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BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 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.

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JOSEPH FUHRMAN, NORTH WICHITA, KAS.—Breeder of French Coach and Percheron horses. Pure-bred young stock, of both sexes, for sale; also, grade animals. Prices as low as same quality of stock can be had elsewhere. Time given if desired. Inspection invited. Letters promptly answered. Mention this paper.

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Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kas.

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VALLEY GROVE HERD OF SHORT-HORNS.—For sale, choice young bulls and heifers at reasonable prices. Call on or address Thos. P. Babst, Dover, Kas.

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A. W. THEMANSON, WATHENA, KAS.—Poland-China boars. Gilts bred to Graceful F. Sanders; he is by J. H. Sanders 27219 and out of Graceful F. 63408, by A. A., by Black U. S. Sire and dam both first-prize winners at World's Fair and descendants of Black U. S.

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POLAND-CHINAS.—Dietrich & Gentry, Richmond, Kas., have a fine lot of fall boars and sows and two very fine young sows bred that they will sell cheap. Breeding choice. Quality guaranteed. Write or come and see us.

D. TROTT, Abilene, Kas.,—Pedigreed Poland-Chinas and Duroc-Jerseys. Also M. B. Turkeys, Light Brahma, Plymouth Rock, S. Wyandotte chickens and R. Pekin ducks. Eggs. Of the best. Cheap.

CATTLE AND SWINE.

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ASHLAND STOCK FARM HERD OF THOROUGHbred Poland-China hogs, Short-horn cattle and Plymouth Rock chickens. Boars in service. Admiral Chip No. 7919 and Abbottsford No. 28351, full brother to second-prize yearling at World's Fair. Individual merit and gilt-edged pedigree my motto. Inspection of herd and correspondence solicited. M. C. Vansell, Muscotah, Atchison Co., Kas.

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FIRE BURNED MY HOME.—And all my grain January 24, so I will sell eggs from Knapp strain S. C. White Leghorns, \$1 per thirteen, \$2 per thirty. J. R. Cotton, Stark, Neosho Co., Kas.

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17 Years Breeders of B. P. Rocks exclusively. Birds raised on four farms. We shipped 9,500 in 1893-94 into eighteen States and Canada. Eggs \$1 for 13; \$2 for 30; \$6 for 100. Eggs packed safe to ship any distance. Good hatch guaranteed. Send for circular.
Joe Cunningham & Co., Loree, Miami Co., Ind.

E. E. AXLINE, OAK GROVE, MISSOURI, (Jackson Co.)
Barred Plymouth Rocks.
Bred from the best strains and judicious matings. Eggs \$1 per setting of fifteen. Satisfaction guaranteed.

SWINE.

Thoroughbred Duroc-Jersey Hogs
Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. Stonebraker, Panola, Ill.

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SWINE.

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Have for sale pigs from State fair winners. Can fill classes for show. Boars for fall service. A few choice sows bred. Address
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Breeder of Pure-bred BERKSHIRE SWINE. Stock for sale at all times. Satisfaction guaranteed. Write for what you want.

BERKSHIRES.
We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders.
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T. A. HUBBARD, Rome, Kansas,
Breeder of
POLAND-CHINAS and LARGE ENGLISH BERKSHIRES. Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

BOURBON COUNTY HERD, English o Berkshire o Swine.
J. S. MAGERS, Prop., Arcadia, Kas.
Imported and prize-winning American sows headed by Imp. Western Prince 32302. All selected and bred to head herds and to supply those wanting none but the best. Fall litters now can't be beat. Write or come visit me and see the herd.

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BREEDER OF
Regist'd Berkshire Swine
45 in herd, headed by Lord Majestic 34708, a son of Imp. Lord Windsor 30461; dam Imp. Majestic 30459. 6 boars, 12 gilts, by Model Duke II. 22467, and 9 fall of 1894 farrows, both sexes, for sale. Write or come.

MAINS' HERD OF POLAND-CHINAS.
JAS. MAINS, Oskaloosa, Kas. (Jefferson County.)
A grand lot of sows bred to Monroe's Model, Excel, McWilkes Jr. and Storm Cloud 2d. Also all other classes and ages of stock for sale. I guarantee safe arrival and stock as represented or money refunded. Breeding stock recorded in Ohio P. C. R.

GEORGE TOPPING, Cedar Point, Kas. (CHASE CO.)
Importer, breeder and shipper of
LARGE ENGLISH BERKSHIRE SWINE
of best families and breeding. Choice pigs for sale at low prices. Also Single-combed Brown Leghorns and Mammoth Bronze turkeys. Eggs in season. Farm 6 miles south of Cedar Point. Mention K. F.

STANDARD POLAND-CHINA HERD.
CHAS. A. CANNON, Proprietor, HARRISONVILLE, CLASS COUNTY, MISSOURI.
Breeder and shipper of registered Poland-China swine of the best strains. Herd headed by Chow Chow 9993 S., assisted by a Black U. S. son of Imitation 27185 O., also a son of Tecumseh Jr. 10207 O. 220 head in herd. Young boars and gilts yet on farm. Write or come and visit me.

JOHN KEMP, North Topeka, Kas., breeder of improved Chester White Swine. Some fine young boars fit for service for sale. Correspondence invited.

JOHN A. DOWELL'S HERD REGISTERED POLAND-CHINA SWINE.
Robinson, Brown Co., Kas.
130 head, all ages, headed by Onward 8981 S., sired by George Wilkes. He is assisted by Tecumseh Wilkes, sired by General Wilkes 21927. The females belong to the best strains. Come or write.

W. S. ATTEBURY, Rossville, Kansas.
BREEDER OF
Chester Whites
Exclusively.
Satisfaction guaranteed.

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J. A. WORLEY, Sabetha, Kansas.
Poland-China Swine, Short-horn Cattle, Light Brahmas and G. L. Wyandottes. Herd headed by Anxiety 29251 A., assisted by Combination U. S. 13408 and America's Equal 12379. Have some choice fall pigs, both sexes, for sale, and a few Light Brahma cockerels. Eggs \$1 and \$1.50 per setting. Write. [Mention KANSAS FARMER.]

BARRED PLYMOUTH ROCKS EXCLUSIVELY.
All high-scoring birds. Have bred Plymouth Rocks for thirteen years. Yard headed by cockerels scoring from 92 1/2 to 94 points, including a cock sired by the World's Fair winner, scoring 94 points by Pierce, and a 93 1/2 point cock from L. K. Felch's yards. Have shipped eggs to all parts of the United States. Eggs \$1 per thirteen or \$2 for thirty. I guarantee satisfaction. Send for circular.
D. B. CHERRY, Knoxville, Marion Co., Iowa.

CATTLE.

SUNNY SLOPE FARM, C. S. CROSS, Proprietor, Emporia, Kas.
Breeder of PURE-BRED HEREFORD CATTLE. Herd headed by Wild Tom 61592, a son of Bean Real 11055 and assisted by sons of Cherry Boy 26475, Archibald 1st 39258 and Washington 22615. 200 head, all ages, in herd. Strong in the blood of Lord Wilton, Anxiety and Horace. A choice lot of young heifers, fit for any company. Bulls all sold. Correspondence solicited, or, better still, a personal inspection invited.

SHANNON HILL STOCK FARM.
G. W. GLICK, ATCHISON, KAS.
Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Waterloo Duke of Shannon Hill No. 89879 and Winsome Duke 11th 115,137 at head of herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

MAKIN BROS. Breeders of Hereford Cattle.
Choice stock for sale of both sexes. We will sell any individual, a carload or the whole herd at reasonable prices. Write or come and see us. Address Florence, Marion Co., Kansas.

SWINE.

A. E. STALEY, Ottawa, Kansas.
CHESTER WHITES AND POLAND-CHINAS. Light Brahma eggs \$1.50 for 15.

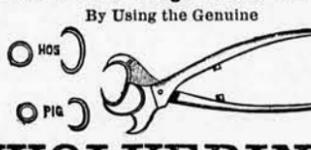
BERT WISE, breeder of Poland-China Hogs, Holstein Cattle and Barred Plymouth Rock Chickens of choicest strains. Butler's Darkness No. 6846 S. and Ideal U. S. Nemo at head of swine herd. Only choice stock shipped on order. Sows bred and a few extra good young boars for sale. Three are out of my Orient sows. Write your wants. Satisfaction guaranteed.
BERT WISE, Reserve, Brown Co., Kas.

Evergreen Herd Poland-Chinas.
J. F. & P. C. Winterscheidt, Horton, Brown Co., Kas.
150 in herd. Boars in service: Admiral Chip 71919 S., George Wilkes Jr. 11838 S., Corbett 11859 S. and Winterscheidt's Victor (Vol. 9). 45 sows bred for coming pig crop. 10 young boars and 40 gilts ready to go. Write or come.

BLACK U. S. AND WILKES
300 head, registered or eligible. Boars in service. Modest Duke 12653 S., Wilkes Tecumseh 11760 A., White Face 12981 O. and Oggood Dandy Wilkes 12709 S. 60 young boars; 80 gilts.
J. R. CAMPBELL & SON, Avilla, Jasper Co., Mo.

LARGE SALES Sold 1673 O. I. C. HOGS IN 1894.
Send for a description of THIS FAMOUS BREED, two of which weighed 2806 lbs. First applicant from each locality can have a pair on time and an agency.
The L. B. SILVER CO., CLEVELAND, O.
(Breeders' Directory continued on page 16.)

FARMERS!
Prevent Your Hogs From Rooting
By Using the Genuine



WOLVERINE
HOG RINGER and RINGS.
Best and Cheapest in the market. For sale at Hardware and General Stores. Man'd by Heesen Bros. & Co., Tecumseh, Mich.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

OCTOBER 3—L. N. Kennedy, Nevada, Mo., Poland-China swine.
OCTOBER 4—Winterscheidt Bros., Horton, Kas., Poland-China swine.
OCTOBER 9—Geo. W. Null, Odessa, Mo., Poland-China swine.

THE HORSE INDUSTRY.

"Farmers in Kansas, Nebraska, Missouri and Iowa make a fatal mistake if they neglect or overlook the importance of horse-raising at this time," said Capt. W. S. Tough, manager of the horse and mule market at Kansas City, to a FARMER representative a few days ago.

As Capt. Tough is an old and experienced breeder and is to-day still engaged in the business, as well as in charge of a great horse market, he was requested to give our readers the benefit of his practical and authoritative views, which he did, as follows:

"Yes, I think this is a very pivotal period to the farmers and horse and mule breeders generally. Now, if the farmers and breeders of the country could realize the true state of affairs they would with one accord see that there was never such an opportunity to breed and raise good quality horses and mules for market with an assurance of a good wholesome profit as right now. One of the best things that could have occurred to this country is the great depression in the prices of horses, for the reason that it forces the farmers to dispose of the great surplus of common animals, produced from injudicious breeding all over the country. Prices went down at such a rate that no one could hold their stock for a raise, as they would eat up their value in a very short time, and also deteriorate in value on account of advance in age. Some say the demand has largely fallen off. There was never in the history of the country such a number of horses bought and sold in the same length of time as in the past six years. The number of dealers has quadrupled. Prices kept going down, stock must be disposed of, and a great number of men saw, or thought they saw, an opportunity to make easy money; once started in the business the majority continued until they were no longer able to raise the funds to carry on the business. The continued reduction in prices forced a market. Prices seemed so low in comparison with the past that a large number of Southern and Eastern buyers purchased. Less care was taken with them and necessarily the mortality has been a hundred-fold greater than when values were higher and stock harder to get. This great surplus that was in the hands of the farmers has been so materially lessened that the number of good horses of most all grades is becoming scarce, and, as the supply continues to fall off, prices on these classes will gradually appreciate until we may reasonably look for good horses and good mules to be as high, if not higher, in three years from to-day than they have been for the past five, due to the fact that the low prices have so thoroughly discouraged the farmer and breeder that the past year there has not been over 11 per cent. of the farm mares of the States of Kansas, Nebraska, Iowa and Missouri bred.

"It will be at least four years before we can feel the effects on the market of an increased production, even should the farmers to-day fully realize the condition of the market and turn their attention to breeding horses and mules more intelligently. It is certainly fair to presume that our Eastern farmers, with lands valued all the way from \$40 to \$100 an acre, will hardly find it profitable to raise horses and mules, without it is the very highest grades of the trotter, coach and thoroughbred runner; therefore the States west of the Mississippi river can be expected to produce the majority of the high-class general utility horses, such as first-class draft, nice roadsters, good express horses and the handsome carriage horse, as they have cheap lands, which afford cheaper feed; climate well adapted to the raising of this class

of stock, and are more centrally located. The trouble is, in the main, that a great number of street railway companies in our cities, whose demand was for the class known as the ordinary streeteer, which is the medium farm horse, were paying the breeder and farmer a fair profit without causing them any great care or expense in the breeding and handling of such stock. Consequently when this demand was cut off, which it is almost entirely, it left a great surplus for which there is a very light demand, and as they had to be disposed of, they were thrown upon the market, and prices were cut down until they affected almost every other class and grade of work animals. This, coupled with the great general depression in business matters for the past few years, has had such a discouraging effect upon farmers and breeders that they have even neglected their horses more than before, and the majority of animals that were offered in market were only partially broken and in very ordinary condition. There is no doubt from the outlook of the export trade at present, and it is generally increasing, if our farmers will turn their attention to breeding horses with the same judgment and intelligence that they do their hogs and cattle for at least a generation, the product of the farm in this line will be equally as remunerative as any other branch of legitimate farming, if not more so. The question is asked, What class, then, shall we raise? We can only answer that circumstances will largely control the farmer in regard to that.

