
Hop Culture (paper)......30
Onions: How to Raise Them Profitably (paper)......50
Silos and Ensilage......20
Stewart's Irrigation for the Farm, Garden and Orchard.....1.50
Tobacco Culture: Full Practical Details......25
Farming for Profit.....3.75
Jones' Peanut Plant: Its Cultivation, etc. (paper)......50

FRUITS AND FLOWERS.
Fruits and Fruit Trees of America (new edition)——Downing.....5.00
Propagation of Plants—Fuller.....1.50
Field Notes on Apple Culture—Bailey......75
Elliott's Hand-Book for Fruit-Growers.....1.00
Every Woman Her Own Flower Gardener.....1.00
Fuller's Small Fruit Culturist.....1.50
Fuller's Grape Culturist.....1.50
Henderson's Practical Floriculture.....1.50
Parsons on the Rose.....1.50

HORSES.
American Reformed Horse Book—Dodd.....2.50
The Horse and His Diseases—Jennings.....1.25
Dodd's Modern Horse Doctor.....1.00
Jennings' Horse Training Made Easy.....1.00
Horse-Breeding (Sanders).....2.00
Law's Veterinary Adviser.....3.00
Miles on the Horse's Foot......75
Woodruff's Trotting Horse of America.....2.50
Youatt & Spooner on the Horse.....1.50

CATTLE, SHEEP AND SWINE.
The Dairyman's Manual—Henry Stewart.....2.00
Allen's American Cattle.....2.50
Coburn's Swine Husbandry.....1.75
Dodd's American Cattle Doctor.....1.50
Harris on the Pig.....1.50
Jennings' Cattle and Their Diseases.....1.25
Jennings' Sheep, Swine and Poultry.....1.25
Randall's Practical Shepherd.....1.25
Stewart's Shepherd's Manual.....1.50
The Breeds of Live Stock (Sanders).....3.00
Feeding Animals (Stewart).....2.50
A B C Butter-Making (boards)......80

MISCELLANEOUS.
King's Bee-Keeper's Text Book.....1.00
Silk Culture (paper)......30
American Standard of Excellence in Poultry.....1.00
Wright's Practical Poultry-Keeper.....2.00
American Bird Fancier......50
Quincy's New Bee-Keeping.....1.50
Dogs (by Richardson)......60
Atwood's Country Houses.....1.50
Barns, Plans and Out-buildings.....1.50
Arnold's American Dairying.....1.50
Fisher's Grain Tables (boards)......40
Fuller's Forest Tree Culturist.....1.00
Willard's Practical Butter Book.....1.00
Willard's Practical Dairy Husbandry.....3.00
Practical Forestry.....1.50
Household Conveniences.....1.50
Dodd's American Reform Horse Book.....2.50
Jennings on the Horse and His Diseases.....1.25
Profits in Poultry.....1.50
Frank Forrester's Manual for Young Sportsmen.....2.00
Hammond's Dog Training.....1.00
Farm Appliances.....1.00
Household Conveniences.....1.50
Husman's Grape-Growing.....1.50
Quinn's Money in the Garden.....1.50
Reed's Cottage Homes.....1.25
Dogs of Great Britain and America.....2.00
Allen's Domestic Animals.....1.50
Warrington's Chemistry of the Farm.....1.00
Williams' Window Gardening.....1.50
Farm Talk (paper)......50
American Bird Fancier (paper)......50
Wheat Culture (paper)......50
Gregory's Onions—What Kind to Raise (paper)......20
Gregory's Cabbages—How to Grow Them (paper)......30
Our Farm of Four Acres (paper)......30
Cooked and Cooking Foods for Animals (paper)......30
The Future by the Past, by J. C. H. Swann.....1.00

Address KANSAS FARMER CO., TOPEKA, KANSAS.

PUBLIC SALE

Thoroughbred Holstein Cattle

I will offer at Public Sale in Atlica, Harper Co., Kas., on

TUESDAY, JULY 23, 1889,

Sixty-one head of Registered or registerable Holstein cattle, as follows: 23 head of milch cows, from 4 to 6 years old, all imported; 3 bulls, 5 to 6 years old, 2 American bred and 1 imported; 7 heifers, 1½ to 2 years old, all in calf; 1 bull, 3 years old, imported; 3 bulls, 2 years old; 8 bulls, 14 to 16 months old; 3 bulls, this season's calves; 8 heifers, this season's calves.

All these animals are registered except the younger ones, and their eligibility for registration is guaranteed. All females old enough are in calf to one or the other of the celebrated bulls, Lord Cecil No. 1851 (Vol. 7 Holstein-Friesian Herd Book) or Zyphus No. 2933 (Vol. 3). The cows are of as fine strains as were ever imported into this or any other country, and are each grand milkers, and the younger animals are able to judge of the younger animals by sire and dam, which will in each case be present. This herd of cattle is pronounced by all who see it as the very best west of the Mississippi river. No better opportunity will be offered to procure cheaper animals, taking quality into consideration.

Atlica, the point where the cattle are located and the sale will take place, is situated on the Santa Fe railroad, forty-seven miles west of Wellington. Parties desirous of attending the sale from points east or west of Newton should connect with the train south from that place at 6 a. m. These cattle can be seen at any time near the depot in Atlica, and any information concerning them will be cheerfully given. Come and examine the stock if you like before the sale. By no means fail to attend the sale.

TERMS:—All sales of one animal to one person, cash; two or more animals to same person, six months note, secured with interest at 8 per cent.

Come and see the best herd of cattle you ever beheld. Address all communications to

C. S. JOES, Atlica, Kansas.