"We have found farmers who seemed to have a special faculty for the breeding, raising and handling of mules and are always successful. It is the same with the raising, breaking and handling of the first-class draft horse, the express horse, the round-bodied, closely-made chunk of 1,100 to 1,300 and 1,400 pounds. Again there is the farmer who has had considerable experience in breeding the fine American road horse or trotter, which stands pre-eminent among the breeds of horses we have in the United States, if not in the world. A large proportion of the finest and most stylish coach teams of our large Eastern cities have been purchased from localities where the animal raised is almost exclusively the high-bred trotter, and only bred with a view to style, size and bone and not exclusively for blood lines or speed. The trotter is as uniform a breeder as any other class of horses and can be educated as a saddle horse, with all his handsome gaits; a fine road horse, able to pull two men in a road wagon at a gait varying from 3:00 minutes to 2:30. He can also be educated to show as much style, with as much fine park action and finish, and then with warm blood, size and quality, and better able to go the distance, can certainly excel any horse as the long-distance road horse. It is not necessary for the farmer, if he breeds trotters, to feel that it is incumbent upon him to have a training track upon his place and all the paraphernalia necessary for the race track. If he will breed for size, style, bone and quality, he will find plenty of buyers who are anxiously waiting for the animal to be of an age suitable to be put to work.

"The producer does wrong to hold his animal with a view to get the very last dollar he will ever be worth. Sell him at a fair profit and let the purchaser make money. If you do, he will come back and want others, and so it will continue, and we would say to each farmer and breeder, use your taste in this as you would with cattle, or the different breeds of hogs. Use your judgment as to what you are best qualified to handle and make a success. People who doubt that good horses are becoming scarce and will soon appreciate in price at a degree as marked as their depression in the past will find just as soon as farmers begin plowing and cultivating, the number of horses at the different markets will show a material decrease. Farmers will say, 'Yes, I have two or three extra horses, but I can use them to good advantage in relieving my other horses during the pressure of spring work, and when through I can turn them out. They

will get in good condition on grass pasture, which does not cost much, and from the outlook at present fall prices will be at least as good, if not better.' Already horses are being shipped into certain localities in Kansas to be sold to the farmers. It is a difficult matter to convince any class of people that a business will work a profit under such experiences of depressed prices as the past five years, and we very much fear that our farmers will not realize the condition of affairs until they are unable to reap the profits at any very early date.

"If the farmers and breeders of the Western States would now look into the matter and take hold of it in earnest, resolve they would not breed one mare without she was a good No. 1 individual, of a class that is, and is likely to continue in demand; then breed only to a sire of equal or greater merit in the same class, fully realizing that the old theory is true, that 'like begets like,' or the likeness of some immediate ancestor; care for, feed and handle the produce as they would other live stock products, they would make the four States mentioned, together with northern Texas, Oklahoma and Arkansas as noted for their product of high-class horses as the State of Kentucky has been. It is bound to come sooner or later, and why not start in time and get the first and most substantial profits therefrom? They say that most doctors dislike to take their own prescriptions, but in this instance I so far believe in this view of the situation that I have purchased twenty-five head of selected draft mares and also have thirty head of large, well-formed, high-bred trotting mares, which I will breed this season. Breeding is no longer an experiment. With the experience of the past twenty years we can say the problem has been solved and the only guide and rule to go by is breed for the best, to the best, for they always pay the best under all circumstances."

What About Red Polled Cattle?

EDITOR KANSAS FARMER:—I would like the opinion of those competent to judge, but not prejudiced by interest, as to the merits of Red Polled cattle, as compared with the more popular and better-advertised breeds. I believe there is not a single Kansas breeder advertising that breed of cattle in the FARMER. I like Short-horns, and if they were hornless would look no further. Am trying caustic potash on calves this spring, but while it is easier to perform, it is no more humane than dehorning. Nevertheless, if it proves a success, shall keep it up, or change to a hornless breed. With best wishes for the FARMER and its readers, I am,
W. M. DRYDEN.
Spring Creek, Kas.

Members of the Kansas Improved Stock Breeders' Association and others are urged to give our correspondent their views or experience with this splendid breed of cattle. Are they as profitable as they are handsome? There are a number of small herds of Red Polled cattle in Kansas, but we know of no one who has any animals outside of a few bulls to spare and these are promptly taken by the breeders' neighbors.—EDITOR.

To Prevent Growth of Horns.

[Some weeks ago there was a good deal of inquiry for methods of preventing the growth of horns by the application of chemicals to the embryo horn when it first appears. Numerous answers were then published and the following, from Mr. M. H. Alberty, of Cherokee, Kas., was reserved as a reminder at this, the season of the year when this method of dehorning is most applicable.—EDITOR.]

EDITOR KANSAS FARMER:—I will endeavor to give the readers of KANSAS FARMER some of the different ways I have used to prevent the growing of horns. The best way is to purchase a hornless male of some of the polled breeds. If he is well bred, the first cross will produce 95 per cent. of hornless calves, dams being cows with horns. If your readers prefer other breeds that are not hornless, it will be necessary to remove them.

I find the best time is when the calf is not over a week old, if horn germs can be located by the skin on head of calf raising up, caused by pressure of horn germ commencing to grow. Remove hair from head, where germ is located, with shears or clippers. Cut off the little bumps or raised skin with a sharp knife, so that head will be smooth. If this causes bleeding, wait until the flow ceases, rub dry blood off carefully, and apply three to five drops of "horn-killer." Almost any of the many "horn-killer" medicines will do the work. The best way to apply medicine is to dip a stick in bottle and

SPECIFIC FOR SCROFULA.

"Since childhood, I have been afflicted with scrofulous boils and sores, which caused me terrible suffering. Physicians were unable to help me, and I only grew worse under their care. At length, I began to take



AYER'S

Sarsaparilla, and very soon grew better. After using half a dozen bottles I was completely cured, so that I have not had a boil or pimple on any part of my body for the last twelve years. I can cordially recommend Ayer's Sarsaparilla as the very best blood-purifier in existence."—G. T. REINHART, Myersville, Texas.

AYER'S

THE ONLY WORLD'S FAIR
Sarsaparilla

Ayer's Cherry Pectoral cures Coughs and Colds

apply end of stick to germ, keeping stick perpendicular, pressing gently on horn germ. Make two or three applications, and be lively, as it will soon take effect, and calf will want to shake its head. Five cents' worth of caustic potash, in stick form, can be used, if preferred, and will do the work. To use it, dampen horn germ where skin was cut off and rub with end of caustic potash stick; dampen twice and apply caustic, and work is done. If, in three or four days, a large-sized scab has formed, and appears to be well down in hide, the work is done and no further application will be necessary. Care must be taken not to spill medicine on calf or get it on the hands, as it will burn wherever it touches.

M. H. ALBERTY.

Cherokee, Kas.

Corn and Cob Meal for Young Stock.

EDITOR KANSAS FARMER:—Since the middle of November, we have been grinding ear corn with horse-power. We take from three to four buckets of cob meal and put it into about thirty gallons of warm water, and bring it to boil, season it well with salt and let it stand from one to three hours. Thin it down by putting more water into it, mix thoroughly and feed a little, warm, to the hogs. We find that cob meal is worth more to feed in this way than the same weight of pure corn meal would be, or, in other words, the ground cob is worth more to us than the same amount of bran.

We find the cob meal is excellent feed for calves, young stock of all kinds, milch cows and also horses, but must not be fed to young chickens.

The question in the mind of the writer is, why we, as a people, have been so slow to take up with this manner of preparing corn and cob for feeding purposes. Then, again, when we see the number of acres of corn that are cut and put into shock in Kansas and hauled out and fed, with three-fourths of the stalks going to waste, is another of those mysteries.

The climate that we have in Kansas is favorable for feeding stock in the fall and winter months, and cannot be excelled in any other State in the Union. Therefore, farmers of Kansas, we cannot suffer this waste of corn cob, also corn stalks, to go on as in the past.

Almost every farmer is able to have a mill on his farm to grind the ear corn into cob meal, and the day is not far distant when the machine for crushing and cutting ear corn, with the fodder, into any condition we may want, will go from farm to farm as the threshing machine now makes its rounds amongst us. The Sunflower State will come to the front in this manner of preparing corn fodder and also cob meal, and stand in the proper place where her soil and climate and well-directed energy of her farmers have and will place her, in the front ranks. *Ad astra per aspera.*

Garnett, Kas. JAMES BELL.

Agricultural Matters.

HOW TO MAKE THE FARM PAY.

By George Anderson, read before the Farmers' Institute, at Oak Grange hall, Shawnee county, March 7, 1896.

Success in agriculture, as well as any other business, depends largely upon the amount of thought bestowed upon it. Energy of brain is as essential to success as that of muscle. Many men who have failed in mercantile or other kinds of business think it an easy matter to make money on the farm. In fact, many farmers do not consider farming in the light of a business, but rather as an occupation one may follow without any capital or special knowledge. That is the chief reason, fellow farmers, that the majority of persons having farms for rent want cash rent for them. A good, practical farmer, or one who has that reputation, never has any trouble in renting for crop rent. In fact, he does not want to rent many years, for he is soon able to buy a farm.

One of the important qualifications necessary for a farmer, to make the farm pay, is to be satisfied with his calling and make the best of his surroundings. The farmer who is always grumbling because his neighbor is getting along better than he, or wants to run the finance of the country and cursing the money-lenders, is not the farmer that will make the farm pay. On the other hand, a farmer who has the better qualifications—a cheerful disposition, a close observer how his successful neighbor manages, and much more ready to receive advice than to give it, unless asked, and keeps within his means, will make the farm pay. I repeat it, keep within your means, or keep out of debt. I think going in debt has been the most common mistake with Kansas farmers, and the greatest curse is that the proceeds of her bountiful harvests have gone to pay interest. To any young man just starting on a farm, my advice is, don't go in debt, except it be for real estate, and be very cautious about that. If you go in debt you will be liable to spend time thinking how to get out when you should be sleeping soundly in order to be ready for the labors of the coming day.

We hear from men on every side that farming does not pay as well as it did twenty years ago, and that the country is going to the dogs. Their fathers or grandfathers made money on the farm; why can't they? The trouble is just here: They live beyond their income. They spend more than they earn. Getting "on tick" has ruined many farmers, not only in Kansas, but all over the country. Farmers twenty or forty years ago bought and sold for cash. Their wants were not so numerous as the wants of the average farmer to-day. They bought what they needed and could pay for. There was none of this modern splash and empty style about things that we see now. They did not purchase a \$150 carriage simply because their wealthy neighbor had one or because the old one was out of fashion; they kept down expenses; they lived within their income, and at the end of the year they came out all right. The credit system, some say, is a good thing, properly used, but it has proved a curse to many Kansas farmers.

You ask, how would you keep out of debt or live within your means? My way is to carry on the business so as to pay as I go except for real estate. I make dairying a specialty and the proceeds keep up all running expenses and have left a balance to use in improving my farm. And all that is necessary to make dairying pay is to have from six to ten good cows: make gilt-edge butter, and it will bring you 25 cents per pound in our home market twelve months in the year. Those living near a cheese factory will find that the proceeds of a few cows will come very acceptable each month—minus the bother of making butter and marketing it, as we have to do. There are many other sources of revenue that can be relied upon to keep farmers' pocketbooks replenished. The poultry department is an important factor on every well-regulated farm. Poultry

are great scavengers and will come nearer furnishing something for nothing than anything on the farm, or at least we find it so. A dry, warm place to roost, a small piece of rye sown near the hen-house for green food for winter and early spring, with free range over premises, will pay a larger per cent. of profit for money invested than any other investment on the farm. Farmers who have kept no account of receipts from their poultry for one year will be surprised if they will keep a correct account for that length of time. We market our eggs and poultry directly to consumers, same as our butter, and I find, on looking over my market book, that eggs alone have brought us an average of \$1.86 per week during the past year. My little girls have attended to raising the young chickens for one-half what they raised, encouraging them to earn a part of the money that it takes to buy what they need to be happy and contented on the farm, and I am sure it helps to make the farm pay. Market gardening, horticulture and small fruits are other sources of revenue on farms. Stock-raising has been one of the principal sources of revenue in the past, and many farmers are claiming that prices at the present time do not pay cost of raising. This is true, with horses at present prices. Cattle can be raised at present prices.

Farmers who are out of debt are not complaining, as a rule. Everything that farmers have to buy is so very cheap. I can procure more clothing, more groceries and more dry goods with a five-dollar bill now than ever before since I have been doing business for myself. The same is true with hardware, boots and shoes, and nearly everything else at the present time.

To make the farm pay we must diversify our crops. It would not be wise to depend on any one crop. The imprudence of putting all one's eggs into one basket has long been a proverb. Therefore, I would divide crops as well as circumstances will admit. It not only gives the farmer a chance to rely on more than one crop in seasons of short crops, but also that he may have employment for as long a period as possible without being crowded at any time during the season. Every farmer ought to produce, as nearly as possible, everything adapted to his climate that his family consumes. The prosperity and happiness of every farmer depends largely on this. An old colored man once said to me: "Bought corn kills horses," and it is true with many other things farmers buy.

Good tools are a requisite to successful farming. But taking proper care of those tools and housing them, are the points that most Kansas farmers are wholly deficient in. The slipshod way farmers have of leaving their tools in field where used last, until the coming season, will not make the farm pay. More farm implements rot and rust out in Kansas in one year than are worn out in two years by use. In fact, I am well acquainted with a man, who used to claim to be a farmer, who bought a new cultivator, used it one season, left it where last used until the next season, and because it would not scour the next spring, he said it was no account and bought a new one. It goes without saying that that man did not farm many years. He is now working by the month.

Shelter should be provided for all farm animals during cold and stormy weather. Particularly the dairy cows should have warm, dry stables.

There is a great deal said at present in regard to the feeding and fattening qualities of the different grains produced on our Kansas farms. I still think corn is king in feeding hogs or cattle, oats for horses, corn chop and wheat bran, equal parts, for dairy cows.

The observing farmer is beginning to realize that there is too great a loss by fertilizing material going to waste each year from feeding along the creek, in natural shelter, where the spring rains and freshets wash away nearly all manure made during winter. They find it would be cheaper to prepare shelter where the manure can be saved, and thus keep their land well

fertilized without buying commercial fertilizers. The past season has been one of the driest since 1860. It has been disastrous to crops all over the West. Our feed supply being short, we will learn the lesson of practical economy. The Western farmer is notably wasteful. Providence gives him a bounteous return for his labor usually, and he does not value his products as he should. The waste observed about the ordinary Western farm is simply shocking to a man from the East. We will now learn how far we can make a little go, and, if we make good use of this lesson, the drought may prove a blessing in disguise.

Experience has taught the Kansas farmer to crib or store his surplus corn in more favorable seasons and not market same until certain of a crop the coming year. I have found this one way to make the farm pay. If I had not had a supply of old corn I would be compelled to buy corn before another crop can be grown, at 100 per cent. advance over what corn was selling for in fall of 1893.

Summing up how to make the farm pay financially in a few words, is simply this: Industry, economy, and live within your means, keep up the fertility of your farms, look after the small things, and keep out of debt.

Still we have other matters to look after to make the farm pay. Socially and mentally we should endeavor to rear up our sons and daughters to be useful men and women. That there is a growing tendency of young men to leave the farm is a well-established fact. There should be something to induce boys to remain at home, something to inspire them with an interest in farm life. One of the surest methods of keeping them upon the farm is to allow them some privileges that will encourage them, and never forgetting that you were young, twenty, thirty or forty years ago. I think one thing that causes many of our boys to become discontented is the continual fault-finding by their parents and older people with such remarks as this: "Farming don't pay, nohow." "We will soon land in the poor-house." The boy feels like a poor minister, who took permanent leave of his congregation in the following manner: "Brothers and sisters, I come to say good-bye. I don't think God loves this church, because none of you ever die. I don't think you love each other, because I never marry any of you. I don't think you love me, because you have not paid my salary. Your donations are moldy fruit and wormy apples, and by their fruits ye shall know them. Brothers, I am going to a better place. I have been called to be chaplain of a penitentiary. Where I go ye cannot come now, but I go to prepare a place for you, and may the Lord have mercy on your souls."

I would advise our young people to watch the young men and women who are leaving school and college for the conflict of life, and note those who take to farming and stock-raising and those who choose professional life, and see if a greater percentage of the former do not meet with success.

Many complain of the confinement of farm life, and especially at night they must be at home. Statistics show that nine-tenths of the crimes committed in the world are done between sunset and sunrise. Blessed rather is the farmer's family, safe from temptation and secure in the pure influence of home. Let us build up our homes, sending forth a moral and religious influence, a spot that will be remembered with pleasure by our children in the years to come, a quiet retreat in which to entertain our friends, a rest for the weary traveler and stranger and an honor to our community in which we live, and we can say we have made the farm pay.

Rye in Place of Wheat.

EDITOR KANSAS FARMER:—The outlook for the next wheat crop is anything but encouraging throughout central and western Kansas. With a bad season for seeding, in most of this territory, and a winter of "scorching storms," together with the low prices in prospect, the wheat farmer has little to encourage him. Doubtless many

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would gladly change to some other crop, were there a prospect or promise of some other remunerative crop to take its place. I wish to speak a good word for rye. It is a crop with which we are all somewhat acquainted. It is cultivated and handled exactly like wheat. The same preparation of soil, the same amount of seed per acre, and the same teams and machinery are required in raising rye as wheat. I believe there has been some prejudice against rye, because wheat has been generally considered a better bread-stuff; besides, we have usually been able to realize more from an acre of wheat than of rye.

Let us consider some of the advantages which may be claimed for rye as a crop: First, it is pre-eminently and emphatically the most hardy grain crop grown in this region. I have never seen it winter-killed or frozen out in this or any other of several States where I have seen it growing. It does not allow itself to be crowded out, as sometimes happens to wheat, therefore has not the repute of changing to cheat. As a bread material, rye furnishes an article superior to the bread made from fine wheat flour for healthfulness. Wheat has the reputation of producing a more palatable bread of delicate flavor and the flour is more easily manipulated than that from rye. It is, nevertheless, a fact that those people who use rye as the regular diet are stronger and healthier every way than those who eat white wheat bread. As a stock feed I know of no grain that can equal it. When properly fed there is no other grain for farm animals of greater value. In the quantity of its yield it compares favorably with wheat. Were an average taken, perhaps the rye might prove the best yielder, as there are less poor fields of rye than wheat. I have seen forty bushels of rye grown per acre in Kansas. For the past three years rye has been worth the same in market as wheat. But rye yields a straw so much superior to that of wheat, in quantity, in quality and in palatableness, that I consider its value as forage or roughness one of its best recommendations. Where the rye straw is kept dry and bright it is fully as valuable as prairie hay for horses or cattle. Those of your readers who are acquainted with the Pennsylvania barns and the practice of feeding "hechsel and schrott," where the straw is shredded and mixed with chop-feed, will readily sanction anything I may say in favor of rye straw as wholesome feed for teams.

McPherson, Kas. A. F. W.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

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Irrigation.

IRRIGATION POSSIBILITIES UPON THE HIGHER LANDS OF WESTERN KANSAS.

By A. B. Montgomery, Goodland, before the Kansas State Board of Agriculture, at its twenty-fourth annual meeting, January 9-11, 1896.

I am placing a plant upon the table lands of Sherman county, at a depth of 140 feet, which is not yet completed. After seventeen or eighteen years' residence in western Kansas, I certainly can speak to some extent as to whether or not agriculture is a success without irrigation. I am confident that it is necessary for successful agriculture that we irrigate. Our rainfall there amounts to about seventeen to eighteen inches per year, average.

If that was distributed through the growing season, it would be more than enough for successful farming. In the 'arid' regions of the West, twelve inches of water applied at the proper time is sufficient for raising good crops—in Sherman county we would seldom fail to raise a crop if we could have from four to eight inches of water during the growing season in addition to our rainfall. Sherman county is thirty by thirty-six miles in extent, comprising 691,000 acres of land, mostly level prairie, rich loam soil, no hard-pan. Under the entire county lies an inexhaustible supply of water. Ten per cent. of the area, or about 70,000 acres, lie within fifty feet or less from this sheet water.

The first requisite for successful irrigation is the supply of water. We, in Sherman county, feel that we have tested that question to our satisfaction. On the town site of Goodland, 3,700 feet above sea level, and twelve miles from the nearest running stream, on 160 acres of land, pumps are running that furnish 500 gallons of water per minute, or 30,000 gallons per hour, which means over one inch of water for twenty-five acres every twenty-four hours, and we find no diminution in the supply after continuous pumping for several years. One six-inch tubular well at the city waterworks has a capacity of 7,000 gallons per hour; two other wells, four inches in diameter, within ten feet of the six-inch well, furnish 3,000 gallons per hour. With the above showing, we feel satisfied regarding the supply. I am further convinced that the problem of irrigation by pumping, from a depth of fifty feet, is an assured success. I cite you to the wonderful progress made by the people of Garden City and vicinity; also, to parts of western Nebraska, besides many places in numbers of our western counties, all done by pumping, and using the windmill for power.

As a large part of Sherman county lies above fifty feet in depth to water, the problem to be solved is, can we successfully lift the water to enable us to irrigate and compete with the rain belt, or more favored sections of our country? We find people moving to the Western deserts, onto land covered with sage brush and alkali, paying exorbitant water rights, putting up with many inconveniences, long distances from markets, and yet, after all, making a success. Why? Because of irrigation. Through that means they are able to raise more per acre, of better quality, than the farmers within the rain belt. They till less land; they become better citizens socially by living in closer communities.

But why leave Kansas for the deserts? We have millions of acres of better soil; all the conveniences of civilization; water within easy reach, only waiting to be placed on the soil by the windmill and pump. Through that means the farmer is independent of exorbitant water taxes; he is within easy reach of markets, both east and west. Now, can we solve the problem of irrigation on the higher lands? It is an assured success up to fifty feet to-day. How short the time since croakers said it was impossible to irrigate by pump at any depth? May we not look forward with hopes of success to the near future, when the mind of man will give us a wind engine to lift the water at 100-foot depth as easy as it is to-day at fifty-foot depth? We must utilize the wind power that blows

across the prairies of western Kansas; we must harness that great power, through the agency of the windmill, connect it with the great supply of water beneath; then with the four great factors, wind, water, soil and brains, the problem of successful irrigation in western Kansas will be solved.

I am confident the mind of man will give us the pump and windmill for deep pumping when the demand arises. The mind of man has never failed yet when a necessity required. The demand is here, and to-day the great factories are sending out men to study the demands for windmills for deep pumping. Some one in this meeting suggested the gasoline or steam engine. That power is too costly for the average farmer settled on the frontier of our State; you must give him cheaper power; you must give him a pump and windmill within reach of his means. Since the possibility of irrigation by pumping has opened a way out for my people, they have not been idle the past season. There are to-day, built and building, 150 reservoirs in Sherman county for irrigation purposes; one year ago there were none. A Mr. Hunter has a ten-foot windmill, two and one-half inch cylinder, one and one-quarter inch pipe; the plant, when erected, was intended for pumping stock water and domestic purposes; the depth to water is 140 feet. The past season he watered seventeen head of stock and irrigated a garden patch of one-fourth of an acre, realizing from the latter \$52. A Mr. Butts, another farmer having a similar plant, and only intended, when erected, to supply stock water, besides watering thirty-two head of stock, also irrigated one-half of an acre of garden, from which he realized \$92, the depth to water being 135 feet. I only give you these instances to show that what has been done on a small scale can be done on a large scale.

The County Commissioners of Sherman county placed a windmill plant in the courtyard this last season; the well is a four-inch tubular, the depth 160 feet. Two acres were irrigated, and the windmill laid idle three-fourths of the time for want of reservoir room, the reservoir being too small for the capacity of the plant. This plant, we estimate, will irrigate eight acres. The windmill is eighteen feet. It has filled the reservoir, which holds 70,000 gallons, in two and one-half days. I could give instances of the success of several farmers in Sherman county the past season who have irrigated, by pumping, for the first time.

I am satisfied the success of irrigation must come through individual efforts. Any legislation that will help to that end will be thankfully received by our people. The creation of an irrigation board at high salaries will not benefit Sherman county; large appropriations expended in testing the supply of water will not benefit our people. We have demonstrated that fact already. What we need is funds to supply farmers with pumping plants, giving them time enough to raise, say two or three crops. If the farmer could buy a pumping plant on one, two and three years' time, he could "see daylight."

If any legislation is enacted or required to test the supply of water, I would recommend that the State appropriate \$20,000, and have the County Commissioners of the organized western forty counties place a pumping plant, to cost not over \$500, either on school land or the county farm, at a depth of not less than seventy-five feet, and to make their reports of the success of such plants direct to the Secretary of the State Board of Agriculture. We feel that the State Board of Agriculture is friendly to the people of western Kansas, and we feel that we have a friend in the worthy Secretary, who has by many efforts and kind acts cheered us on, knowing that a great future is developing for western Kansas.

Maj. Powell says 5 per cent. of western Kansas can be irrigated. He says that 5 per cent. under irrigation will give us the densest populated part of Kansas. I am confident, with my knowledge of the water supply and soil of Sherman county, that 20 per cent. can be irrigated. If so, then what a

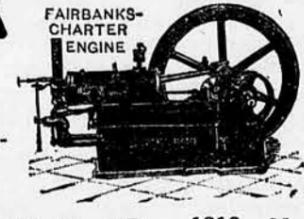
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grand future awaits the toilers of western Kansas, and especially Sherman county.

At a depth of 150 feet, a pumping plant that will irrigate ten acres can be placed at a cost not exceeding \$400. The farmer can build his reservoir himself, with only the cost of his labor. The first crop will repay all outlay and leave a surplus. In a few years a windmill plant that to-day is a luxury will be a staple article, and the price will be much lower. One very important point is to have a pond or reservoir. The reservoir should be built as near the top of the ground as possible, so as to get a good head of water in order to successfully flow over the ground to be irrigated.

To build a reservoir, scrape off about six inches of the top dirt, drag it to one side, and make the bottom as level as possible; pump water onto the floor until it is soaked down, say two feet, let it settle a little, then tramp with horses or cattle until it is tramped as hard as a road-bed. Begin your walls on top of the tramped floor, say about ten feet wide at the bottom, five feet high and three feet wide at top; while building the wall let the pump run, so as to fill the pond as fast as you build the walls, taking the dirt from the outside of the pond to build with.

In the discussion of Mr. Montgomery's paper, Dr. W. J. Workman, of Ashland, said: "The 'Jumbo' wind engine has been in use, in a limited way, for the last ten years. The first one was built somewhere north of Garden City, and was called the 'Dutch windmill.' Why it was so named I have never learned. The principal incentive to its construction and use was economy in cost. It was not thought at that time that great power could be obtained from them (much greater than from any other form of windmill known), and yet keep the diameter of the wheel so small as not to endanger it in high winds.

"These invaluable properties have been determined quite recently. The growth in size and usefulness has been quite gradual, and not until within the last year or two have they been sufficiently perfected to give a definite idea of the scope of their usefulness. The first wheel of any considerable power that I am familiar with was erected by John H. Churchill, of Dodge City. This has a diameter of fourteen feet, with a shaft twelve feet in length. It is built with eight radial fans. Mr. Churchill is able, with this wheel, to run two pumps, one of six and the other of four inches in diameter. Since the construction of this, one of large size has been built at the Soldiers'

Home, near Dodge City, furnishing power for a six and an eight-inch Gauze pump.

"I have recently constructed the largest 'Jumbo' yet attempted. The diameter of the wheel is twenty-one feet, with eight radial fans, mounted on a steel shaft twenty-seven feet in length. The wheel is in two sections, with central bearings for the shaft. This wheel is intended to run a pump fifteen inches in diameter, twenty-four-inch stroke, furnishing about 700 gallons of water per minute, fourteen-foot lift; also a water elevator with a capacity of 800 gallons per minute. I find that I have power going to waste in a fifteen-mile wind. The question of how great a diameter can be given a wheel built upon this plan and yet not be endangered by high winds has not been determined. However, should twenty, forty or 100 horse-power be required, the shaft can be extended indefinitely, adding sections of radial fans of ten or twelve feet in length, doubling the power whenever we multiply the number of fans by two. I am satisfied that a 'Jumbo' can be built with 100 horse-power at a cost not to exceed \$500. If the cost should be double the estimate, it would still be a marvel of cheapness.

"One objection, urged by those who had not observed their work, was that only north or south winds would furnish power. This objection has no foundation; in fact, I have found that when the wheel is properly constructed it works equally well with the wind at any quarter, and only stops when the wind comes directly from due east or west, which is so seldom as not to be taken into account. Wheels of great power should always be mounted on a steel shaft, not less than two and one-half inches in diameter—the spokes secured in cast spiders, secured to the shaft by means of keys and set-screws. Two or more pulleys with eight-inch face will be found necessary, to which to apply brakes, or to carry power to grinding or other farm machinery. These large wheels may be turned loose in the highest winds without injury—in fact, when all other windmills are thrown out of gear by high wind, the 'Jumbo' is doing double work. The castings and shaft can be obtained at any foundry; the other ma-

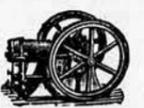
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terials at any lumber yard, and any farmer, with the assistance of the neighborhood carpenter, can build his own wheel. Where large quantities of water are to be raised from a depth of from 100 to 300 feet, as is the case on the table lands of western Kansas, or where a large head of water (with low lift) is desired, no power that I know of will compare in point of economy with the latest improved 'Jumbo.'

Field Notes.

Beyond a certain limit the law of supply and demand certainly does have an influence, and in no branch of production is this more aptly illustrated than in the live stock markets of the country at this time. The reports from the four leading market centers of the West, Chicago, Kansas City, St. Louis and Omaha, for the week ending April 6, show a shortage of 31,000 cattle and 73,900 hogs. Every breeder at once recognizes that better prices are sure to be realized. Kansas has more moisture in the soil than at this time last year, hence a better prospect for a corn crop, assuring better prices for porkers in the future. If your interests are at stake, consult Mr. W. H. Wren's advertisement elsewhere in this issue.

Among other invitations extended to and accepted by the writer, was that of the well-known northeast-central Missouri breeders, Thos. W. Ragsdale & Son, proprietors of the Oakland herd of Short-horn cattle, that was founded in 1872, and since won in the show rings of the United States fifty-eight herd prizes, aggregating over \$12,000 in cash. The farm on which the herd has been developed, is situated in Monroe county, eight miles north of Paris, the county seat, and eight miles south of Shelby, on the Hannibal & St. Joseph railway. The late sale of all bulls old enough for service, that went to Texas, reduced the herd to fifty-six head, headed by the three-year-old Cruickshank bull, Crown King 111418 A. H. B., sired by Imp. Ducal Crown 97149, bred by A. Cruickshank; dam New Years Morna. He is one of the most perfect types of Scotch bulls and now has for the inspection of the visitor a nice string of broad-backed, deep-flanked and high-character sons and daughters in the herd. There are three eight-months-old calves that bear a close inspection and a nice lot of one and two-year-old heifers. Among the youngsters now coming on are two sons of Crown King out of two very excellent cows, the one Flat Creek Mary by Imp. Burgomaster, and the other Rose Mary by Riverdale Major. Both of these young chaps, as the reader will readily understand, are "bred right" and are now even more than a hopeful promise, though young they are. Space forbids further notes of the Short-horns, and a word or two about the Berkshire swine will be in order. The up-eared blacks, consisting of about fifty head exclusive of spring pigs lately arrived, are headed by Famous, a son of the noted Longfellow 10835, that weighed, when within five days of seventeen months of age, 725 pounds. His son Famous has proven himself a great sire and now has a lot of twenty-five sons and daughters belonging to the fall of 1894 farrows to his credit in the herd. Eight aged harem queens of select character compose the mainstay of the herd in the female division. Three of them have farrowed lately fine litters by Famous. But enough of these divisions, and to that one more interesting, at least just at this time of the year, the poultry, under the supervision of Mrs. Ragsdale, and who in the West that reads the doings of the poultry people does not know her after her eighteen years of practical and successful career as a breeder of high-class poultry. The visitor now finds, after a partial season's trade has gone, 250 fine Light Brahmas belonging to the noted Felch, Upson and Barker strains. A grand troop of fifty cockerels, forty of which are strong, vigorous young fellows, and among them many high-class individuals ready to go out from the farm at \$2 to \$4 each. Close along on another farm are 150 Barred Plymouth Rocks, whose blood belongs to the Conger, Munger, Felch and Hawkins breeding. But few young Plymouth cockerels are left, yet a few good young ones may go at \$1.50 to \$3 each. The reader may say: "She's a little high in prices." So are gold dollars just now. Seven Brahma cockerels came to the farm last year at an average each of \$7 and two turkey toms went away for \$14 and \$17, respectively. So there, now. The turkey flock consists of fifty-two hens and twenty-four gobblers, twenty of which weighed in February on an average of thirty-three pounds. Her show birds won eighteen first prizes at nine shows and at six fairs won eight blue ribbons. At the World's Fair she won second on yearling hen, third on tom and first in the Missouri State poultry exhibit at the Columbian on both turkeys and Light Brahmas. In 1894 her birds won eight firsts at six shows, and among them first on turkey hen and third on pen, scor-

ing 193%. Won all offered on the Brahmas. The Brahmas score along from 91 to 94%. They have the run of the farm and are strong and healthy. The writer rather concluded that Mrs. Ragsdale was just a little more successful in her department of the breeding operations on the farm than was the "old man," but then that's nothing in this day and age. The choice of the young toms go out at \$5 and the hens at \$3 to \$5. The old toms retained for usefulness in the flock weigh forty-five and forty-six pounds and are of as high standard as to plumage as they are good weighers. The reader will find further information pertaining to the farm in an advertisement elsewhere in this issue, and should you chance to visit Oakland farm, a right hospitable old-fashioned, home-like reception will be tendered you.

SOHAM'S ANNUAL HEREFORD SALE.

The writer last week visited the Weavergrace Herefords, the property of the noted Hereford breeder, Mr. T. F. B. Soham, whose farm lies near Chillicothe, Mo., and spent the day in looking over the grand collection of foundation stock and the forty offerings that will go to the highest bidder at the regular annual clearance sale, on Wednesday, April 17, 1895. Space forbids that review of the operations and individual make-up that the herd deserves. As every breeder well up in American Hereford history knows the Hereford antecedents of Mr. Soham, it is not necessary to state more, perhaps, than to say that on page 362 of Vol. 1, "American Hereford Record," the reader will find: "The most important importation of Herefords to this country was by Mr. William H. Soham, in 1840. Included in this importation was the celebrated Matchless, that was a winner of first prize and sweepstakes at the Royal Agricultural Society's show in 1839. At the first annual New York State fair, held at Syracuse in 1841, we find: 'Your committee recommend a special premium of \$20, for the Hereford cow, Matchless, as we consider her a very superior animal.'" This importation consisted of twelve head of selected Hereford cattle and twenty-five Cotswold sheep, and cost their American owner nearly \$3,000, which was quite a sum of money in the early 40's. The reader will thus understand that Mr. Soham of to-day comes by his Hereford inclinations and individual success by actual inheritance, as it were. His annual clearance sale, April 17, 1894, was one of the most successful held in the United States during the year, and if one may judge of the prizes taken in the four State fair show rings and the three district fair shows in the fall of 1894, as shown on pages 7 and 8 of the coming sale catalogue, the Weavergrace herd needs no further introduction at the hands of the writer, as it is generally conceded that the "white-face" herds of the United States have held up in the estimation of beef-producers, whether range operators or farm breeders, better than any other breed all through the spell of depression, and as the sun of thrift has once more appeared above the horizon of better prices, its but natural that the breeder of high-class Herefords should feel good and that the breeders of beef cattle are hustling to get more extensively into the business. The visitor will find, if he carefully consults the sale catalogue, that the blood lines in the herd belong to the best in Hereford history, and if he compares the very life-like illustrations with the several living individuals, he will conclude that the artist has not overdone it, but in about three instances hardly does his subject that full measure of justice that their character, conformation and quality deserve. With these few observations on the individuality and history of the herd, the observer, on looking over the herd, especially the young things and youngsters, will conclude that Mr. Soham succeeds in getting a high standard of style without sacrifice of beef qualities. Gets good heads, good horns and a grace of carriage that simply demonstrates what may be accomplished by father and son in over half a century's practical experience.

W. P. BRUSH.

As baldness makes one look prematurely old, so a full head of hair gives to mature life the appearance of youth. To secure this and prevent the former, Ayer's Hair Vigor is confidently recommended. Both ladies and gentlemen prefer it to any other dressing.

"The Farmer's Ready Reference, or Hand-Book of Diseases of Horses and Cattle." Descriptive circular free. Address S. C. Orr, V. S., Manhattan, Kas.

No Change to New York and Boston.

The through service offered the traveling public by the Nickel Plate road (N. Y. C. & St. L. railroad) is unsurpassed. The perfect passenger service of this road, with the well-known excellence of the West Shore and Fitchburg roads, recommends itself to the traveling public. Wagner Palace cars and dining car daily on through trains to New York and Boston. For additional information, see your local ticket agent or address J. Y. Calahan, General Agent, 199 Clark street, Chicago, Ill.

Weather Report for March, 1895.

Prepared by Chancellor F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

While the past month was a warm one, yet its mean temperature has been exceeded in seven other Marches in the last twenty-eight years. March of last year was one of the three warmest Marches. In March, 1868, the thermometer reached 93°, which is 6° warmer than the maximum of the past month. While March, 1895, has been exceeded in mean and maximum temperature by other Marches, it is exceptional in the high temperature (68.51°) of the last week of the month, which is the hottest March week ever noted here. This month is the fifth consecutive month with deficient rainfall. The wind, cloudiness and barometer were normal.

Mean temperature was 44.21°, which is 2.83° above the March average. The highest temperature was 87.0°, on the 27th; the lowest was 6.5°, on the 4th, giving a range of 80.5°. Mean temperature at 7 a. m., 37.87°; at 2 p. m., 51.45°; at 9 p. m., 42.77°.

Rainfall, including melted snow, was 1.47 inches, which is 0.90 inch below the March average. The entire rainfall for the three months of 1895 now completed is 2.98 inches, which is 2.19 inches below the average for the twenty-seven years preceding.

Mean cloudiness was 46.60 per cent. of the sky, the month being 2.50 per cent. clearer than usual. Number of clear days (less than one-third cloudy), fifteen; half clear (one to two-thirds cloudy), eight; cloudy (more than two-thirds), eight. There were two entirely clear days and six entirely cloudy. Mean cloudiness at 7 a. m., 43.20 per cent.; at 2 p. m., 55.30 per cent.; at 9 p. m., 41.30 per cent.

Wind was southwest thirty-seven times; northwest, eighteen times; north, four times; south, four times; northeast, sixteen times; east, three times; southeast, ten times; west, once. The total run of the wind was 13,899 miles, which is 222 miles above the March average. This gives a mean daily velocity of 448.35 miles, and a mean hourly velocity of 18.68 miles. The highest velocity was 60 miles an hour, from 12:14 to 12:24 p. m. on the 1st and from 12:27 to 12:37 p. m. on the 3d.

Barometer.—Mean for the month, 29.103 inches; at 7 a. m., 29.118 inches; at 2 p. m., 29.100 inches; at 9 p. m., 29.094 inches; maximum, 29.550 inches, on the 16th; minimum, 28.664 inches, on the 29th; monthly range, 0.886 inch.

Relative Humidity.—Mean for the month, 56.9 per cent.; at 7 a. m., 71.5; at 2 p. m., 43.4; at 9 p. m., 55.8; greatest, 100, on the 19th; least, 3, on the 13th. There was one fog.

FLOWER 25 VARIETIES 25c.

Stamps or Postal Note. Includes many rare and costly varieties. CHICAGO SEED CO., Chicago, Ill.

SEED POTATOES!

Cane, Corn, Oats and Grass SEEDS.

Send for descriptive list and prices.

H. T. McCORM, 118 S. Fourth St. - ATCHISON, KANSAS.

Early Seed Corn.

Ten Good Yielding Yellow and White Varieties. Will fully mature good seed if planted June 15. You may need such corn this year. Prices low. Quick shipment. Catalogue and sample free. Address

J. C. SUFFERN, Seed Grower, Voorhies, Ill.

Seed Corn!

New NEBRASKA IRON-CLAD—made 80 bushels per acre in Nebraska in 1894, without irrigation. A cross between the well-known Golden Beauty and Early Yellow Dent. Sample ear, 10 cents, postpaid. Early Thompson and King of Earlies, 60 bushels per acre, without irrigation in Nebraska. Send for our new catalogue.

DELANO SEED CO., Lee Park, Neb.

Treatise on HOW TO GROW

PEDIGREE CORN

FREE ON APPLICATION.

PARLIN & ORENDORFF CO. Manufacturers Agricultural Implements, CANTON, ILLINOIS.

EVERGREENS.

Largest stock in America, including Colorado Blue Spruce and Douglas Spruce of Colorado. Also Ornamental Shade and Forest Trees, Tree Seeds, Etc. E. DOUGLAS & SONS, Waukegan, Ill.

EVERGREENS

that live and grow is what you want. I sell them. Nursery grown trees, 265, 8 varieties, transplanted evergreens one foot and up, packed and on cars for \$10.00. Greatest bargain ever offered. Smaller lots cheap. Windbreak trees a specialty. Illustrated catalogue free. Local Agents wanted. Mention paper. D. HILL, Evergreen Specialist, Dundee, Ill.

WHAT WE SAY WE DO WE DO DO

"He had an honest look." You've heard of him. Perhaps you've seen him. Possibly you've dealt with him. And you're sorry for it now. Still you've learned something. You're never going to forget what it was that caught you. It was *that honest look*. In buying your harvesting machinery don't put too much confidence in an honest look.

M'GORMICK

light-running steel binders and mowers not only have the honest look, but they have something better—reputation—character. This they have earned by long years of public service. There's stability in the very name "McCormick" and machines having that name can not be sold as cheaply as others, because they have other and more intrinsic value than "an honest look."

Seen a McCormick Catalogue? There's an agent in your town—ask him for one.

WHAT WE SAY WE DO WE DO DO

THE OLD WAY



WHAT'S THE MATTER? FARM COVERED WITH STUMPS.

THE NEW WAY



HAWKEYE GRUB & STUMP MACHINE

Works on either Standing Timber or Stumps. Pulls an ordinary Grub in one and a half minutes. Makes a clean sweep of two acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the machine. You can not longer afford to pay taxes on unproductive timber land. Clear it, raise a bountiful crop with less labor and recuperate your old worn out land by pasturing. It will only cost you a postal card to send for an illustrated Catalogue, giving price, terms and testimonials. Also full information concerning our I. X. L. Grabber, Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timber land. Address MILNE MANUFACTURING CO., 684 8th St., Monmouth, Ill.

Sunnyvale Shetland Pony Farm. For catalogue address Milne Bros. at above office and number. Breeders of Pure Shetland Ponies.

LIVE STOCK AUCTIONEERS.

F. M. WOODS, Live Stock Auctioneer, Lincoln, Neb. Refer to the best breeders in the West, for whom I do business. Prices reasonable and correspondence solicited.

JAS. W. SPARKS, Live Stock Auctioneer, Marshall, Mo. Sales made everywhere. Reference to the best breeders in the West, for whom I have made sales. Catalogues compiled and printed. Terms reasonable.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer. Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

C. A. SAWYER, FINE STOCK AUCTIONEER—N. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Compile catalogues. Retained by the City Stock Yards, Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

Ask your neighbor to subscribe for the KANSAS FARMER.

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.

FROM INFANCY TO AGE.

"What is life?" I asked a little child
Soft nestling on its mother's breast.
From 'neath the arms that tenderly
Held it in its friendly nest,
It looked at me and sweetly smiled.
I read in its unconscious look
That to its life's unopened book
Was an unfathomed mystery.

"What is life?" I asked a romping boy
With rosy cheek and sparkling eye.
He looked at me inquiringly,
And answered as he hurried by,
"All I have seen of life is joy,
And all is fair ahead, I ween.
No pain nor doubt had come between
Himself and bright expectancy."

"What is life?" I asked a sturdy man
Of years mature and thoughtful mien;
And thus he answered musingly:
"Of man's allotted days I've seen
One-half, the rising slope I've ran;
At first along the way I found
But flowers strewn upon the ground;
But further on I've felt the pain
Of thorns that on my path have lain—
Afflictions come obtrusively."

"What is life?" I asked a man of cares,
Who stood on its declining slope;
"This life," he answered feelingly,
"Was replete with joy and hope
Till loss and trial marred the years
That followed in the wake of youth.
Upon the way," quoth he, "in truth,
I've gathered little worth the strife
Pertaining to this mortal life,
For all here is uncertainty."

"What is life?" I asked an aged sire
With looks as white as stainless snow,
Who traveled the declivity,
To where the turbid waters flow
That quench fore'er life's lingering fire:
"This life's a pilgrimage," said he,
"For travelers to eternity.
Short-dated are the joys of earth,
Its treasures not of lasting worth;
But blest are they who here have striven
To lay their treasures up in heaven,
Where joys abide eternally!"
—Ohio Farmer.

THE LATE MR. WORTH.

Measured by the Standards of Success He Reached a High Place.

Charles Frederick Worth, the famous man milliner and dressmaker, is dead, having passed on to that far country where his services will not be in request, a victim of the dread influenza now raging so virulently in foreign capitals. By his death the gay city of Paris, where he has reigned without a rival since Eugenie's time, will lose one of its most prominent fascinations for female tourists. Scarcely any woman of wealth or fashion has deemed her tour in foreign parts a complete success unless she brought back with her gowns, hats, or other articles of costume designed and executed in his studio. In some respects he resembled the late Ward McAllister. He was an *arbitrator elegantiarum*. As an artist, however, he was clearly superior to McAllister. The latter knew, none better, what men and women should wear, what designs were graceful and what fits were perfect. Worth knew all this, and not only knew it, but he could con-



CHARLES FREDERICK WORTH.

ceive the designs and then execute them. To this extent he was an artist, and he was supreme in his realm. The woman who thought she knew what she wanted better than he did not have her gown made by him. There are other men dressmakers, but they have not reached his heights. It was only necessary to have the stamp of Worth upon one's gown in order to secure universal respect and envy. Probably in his long career he turned out many dresses that were no better than those designed and created by others, but this made no difference so long as it

was known they were produced by Worth. It was as much heresy to doubt the perfection of a dress made by Worth as it would be to belittle a score by Beethoven or a picture by Raphael. The signature at once lifted it above criticism.

In his time, says the Chicago Tribune, Worth had a long and brilliant career. Women of wealth and fashion, brides and widows, countesses and duchesses, queens and princesses, actresses and prime donne have thronged his studio and been arrayed in a glory which might be unlike that of the lilies of the field, and yet was both fascinating and powerful in its influences, for how many actresses and singers have relied upon Worth's ravishing stage costumes for their success, and how many more who never saw Worth have clandestinely used his name to draw troops to the matinees and make a popular success! No man living, poet, prose writer, artist, singer or actor, has ever had such an influence upon the world of high society as this dead gown-maker. He has been the adoration of those who could afford to patronize him, while those who could not have lived upon hope that some day their ships would come in whereupon they would sail away to Paris and visit that atelier whence issued such ravishing costumes. Worth's calling was not a very exalted one, for a man, but measured by the standards of success he reached a high place. He was easily at the top of his profession, and, as the practice of his profession did call for some artistic knowledge and some sense of the beautiful, his rise and his pinnacle where he sat lonely are not to be lightly regarded or to be deprecated. While it is somewhat of a calamity to lose a man like Worth, who had done no small work in helping to beautify women, still there is no question his place will be filled, as among his lieutenants there are those who by long experience are fitted to fill it. It is one of the compensations of nature that no man is indispensable. Other geniuses will appear in the world of fashion, and some one of them ere long will dominate it as supremely as did Worth. Meanwhile it will be, in one sense at least, a relief that stage performers of the female sex can no longer assert their artistic excellence because their gowns were made by Worth.

Materials for Cushions.

Suitable materials for the covers of pillows are legion. Pieces of last summer's thin silk can be used, and for a hearth cushion there is nothing better than the front of one of those tea-gown patterns which were used a few years ago, and which were embroidered in Persian designs and colorings. At any Japanese store can be found a variety of printed cotton crepes of odd silks, or of elaborately embroidered oriental scarfs, ranging from 25 cents a yard to any amount you may be willing to pay. A new material is chiffon, a ridged cotton goods, woven of threads of different shades of the same color. It is 36 inches wide, and but 75 cents a yard, 2½ yards making the cover and ruffle for a large pillow. At several shops they are already made up in greens, dull pinks and blues or yellows.

Waterproof Walking Skirt.

It is advisable that one should have one petticoat to be used exclusively for walking, and this may be faced for some distance from the bottom with a waterproof cloth. There will then be almost perfect protection for the feet and ankles in wet weather. It is the swishing of damp clothing about the feet that constitutes most of the discomfort of a rainy day expedition, and the waterproof lining does away with this.

A Very Pretty Laundry Bag.

A very pretty as well as useful laundry bag is made by sewing up a piece of coarse linen 34 by 21 inches. Work, first, all over with detached daisies in one shade, filled in with herringbone in another shade. Make with a deep hem reaching nearly to the draw-string.

Wax Candles Are Fashionable.

After all the "advance" in the problem of illumination, many of the most luxurious functions now depend for light on wax candles. They are more used at present than before for a generation.

For a beautiful specimen of penmanship address Wichita Commercial college. Three professional penmen. Y. M. C. A. building.

ARMSTRONG & McKELVY
Pittsburgh
ANCHOR, Cincinnati.
ATLANTIC, New York.
BEYMER-BAUMAN, Pittsburgh.
BRADLEY, New York.
BROOKLYN, New York.
COLLIER, St. Louis.
CORNELL, Buffalo.
DAVIS-CHAMBERS, Pittsburgh.
ECKSTEIN, Cincinnati.
FAHNESTOCK, Pittsburgh.
JEWETT, New York.
KENTUCKY, Louisville.
JOHN T. LEWIS & BROS. CO. Philadelphia.
MORLEY, Cleveland.
MISSOURI, St. Louis.
RED SEAL, St. Louis.
SALEM, Salem, Mass.
SHIPMAN, Chicago.
SOUTHERN, St. Louis and Chicago.
ULSTER, New York.
UNION, New York.

From foundation

stone to tip of spire, from priming to finishing coat, for inside or outside painting use only Pure White Lead. Don't mistake the brand (see list genuine brands). It is the only way to be sure.

Pure White Lead is easily tinted to any shade of color desired by using the National Lead Co.'s Pure White Lead tinting colors, prepared expressly for this purpose. For further information send for pamphlet and color-card—sent free.

NATIONAL LEAD CO.,

1 Broadway, New York.

Easter Eggs.

But few people have any idea that the originals of the many colored "eggs" which will soon be distributed as Easter gifts have probably descended to us from the greatest of the Chinese "spring festivals," and can boast of an antiquity of more than 700 years before the Christian era. So there appears to be no new thing under the sun; and although the magic eggs of today are merely receptacles for a nondescript medley of bon bons and bijouterie, they are a survival, or rather revival, of one of the quaintest of old world customs.

This practical method of disposing of Easter eggs suggests that much of the ceremony connected with them is due to the celebration of the Easter feast, which succeeds the Lenten fast. That "an egg at Easter" is a very old proverb in this country is sufficiently shown by the fact that the Pope sent Henry VIII. an Easter egg in a silver case, while an extract schedule of the personal expenses of Edward I. contains, against Easter Sunday, the suggestive item: "Four hundred and a half eggs, 1s. 6d." The price is as noteworthy as the number.

But the most remarkable feature of the usage is its international character. Thus, in Russia, it is customary to exchange visits and eggs on Easter day and "to drink a deal of brandy." Again, in Italy, dishes of eggs are sent to the priests to be blessed, after which they are carried home and placed in the center of the table. It is the correct thing for all the guests to eat one of them. The custom also exists in Spain and Germany and generally among the Jews, Greeks, Persians, in some form or another. —Chamber's Journal.

There is no excuse for any man to appear in society with a grizzly beard since the introduction of Buckingham's Dye, which colors natural brown or black.

Agents wanted for Gearhart's Family Knitter. For particulars address J. E. Gearhart, Clearfield, Pa.

That Trip East

May be for business or pleasure, or both; but pleasure comes by making a business of traveling East over the Santa Fe Route as far as Chicago.

Thirty miles the shortest line between Missouri river and Chicago; that means quick time and sure connections.

Track is straight, rock-ballasted, with very few crossings at grade.

No prettier, cozier, or more comfortable trains enter Chicago than those over the Santa Fe. They are vestibuled limited expresses, with latest pattern Pullmans and free chair cars. Meals in dining cars served on plan of paying for what is ordered.

Inquire of nearest agent, or address G. T. Nicholson, G. P. A. Santa Fe Route, Monadnock building, Chicago, or W. J. Black, A. G. P. A., Topeka, Kas.

Six Thousand Square Miles of Wealth.

The vast fertile valleys of the two Indian reservations in northeastern Utah, soon to be open to settlers comprise about 3,500,000 acres of the finest agricultural and grazing lands. The direct line to Uintah and Uncompahgre reservations is by the Union Pacific system via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

10,000 AGENTS WANTED.

Ladies or gentlemen to introduce an article of merit, that does its own talking. A household necessity. Sells on sight to rich or poor. Over 200,000 sold in one year; a money maker in the face of hard times. \$2.00 will start you in business. Send 25 cents for full particulars and get an article post-paid, guaranteed to be worth \$1.00. Address, NEW COMET, Box A, Shenandoah, Iowa.

Buy direct from MANUFACTURER and save all Middlemen's profits. **A** 15 days' trial in your home before you pay for the same.

PIANO

You take no risk. We will send our beautiful catalogue, giving full description and illustration of our pianos. **FREE** Address us with your full address. BEETHOVEN P. & O. CO. P. O. Box No. 689 Washington, N. J.

FOR SALE! FARMS WAY DOWN.

I have excellent farms in Rooks county, Kansas, for sale, way down below their value. Will sell on contract for one-tenth down and one-tenth yearly, or will give deed if one-fourth or more is paid down. Write for particulars and state how much you can pay down and how you want the balance of payments. I also have several unimproved farms in central Nebraska and one large body of over 7,000 acres. I have a finely improved ranch of 1,440 acres in Rooks county, Kas. Any or all of above will be sold very low, or might exchange part or all of it for good improved property in Chicago or vicinity. Address

B. J. KENDALL,
601 Masonic Temple, CHICAGO, ILL.

A CATALOGUE!

Send us your name and address and we will send you free our handsomely illustrated 128-page CATALOGUE, listing thousands of articles we sell through the mails. Please mention KANSAS FARMER.

Address Dept. T,
EMERY, BIRD, THAYER & CO.

Successors to
Bullene, Moore, Emery & Co.,
KANSAS CITY, MO.

SPRAINS' and NEURALGIA'S CURE ST. JACOBS OIL

INCORPORATED OCTOBER 29, 1894. LOCATION, 1103-1105 NORTH FOURTH AVENUE. WICHITA, KANSAS.

Object.—To provide a home for penitent fallen women, and to rescue them from lives of shame; to reclaim, educate, and instruct them in industrial pursuits, and to restore them, when possible, unto their homes and parents. BENEVOLENT FRIENDS, this institution is non-sectarian and non-salaried—each worker freely doing her part to "rescue the perishing, lift up the fallen and tell them of Jesus, the mighty to save." God is blessing the work and good is being done. Now, we want you to "help just a little" and enable us to do still greater good. The erring daughters must be reclaimed—they are more often stoned against than sinning. The Savior said, "Neither do I condemn thee; go in peace and sin no more." Address REV. LYDIA A. NEWBERRY, WICHITA, KAS.

The Young Folks.

AMBITION.

A youth, in the bloom of his manhood, lay
In indolent grace, on the shining sand,
And gazed out on the silvery bay,
As it dashed its foam on a distant strand.

The southern breeze disturbed his curls,
As it kissed his brow, in its balmy way;
And the spirit of winds its wings unfurled,
As it danced on the waves to the dash of the spray.

"My life is a dream," he said, with a smile,
"Of pleasure and ease and all that is fair!"
And he paused—"But I must have fame," he
said,
And he sprang to his feet with a resolute air.

The breeze caressed, and the winds danced on,
And the waves threw off their laughing spray,
But the youth drew back with a gesture of
scorn.
And the man of ambition went up from the
bay!
—Home and Country.

APRIL.

All the world is drenched and dreary,
Drowned in April's tears,
Leadens skies, a wind grown weary,
Sighing with a cadence eerie
April's foolish fears—
Tear-stained, frowning child of springtide,
Sprite of smiles and tears.

Over all the world the gleaming
Light of April's smiles,
Wakes the flowers from winter dreaming,
Every breath with hope is teeming—
April's witching wiles,
Fickle, fleeting month of promise,
Mingled tears and smiles.
—Home and Country.

TINO, THE CHAMELEON.

Affords Lots of Fun to a Class of Bright
School Children.

The children in Warburton school
have such a queer pet.

I wonder if you can guess what it is.
No, not a rabbit or a kitten, nor even a
mouse, but a funny little chameleon
that was sent all the way from Florida
to Miss Durand, the principal of the
school.

He is a very little creature, and only
measures seven inches from his queer
little nose to the tip of his tiny tail.
They call him Tino. Tino will fasten
his tiny claw-like feet into Miss Du-
rand's apron, and ride triumphantly
around the school-room, to the great



WHAT TINO LOOKS LIKE.

delight of the children. The first time
he visited them they admired his
beautiful green coat, but very much
to their astonishment the next time he
came his color had changed to brown.
They soon discovered that he had a va-
riety of coats; indeed, he seems to
have rare taste in dress, and is always
able to make himself harmonize with
his surroundings.

Tino's principal diet is live flies. The
boys bring him a supply of these every
morning and never tire of watching
him dart out his long, forked tongue
and catch his victims. His favorite
resting-place is a large plant that stands
near the door of the dressing-room.
Here he will stay for hours in a sort of
stupid state, but one day he must have
decided that it was time for him to
make some explorations. Just as school
was closing, some of the children no-
ticed that he was not in his usual place,
and immediately began a search for
him. They looked in every possible
hiding-place, but all to no purpose.
Tino was not to be found.

They were almost in despair, when
one of the boys went to the dressing-
room, and donning his overcoat started
for home. As he raised his arm to open
the door, there was Tino, clinging to
his sleeve and looking up at him with
his saucy, bright eyes, as though he
had enjoyed the hunt.

The children were delighted to find
their pet. Since then Tino has had
to wear a long yellow ribbon, so he
could not so easily hide from his little
friends.—Myna L. Gaylord, in Our Lit-
tle Ones.

REGARDING OSTRICHES.

The Big Birds Can Run Fully Thirty Miles
an Hour.

Those who assert that the ostrich
lives on broken glass and iron nails are
not quite right; but that it swallows
pebbles to assist its digestion, as do
many other birds on a lesser scale, when
in a state of nature, and pieces of wood,
metal, or what not, when in a state of
captivity, for the same purpose, is most
undoubted.

The strength of the ostrich is quite
equal to carrying a man on its back at
a rapid rate of progression. The ne-
groes often use it for riding purposes.
Dr. Livingstone tells us that the legs
of an ostrich running at full speed can
no more be seen than the spokes in
the wheel of a vehicle drawn at a
gallop.

The ostrich can run thirty miles an
hour, and the Arabs would never be
able to overtake them but for the
stratagems employed. They first follow
them for a day or two, without press-
ing too closely, but sufficiently to pre-
vent them taking food. When they
have tired out the hungry bird, they
pursue it at full speed, and, taking ad-
vantage of a fact well known to them
—that the ostrich always describes a
curve in its course—themselves make
a direct straight "short cut," and so
gradually get within reach.

Each adult bird produces about half
a pound of white and three pounds of
black feathers. Those from the male
bird are most highly esteemed, and all
are in best condition when plucked
from the living bird.

CATS ARE NOT SELFISH.

Incidents Which Controvert the Popular
Idea of Them.

The domestic cat has never ranked
highly in the scale of intelligence, be-
cause it is said to have affection for
places and not for persons. I am
strongly inclined to think that this is a
misapprehension. It has been said
that persons who are fond of cats ex-
hibit weakness of intellect. I must
plead guilty to the fondness; my friends
must decide about the weakness. As a
schoolboy I had a pet cat which would
follow me to school just like a dog, and,
remaining in the shrubberies around,
would wait to return with me. My
father at one period always returned
home from his duties at a certain hour
in the evening. This cat would wait for
him at a certain point in the road, and
as soon as he approached would spring
out, gambol a little round him and
then trot a yard or two in front of him
for the quarter of a mile between the
meeting point and home.

Later in life I had a cat which ac-
companied my family during three re-
movals. On each occasion he was
carried in the arms through the open
road from the old house to the new
one. Not once did he desert us or re-
turn to the former dwelling. This
same cat surprised me one morning as
I was dressing by mewing outside my
door, and on opening it he deposited
before me a half-grown rabbit quite un-
injured. The servant told me after-
ward that the cat was waiting patient-
ly outside the door when she opened it,
and proceeded at once upstairs with its
burden, carrying it as mothers do their
kittens. The cat's pleasure seemed un-
bounded when I took up the frightened
creature and stroked it, and on my put-
ting it down again he made no attempt
to kill it.

My idea is that the cat knew that I
was fond of pets, for I was surrounded
in those days by all kinds of animals,
and he wanted to make me a present,
and so brought me a new pet. My own
experience is that although the cat is
undoubtedly inferior to the dog in in-
telligence, it is far from being the stupid
and selfish creature many suppose it to
be.—Chicago Times.

THE CRAFTY ANT-LION.

The Curious Way in Which He Prepares
to Make a Living.

In the south of Europe there lives a
curious little insect called the ant-lion.
He is about an inch long, and has six
legs, yet he cannot get over the
ground very fast, for he generally
moves backwards.

The ant-lion's habits are most re-
markable, but I may as well tell you at
the start that he is rather cruel, for
you will be sure to find it out before I
am through talking about him.

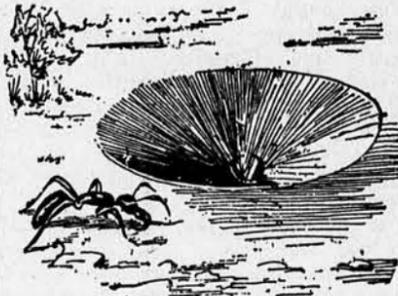
The first thing the ant-lion does

after he has made up his mind to have
a home is to find a nice spot of sandy
ground. Then he marks out a circle
about thirty inches in diameter, and
begins plowing up the ground with his
body. He goes round and round, mak-
ing the opening narrower and deeper,
until he has hollowed out a funnel-
shaped hole which is very deep. Each
time he goes about he turns quite
round. Why? To rest his fore leg.
He has one on each side. So you see
he rests one while he is using the other.
And all the time he keeps throwing
away the sand. How do you suppose
he does this?

He takes it in one of his fore legs,
places it on the top of his head, and
then gives his head a jerk. This sends
it a considerable distance.

When his house is finished, he goes to
the bottom of it, and buries himself—
all but his jaws—in the sand.

The ant-lion is getting ready to make
his living now. For he lives on the



READY TO MAKE HIS LIVING.

juices of insects. Of these he likes the
ants best.

He makes the grounds about his
house very pleasant, for he wants the
busy little ants to come his way. As
they come, the loose sand gives way,
and down they fall. Then they become
his prey. If they happen to fall only
part way to the bottom, and begin to
scramble up again, he throws sand
upon them, the same way he threw it
out on to the ground when he was
plowing up his house.

After he has made a meal off of the
ants, he throws their bodies away in
the same manner.

The only good thing about the an-
t-lion that I can see is his perseverance.
If he comes across a stone which he
cannot remove, after he begins making
his house, he leaves that place and
goes to another. In that respect we
might do well to pattern after the an-
t-lion.—Greta Bryar, in Our Little Ones.

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lost hearing. By the use of
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and hearing have greatly
improved. — J. W. David-
son, Attorney at Law, Mon-
mouth, Ill.



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KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Wednesday by the

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An extra copy free fifty-two weeks for a club of six, at \$1.00 each.

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To insure prompt publication of an advertisement, send 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.

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

Address all orders—

KANSAS FARMER CO., Topeka, Kas.

H. V. Hinckley, of Topeka, has been appointed consulting engineer of the State Board of Irrigation.

If you want KANSAS FARMER and Semi-Weekly Capital, send us \$1.50. Or, KANSAS FARMER and Topeka Advocate, send \$1.50.

We want our readers to secure for us thousands of new subscribers for the KANSAS FARMER and we will pay well for such work. If you will get up a list, write this office for liberal terms.

Some of our agricultural exchanges have indulged rather freely in the "roast" business on account of the connection of State Veterinarian Mayo with the report that the dread pleuropneumonia had appeared in Kansas herds. It ought to be cause for thankfulness that the expert examination showed that the disease was not pleuropneumonia. Dr. Mayo at most expressed only an apprehension that the disease was present. He will doubtless be more careful in the future about the expression of even his fears.

The fact that the State has taken in hand the investigation of some of the problems connected with the irrigation of the western part of Kansas has not caused the ardent friends who have been discussing the subject in public meetings to desist. A meeting is advertised to be held at Phillipsburg, April 23, which is to be addressed by J. L. Bristow, editor of the *Irrigation Farmer*, Judge J. S. Emery, National Irrigation Lecturer, and E. R. Moses, President of the Inter-State Irrigation Association, and W. A. Reeder, of Logan, said to be the second largest irrigation farmer in the State, Judge W. B. Sutton and M. B. Tomblin, of the State Irrigation Board.

Last month Prof. Magruder gave the results of the steer-feeding experiment in progress at the Oklahoma Experiment Station, which showed the highest gain was made from ground wheat fed to steers under shelter. Another thirty days have been added to the experiment, which still shows the value of wheat alone as compared with wheat and corn mixed; but unlike the first part of the experiment, the greatest gain has been made by the steers fed in open corral, while in the first forty-nine days of the trial the cattle under shelter, fed on ground wheat alone, did best. The total gain of the twelve head for seventy-nine days is 2,378 pounds, or an average of, practically, two and a half pounds a day to each steer. Those in the sheds are eating seven pounds of ground grain at a feed, while those outside are eating nine pounds at a feed. All are fed twice daily. Two steers have been sick, but their weights are included in the above gross weight. At the completion of the hundred days the experiment will be written up in full.

IMPROVING POSITION OF THE FARMER.

In estimating the relations of supply of agricultural products and the demand for them, account is usually taken only of the civilized populations of the world. It is not infrequently assumed that those portions of the globe which are now occupied by barbarous, and especially those occupied by savage races, are yet to be appropriated by the Caucasian races, much as America was taken from the Indians. The expectation has been that the inferior races will, as in the past, disappear before the advance of the conquering people. In the ages of the world when war and wholesale slaughter were esteemed the callings of first honor, this was the usual course. So, too, in the settlement of our own country, the Indians have disappeared on account of the ill adaptation of their dispositions to the conditions of civilization. Men thought of the subject to penetrate no deeper than this, almost the entire area of Africa might be estimated as a possible addition to the heritage of the great conquering race. Some have also conjectured that large areas of Asia, now occupied by less progressive races, may be considered as possible conquests.

In estimating the world's ability to feed and clothe it is a mistake, however, to assume that, even should these countries become objects of conquest, they may be added to the bread-producing areas available for the conquerors. The same period which has witnessed the disappearance of the red man before advancing civilization has also witnessed the rapid multiplication of the black man on the same lands from which the red man had disappeared, and contemporaneously with the aggressive race before which the red man disappeared. Indeed, the multiplication of the black population has been more rapid than that of the white. So, also, to prevent the undesirable increase of Asiatics among us rigorous laws have been enacted for their exclusion. Under the fostering influences of modern civilization these races have their most rapid increase. While it is not conclusively known that in their native countries they will thus prosper under improved conditions, indications point in that direction, and it is quite likely that the demands upon their agricultural resources will, in the future, as in the past, be about equal to their production. It is doubtless true that with civilization the productiveness of the land is increased. It is also true that with civilization people's wants are greatly multiplied.

As to populations, a recent newspaper paragraph says:

German geographers have made a careful estimate of the population of Africa and place the total at 163,953,000, which is 42,240,000 more than the aggregate population of North and South America. Europe and Africa combined have a population of 521,332,000, though their area is not greater than that of all America. The German estimate of the population of the world now is 1,480,000,000, and one of the best authorities of the Royal Statistical Society says it will be increased by the year 2517 to 33,586,000,000.

The population of all America is placed at 121,113,000, and has appropriated nearly all of the arable areas. The process of crowding must now commence. Relief from this crowding cannot be looked for in the opening of the thickly-peopled countries of the old world to civilization, unless, indeed, wholesale butchery is anticipated.

The changing agricultural situation is already seen in some of the earlier effects. The day of the merchant prince may not be past. The day of great profits to the manufacturer may recur again. The day of the farmer prince is surely in sight. The advantage presently—perhaps soon—to be enjoyed by the owner of the soil; the desirability of engaging in the most remunerative occupation of the time, the pleasure and exaltation of conducting scientific farming and of transacting the business at a profit, have already been foreseen by students of the situation. The tately farm residence, surrounded by the broad acres of ever-increasing value, may be almost an ideal picture now, but is likely to be no strange sight in the future.

True, the rural conditions under

which each man tills his own acres, and each owns the acres he tills, is the more Utopian. It is also farther away. Efforts at colonization are more or less successful and they succeed measurably in effecting a desirable distribution of ownership. But the foresight of the thrifty is causing him rapidly to anticipate the advance in the values of productive land and the prosperity of the producer of primary food and fabric supplies.

CROPS AND THE WEATHER.

There is just now much anxiety about the wheat crop. Reports as to the outlook do not fail to mention the importance of seasonable rains. Much of the disaster mentioned is attributed to scarcity of moisture during the fall, winter and early spring. Even that killed by freezing is charged up to drought. There is less error, even in this last charge, than the inexperienced suppose. It is undoubtedly true, that, when the plant has been enfeebled by lack of sufficient moisture, and is about on the point of giving up the ghost, it is much more easily "done for" than when full of vitality. Some three weeks ago the writer passed many thousands of acres of wheat of doubtful promise, if not of hopeless loss. The drought of the fall and winter and the cold weather of February and March had blighted it. But farther out upon the plains than any of these fields, on the ranch of Col. C. D. Perry, at Englewood, Kas., was a field of volunteer wheat, which had received a working with the disc harrow, and one irrigation since last harvest, and was as green as a meadow in May and was entirely unharmed by the vicissitudes of climate. It was rather too thick, on account of abundant tillering, but it was, and probably is to-day, good for thirty or more bushels per acre.

As illustrating the tenacity of life of the wheat plant when the proper conditions of moisture in the soil are maintained, Col. Perry related an experience wherein a field of irrigated wheat was cut down by hail just as it was coming into head. He accounted it lost and gave it no further attention, intending to plow the land for fall sowing at the proper time. A friend who had passed the field some time after the storm, asked him why he did not harvest his wheat. On going to the field it was found that new shoots had made heads and a fine harvest was the result.

It is claimed by some fruit-growers who have irrigated their orchards that the strong and vigorous fruit buds borne by properly irrigated trees are able to withstand freezing that proves disastrous to the enfeebled buds of drought-afflicted orchards.

To the gardener and the truck farmer the advantages of irrigation are universally conceded. That the application of water to a small tract of land makes it more valuable than a large area of unirrigated land has been fully demonstrated. It has been assumed, because a family can live well from the product of a very few acres under irrigation and high culture, that therefore the small holding with all there is in its favor will become universal with the advent of irrigation. But it is becoming apparent that under efficient administration the advantages of irrigation accrue also to the farmer of broad acres; that with the artificial application of water the elements of uncertainty disappear and farming becomes applied science. Under such circumstances not unlikely the average area of farms will increase rather than diminish.

But whatever may be the result of irrigation upon social arrangements, the certainty of returns under it is a welcome change from dependence upon the caprices of the weather.

One dollar and sixty-five cents will pay for the KANSAS FARMER and the twice-a-week *New York World*. Everybody should read.

If you want one of the finest magazines published, send us \$2.25 for KANSAS FARMER and *Cosmopolitan*.

KANSAS FARMER and Semi-Weekly *World* (N. Y.), you can have for \$1.65 one year.

MAROH STATE AGRICULTURAL REPORT.

The report of the Kansas State Board of Agriculture, for the quarter ending March 31, is given to the public to-day. It consists of five parts, as follows:

Part I.—Alfalfa, or Lucern: Its characteristics, cultivation, worth, uses and adaptability to Kansas soil and climate.

Part II.—Some discussions of irrigation, as applicable to Kansas—more especially upon the higher lands.

Part III.—Notes on some Kansas wells west of the sixth principal meridian and their water supply.

Part IV.—Addresses, papers and discussions at the twenty-fourth annual meeting.

Part V.—Subsoiling; also, the natural distribution of roots in soils.

Part I. is largely reproduced from the Alfalfa bulletin issued last fall, and which was called for in great numbers after the edition had been exhausted. The demand for information as to this valuable forage plant is likely to continue. While the experience of some growers is calculated to raise expectations which will not be generally realized, it is doubtful if any plant has ever been introduced in this State whose value to the farmer exceeds that of alfalfa. Secretary Coburn has incorporated in this bulletin a few pages of deductions from reports which constitute a valuable summing up of information which it were well for every farmer to file away for reference.

Part II. presents the papers on irrigation, read at the annual meeting of the State Board, in January. Some of these have been given in the KANSAS FARMER. The fifty pages of the quarterly occupied by these papers constitute a symposium on irrigation which may well be studied carefully.

Part III., occupying the next twenty-five pages of the report, contains the beginning of information for which the KANSAS FARMER office has been besieged for many months, but which was nowhere available. The question of the practicability of making a well at any locality, capable of furnishing a supply of water adequate for irrigation; is one of great moment in every part of the State. This inquiry is confined chiefly to the western half of the State, and it is in this region that many have concluded that they must irrigate or emigrate. The reports are from sixty-three counties, and, while the information is not as full as would be desirable, it is nevertheless of great value. It is to be hoped that the State will, ere long, undertake a hydrographic survey of the State, resulting in the delineation of the water resources of the several counties, and even townships, on maps which shall show the practicability of making wells in the several areas, and shall indicate the depths to which they must be sunk and quantities of water likely to be obtained. But the first thing to be done in making such survey is to gather up the information already available, both as to railroad and private wells, as Secretary Coburn has done in this report.

Part IV. contains eighty-eight pages of papers read before the annual meeting by prominent writers and thinkers on subjects of interest to farmers.

Part V. is followed by illustrations of the distribution of the roots of several of our staple crops. The depth and universality of roots in the soil is a surprise to all who have never investigated the subject. The reasonableness of subsoiling becomes more apparent the more is known about the habits of plants and the deportment of soils, in their several conditions, towards water.

The bulletin is an admirable one and should be in every farmer's library. The Legislature made no appropriation to pay postage on the book, but it can be had by inclosing 6 cents for postage, to Secretary F. D. Coburn, Topeka.

The up-to-date work which the Secretary is doing is of great value to Kansas and will be useful to individual farmers in proportion as they study it and intelligently use it. There can be no doubt of our ability to make better use of our resources than has ever been made. The experiences of the last few years have shown that much may be done to anticipate and provide against

crop disasters, and it is the farmer who is a student of his profession who is most successful in this regard and in making a living and more.

EXTERMINATE THE SPARROWS.

To some it may seem inhuman to make war upon the English sparrow, but they are coming to be regarded as much an enemy to our best interests as the rat or mouse and to have no more claim upon us for their preservation. They not only drive away our songsters and useful birds, but their wonderful ability for multiplication is already rendering them so numerous that they are becoming the terror of farmers. All should unite in a war for their extinction. How this can best be done is a question. It has been suggested that during the winter time, when the other birds are away, they might be destroyed by careful and judicious use of poisons; that they can be decoyed into the chambers of barns and other outbuildings by scattering food, and they will soon come in to roost, when they can be captured at night by going among them with a lantern. Now that their nesting time has commenced, their nesting places should be carefully observed, and their eggs or their young destroyed to the utmost extent possible. Perhaps there is some method of capturing them by traps or snares.

Can some of the correspondents of the FARMER suggest the best means by which to conduct the war upon these pests?

READ AND REST.

A Shawnee county reader of the KANSAS FARMER took occasion, when visiting the office a few days since, to speak in a complimentary way of the writings of the "Family Doctor." Particular mention was made of the paper on Ceylon, and it was remarked that an article of that kind, which could, for the time, take a busy man or woman away from toils and cares, has a value, in bringing rest and recuperation of energies, not to be overlooked in making up the farmer's reading budget. Nothing is more true than this, and nothing would give the management of this paper more pleasure than to be able to fully meet this demand in the columns of the KANSAS FARMER. But there is a limit, a rather narrow limit, to the space that can be spared for this purpose. But to meet the case arrangements have been made to furnish our subscribers a liberal supply of the finest current literature at very small cost. It is well known that the monthly magazines of the time are giving to the public a very large proportion of the best of all current writing. To read one of these magazines regularly is to receive an insight into and an acquaintance with the literary world, whose value to old and young cannot be measured in money. Among these magazines none is superior to the *Cosmopolitan*. With the publishers of this superb magazine arrangements have been made whereby we can furnish it with the KANSAS FARMER, both for one year for \$2.25.

Many of our subscribers desire a daily newspaper. In renewing your subscription it is well to note the fact that we can furnish you a year's subscription to KANSAS FARMER and daily *Kansas City Star* for \$4. Or, KANSAS FARMER and daily *Leavenworth Times* for \$3. The amount for both papers to be sent to this office.

Every farmer in Kansas, and especially the breeders and stock-raisers, should have the greatest live stock journal in the world, the *Breeder's Gazette*, of Chicago, price \$2 a year. We make a special offer of it and the KANSAS FARMER, both papers one year, for only \$2. Subscribe now through this office.

The KANSAS FARMER has in stock about 2,000 Spray Calendars, giving concise directions as to time and manner of spraying every kind of fruit. They are very neat and are suitable to hang up for convenient reference. Any one sending a two-cent stamp to pay for mailing and postage will receive a Spray Calendar free.

Wheat Feeding.

EDITOR KANSAS FARMER:—I submit below an estimate of the wheat fed to live stock in the United States from July 1, 1894, to April 1, 1895, compiled from extensive returns from farmers, live stock breeders and feeders and grain dealers covering the entire country. These returns have been received during the latter half of March, and the final figures have been compiled as conservatively as the reports received would possibly warrant:

	Bushels.
New York.....	1,320,000
Pennsylvania.....	2,840,000
Maryland.....	1,350,000
Virginia.....	1,450,000
West Virginia.....	1,200,000
Ohio.....	7,480,000
Kentucky.....	2,170,000
Tennessee.....	1,280,000
Indiana.....	5,240,000
Illinois.....	4,420,000
Michigan.....	5,710,000
Wisconsin.....	2,860,000
Minnesota.....	3,920,000
South Dakota.....	4,080,000
North Dakota.....	850,000
Iowa.....	3,650,000
Nebraska.....	4,620,000
Kansas.....	9,890,000
Missouri.....	5,870,000
Texas.....	1,220,000
Eight other Eastern States.....	1,200,000
Nine other Southern States.....	2,100,000
Seven Rocky mountain States.....	1,650,000
California, Oregon and Washington.....	6,800,000
Total.....	83,130,000

There were in 1894, 400,000,000 bushels less corn produced than in 1893, 800,000,000 less than in 1891. Kansas produced 100,000,000 less and Nebraska 140,000,000 less of corn in 1894 than in 1893. Over much of the United States during the last eight months corn has been worth more, pound for pound, than wheat. It is our personal opinion that these figures more likely underestimate the actual quantity of wheat fed than that they over-estimate it. They have been obtained with much labor and care. CHAS. L. HYDE, Investment Banker.

Pierre, S. D., April 1, 1895.

Passage of the Lottery Bill.

One important action in the interests of morality must be remembered to the credit of the late Congress. In its closing hours it passed the anti-lottery bill, which was designed to give complete and full effect to the national victory won by the best people of Louisiana when they spurned a bribe of \$30,000,000 or more, and refused to extend the charter of the Louisiana Lottery Company. The business of that concern was transferred nominally to Central America as headquarters. By various methods of evasion it has been able in great measure to baffle our postal administration; and where it could not make use of the postoffice it has had especially favorable contracts with the express companies. These indeed have been its chief allies, and through them it has carried on an immense business in the United States from its secure rendezvous in Honduras. The measure which has now become a law has had its most aggressive and untiring instigator in the person of one of the professors in the Massachusetts Institute of Technology, Mr. S. H. Woodbridge. For nearly two years he has been working for the passage of this law, which is so drawn as to make the Honduras Lottery Company and every concern of that sort an absolute outlaw. The circumstances under which final action was reached in the Senate on the last day of the session, in time for the engrossed bill to be signed by the President only five minutes before the latest legal moment, form a story that is quite dramatic. Mr. Woodbridge's campaign well illustrates what one earnest reformer can do when he has wisely selected his point of attack and has the persistence to keep constantly at work upon it.—From "The Progress of the World," April Review of Reviews.

Sorghum.

EDITOR KANSAS FARMER:—I have been growing sorghum every year since 1857, and have made over 10,000 gallons of sirup. Have worked cane continuously from the same ground for twenty-two years and it got better every year. Only manured once in the whole time. Have fed it to stock in all stages with the best results. The seed is equal to corn to fatten hogs. It yields from fifteen to thirty bushels of

seed and from seventy-five to 130 gallons of molasses per acre.

Z. PEFFLEY, El Dorado, Butler Co., Kas.

How to Utilize Some Waste Products of Kansas.

EDITOR KANSAS FARMER:—There is grown in the State of Kansas, and has been for the last ten years, from 173,000 to 187,000 tons of flax for seed only, the straw being of no use. This straw can be utilized at from \$3 to \$4 per ton for spinning or making into paper stock. One hundred and seventy-five thousand tons at \$3.50 per ton would amount to \$612,500, which would be a snug little sum to divide among our farmers. It would require from \$8 to \$10 per ton for labor to prepare it for market. To do this would require only a moderate amount of capital to supply buildings and machinery. Five tons of straw will make one ton of finished fiber. A plant to turn out two tons of finished fiber per day would require about \$10,000 capital to put it into running order, and a county raising 3,000 acres of flax can afford to build a plant of that size. It would pay for itself the first year. The market is unlimited. The process of preparing the fiber for the market can be carried on very readily and worked every day of the year.

Now, if any one should desire to look into the matter and see what there is in it, I will be pleased to give them all the information I can on the subject, and would co-operate with them in putting it into motion. H. B. WARE, Fort Scott, Kas.

Publications of United States Department of Agriculture for March.

[All applications for the publications of this department should be addressed to the Secretary of Agriculture, Washington, D. C.]

Legislation Against Injurious Insects; A Compilation of the Laws and Regulations of the United States and British Columbia. Pp. 46. (Bulletin No. 33, Division of Entomology.)

Report of the Special Agent for the Purchase of Seeds for 1894. Pp. 3.

Report of the Chief of the Division of Accounts and Disbursements for 1894. Pp. 6.

The Flat Pea. Pp. 7, figs. 2. (Circular No. 4, Division of Botany.) Gives description, history, uses, analyses, cultivation, etc.

Giant Knotweed, or Sachaline. Pp. 4, figs. 3. (Circular No. 5, Division of Botany.) Gives general characters, history and cultivation.

Experiment Station Record, Vol. VI., No. 5, Pp. III., 349-488. (Not for general distribution.)

Report of the Chief of the Division of Records and Editing. Pp. 14.

Synopsis of Report of the Statistician—March, 1895. No. 124. Pp. 4.

Report of the Statistician—March, 1895. No. 124. Pp. II., 59-106. Contents: Distribution and consumption of corn and wheat in the United States; consumption of wheat per capita in the United States; the wheat crop of the world; prices of wheat since 1865; wholesale prices of principal agricultural products, etc.; report of European agent; transportation rates.

Flax for Seed and Fiber. Pp. 16. (Farmers' Bulletin No. 27, Office of Fiber Investigations.)

Sweet Potatoes: Culture and Uses. Pp. 30, figs. 4. (Farmers' Bulletin No. 26, Office of Experiment Stations.)

Report on the Mexican Cotton-Boll Weevil of Texas (*Anthonomus grandis* Boh.) Pp. 15. (From Insect Life, Vol. VII., No. 4.)

Insect Life, Vol. VII., No. 4. Pp. III., 281-360, figs. 29-36. (Not for general distribution.)

Charts of the Weather Bureau. (Size 19 x 24 inches.)

Weather-Crop Bulletin (series of 1895), reporting temperature and rainfall with special reference to their effect on crops. (No. 2, for the month ending February 28, 1895.)

Semi-daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

Snow charts, showing depth of snow on ground at 8 p. m. on Monday, March 4, 11, 18 and 25.

Monthly Weather Review—November, 1894. Pp. 411-485, charts 7.

REPRINTS.

Important Insecticides: Directions for Their Preparation and Use. [Revised edition.] Pp. 23. (Farmers' Bulletin No. 19, Division of Entomology.)

Leguminous Plants for Green Manuring and for Feeding. Pp. 24. (Farmers' Bulletin No. 16, Office of Experiment Stations.)

The Rape Plant: Its History, Culture

and Uses. Pp. 20. (Bulletin No. 11, Office of Experiment Stations.)

Tobacco: Instructions for Its Cultivation and Curing. Pp. 8. (Bulletin No. 6, Office of Experiment Stations.)

The Pollination of Pear Flowers. Pp. 110. Pls. I-XII. (Bulletin No. 5, Division of Vegetable Pathology.)

Hog Cholera and Swine Plague. Pp. 16. (Farmers' Bulletin No. 24, Bureau of Animal Industry.)

Foods and Food Adulterants, Part II.—Spices and Condiments. Pp. 129-259, Pls. XIII-XXVIII, figs. 5-13. (Bulletin No. 13, Division of Chemistry.)

The Feeding of Farm Animals. Pp. 32. (Farmers' Bulletin No. 22, Office of Experiment Stations.)

The Doctors Said "Incurable Without an Operation."

January 14, 1895.

The Dr. J. H. McLean Med. Co., St. Louis, Mo.:

GENTLEMEN:—I have a customer who has suffered many years with kidney disease. He has been under treatment of eminent physicians, who pronounced him incurable unless he would undergo an operation. He got so bad he was unable to move about and had fallen off forty pounds. I prevailed on him to try a bottle of Dr. J. H. McLean's Liver and Kidney Balm. He declared the first dose helped him. After using two bottles all the threatening symptoms disappeared and he feels like a new man. I am also using the Liver and Kidney Balm in my own family with beneficial results, and regard it as the most reliable cure for kidney diseases. You can make use of this if you wish, and will give the name and address of the gentleman referred to if any one desires it. Yours truly, JAS. A. FRENSELY, Earlsyville, Va.

The Dakota Hot Springs.

The Hot Springs of Arkansas have long been deservedly popular, for the reason that there has been no other place that has filled the requirements of both a health and a pleasure resort. This state of affairs has changed. The Hot Springs of South Dakota have, in recent years, been thrown open to the people, and because of their delightful situation and great curative qualities, are becoming more popular every day. Situated as this resort is, in the famous Black Hills, in the midst of beautiful mountain scenery, possessing that peculiar balsamic atmosphere which is in itself health-giving, with waters that are pronounced by experts equal if not superior to those of any other mineral springs in the world, it will soon outrank any other like resort.

The hotel accommodations are of the best—hostelries with all the modern improvements and conveniences. The Evans hotel, built of pink sandstone, with steam heat, electric lights, and every room an outside one, is easily the best conducted house between Chicago and Denver. Fine bath houses are connected with the best hotels. The rates of all the hotels are very reasonable. The surrounding country is more than picturesque—it is wonderful. The marvelous "Wind Cave," the falls of Fall river; Battle mountain, the old Indian battle ground; Deadwood and the gold fields, and the famous Bad Lands are all within driving distance. The mammoth plunge bath at the springs is noted as being one of the largest natatoriums in the world. So healthful are the surroundings, and so many the conveniences of this "Carlsbad of America," that it is rapidly becoming the "Mecca," not only for invalids, but for pleasure seekers as well. The "Burlington Route" reaches there in a day and a half from St. Louis. Pullman sleepers and free chair cars on train No. 15 run to Lincoln, and from Lincoln free chair cars and sleepers run through to the springs.

For further information, call on any "Burlington Route" agent, or address D. O. Ives, G. P. and T. A., St. Louis, Mo.

To the Traveling Public.

Before purchasing tickets to points east of Chicago, first ascertain the rate to that point over the Nickel Plate road. City ticket office, 199 Clark street, Chicago, Ill.

"It is very noticeable on the experiment farm," says the April bulletin of the Oklahoma Experiment Station, "that the wheat is greenest on those plats which were plowed immediately after last year's wheat harvest."

FARM RECORD.—Our "Farm Records" have been such a splendid seller because of their practical value that our supply is now quite limited. We have a number of the best binding only, which the KANSAS FARMER will deliver to any address for only one dollar.

The Kansas Weekly Capital publishes more Kansas news than any other weekly paper. A free sample copy will be sent on application to THE TOPEKA CAPITAL CO., Topeka, Kas. Or send \$1.50 to this office for KANSAS FARMER one year and also Capital twice a week.

Horticulture.

Test of Early Varieties of Potatoes.

By Robert H. Miller and E. H. Brinkley, of the Maryland Experiment Station.

For the purpose of ascertaining the comparative merits of different varieties of early potatoes, twenty kinds were selected—most of them from reliable seedsmen in several different States. These varieties had gained reputations of being prolific yielders in the localities where they were grown. The land selected for the experiment had been in corn the previous year, and as the soil was somewhat thin, a top dressing of street sweepings was applied to it. Seven hundred pounds of a complete fertilizer was sowed in the row. The different varieties were cut to as near a uniform size as possible, and were planted the 19th of March. A good stand was secured, and as the weather was favorable during the early part of the season, there was a promise of a fine yield; but the extremely dry season which came later on, and the early blight (which up to this season had not made its appearance in Maryland) killed the vines off very suddenly, and as a consequence only a moderate yield was secured.

In the following table will be found the yields and also the source from whence the seed was obtained. It will be noticed that Nos. 5 and 6 are the same variety of potato, but the seed was obtained from different sources—No. 5, from Jerrard, of Maine, and No. 6, from Councilman, of Maryland. As will be seen the Northern-grown seed has given a yield of thirty-nine bushels to the acre in excess of the Maryland-grown seed:

TABLE I.
VARIETIES OF POTATOES TESTED—1894.

No.	Name of Variety.	Seed obtained from.	Yield per acre—bushels.
1	Columbus	Ford	109 0
2	Lightning Express	Salzer	120 0
3	Early Cyclone	Salzer	133 0
4	Su-amit	Jerrard	130 1/4
5	New Queen	Councilman	145 0
6	New Queen	Councilman	106 0
7	Farmers Alliance	Landreth	119 0
8	Great Hundredfold	Salzer	138 0
9	Extra Early	Home-grown	140 0
10	Van-Norther	Landreth	149 0
11	Van-Norther	Home-grown	137 0
12	Van-Norther	Home-grown	141 0
13	Chas. Downing	Mauls	167 0
14	Rochester Rose	Jerrard	143 0
15	Van-Guard	Home-grown	140 0
16	Early Maine	Home-grown	144 0
17	Puritan	Councilman	132 0
18	Early Ohio	Home-grown	143 0
19	New Early White Prize	Home-grown	145 0
20	Beauty of Hebron	Home-grown	136 0

NOTE.—Some of the notes of this experiment were unfortunately lost, and we therefore only give the gross yields in the above table.

CRIMSON CLOVER AS A FALLOW FOR POTATOES.

The land on which this test was made had been in corn the previous year, and on half of it crimson clover seed was sown at the last time of the working of the corn; extremely dry weather resulted in rather a poor stand, but as it tillered well the following spring, a fairly good growth was made, which was plowed under the 1st of May. At this time the clover was most of it in bloom. The adjoining plot, on which there was no clover, was also plowed at the same time. The clover fallow was worked down close so that it might decompose as rapidly as possible, and was allowed to stand until the 13th of June, when the potatoes were planted, by which time the clover had become rotted. Four hundred pounds of fertilizer was applied per acre to the land on which crimson clover was plowed down, and 600 pounds to the acre on the adjoining plot; the subsequent treatment of each plot was the same in every respect. The cultivation consisted of three workings, twice with Iron Age cultivator and once with double-shovel with bull-tongues attached.

The following table gives the yields of the respective plots in merchantable and unmerchantable potatoes, and also the comparative profits of each, not taking into account the slight additional cost of plowing under the clover:

TABLE II.
CRIMSON CLOVER AND FOUR HUNDRED POUNDS FERTILIZER.

Yield of merchantable, 56 bushels and 13 pounds, at 60 cents per bushel	\$33 74
Yield of unmerchantable, 16 bushels and 1 pound, at 27 cents per bushel	4 32
Total value of crop	\$38 06
Cost of clover seed and fertilizer	5 20
Relative profits	\$32 86

SIX HUNDRED POUNDS FERTILIZER—NOTHING TURNED UNDER.

Yield of merchantable, 48 bushels and 35 pounds, at 60 cents per bushel	\$29 16
Yield of unmerchantable, 4 bushels and 10 pounds, at 27 cents per bushel	1 25
Total value of crop	\$30 41
Cost of fertilizer	6 30
Relative profits	\$24 11

The use of crimson clover increased the value of the crop..... 8 75

Paris Green Treatment for Codling Moth.

Secretary Morton, in a recent interview, said:

"The apple trade of the United States with foreign countries has always been profitable. The demand for apples grown in the United States has always been in excess of the supply. The United Kingdom of Great Britain, alone, during the nine months ending September, 1894, paid the orchards of the United States \$2,500,000. The greatest enemy to our export apple is the 'codling moth.' But the entire crop can be made wormless if the orchards of the United States will use the following recipe:

"Use Paris green at the rate of one pound to 150 gallons of water. Weigh out sufficient poison for the capacity of the tank used, and make it into a thin paint with a small quantity of water and add powdered or quick lime equal to the weight of poison used, mixing thoroughly. The lime takes up the free arsenic and removes the danger of scalding. Strain the mixture into the spray tank, taking care to pulverize and wash all the poison through the strainer. During the operation of spraying see that the liquid is agitated with sufficient frequency to prevent the settling of the poison.

"The prime essential in spraying is to break up the liquid into a fine mist, so as to coat every leaf and part of the plant as lightly as is consistent with thoroughness. This should not require more than from three to seven gallons for a comparatively large fruit tree.

"Let the first spraying follow within a week after the falling of the blossoms of either apple or pear, and follow this with a second treatment just before the fruit turns down on the stem, or when it is from one-fourth to one-half inch in diameter. The first spraying reaches the eggs laid by the moth in the flower end of the fruit, shortly after the falling of the blossom, and the second the later eggs laid by belated moths. Do not spray the trees when in bloom, and if a washing rain immediately follows treatment, repeat the application.

"Knapsack sprayers suitable for applying the insecticide can now be obtained at reasonable prices at all agricultural implement stores."

Some More Grapes.

EDITOR KANSAS FARMER:—Allow me to supplement Prof. Mason's excellent article on grapes, by additional descriptions, based upon several years' experience here in the central part of the State with the varieties named.

The Concord is indispensable. A good supply should be had, whether any other sort is planted or not.

Worden, a seedling of the Concord, is a decided improvement in some respects. Earlier and good to eat as soon as colored, which the Concord is not. Not so vigorous, but hardy and equally productive. Flavor much the same, but better, to my taste.

Early Victor is another Concord seedling, produced by Mr. John Burr, of Leavenworth, Kas. It has been well tested and is very valuable. Why it is not better known and appreciated is strange to me. Quite distinct and very handsome and of excellent quality. Perfectly hardy, vigorous and so productive it must be pruned close to prevent over-bearing. At least a week earlier than Concord. It is the best early grape I know.

Lindley is another sort which holds a high place in my affections. Bright

wine-red and of exquisite quality. Many friends pronounce it the best table grape in my collection. Of good size and a much better keeper than any of the above. Vine a good grower and hardy. Should be set alongside Concord, as its clusters are sometimes imperfect from defective pollination.

Elvira, the parent of Etta, and much like it, it is said, is very distinct from any other sort I have. Berry small, bunch small and very compact; but the vine is very vigorous, hardy and productive. Pale green, inclining to pink or cream when fully ripe. Flavor very pure and delicate, though it is not liked by many at first. I have learned to enjoy it very much, so that for my private delectation I visit the Elvira about as often as any other. Not good for market as it "shells" easily.

Niagara (white or cream) is very handsome and very good when fully ripe. Vine a strong grower, but a little tender to extreme cold and must be pruned close to avoid harm by over-bearing.

Pocklington (golden yellow) is also very large, handsome and excellent. Vine hardy, but slow in growth. Needs rich soil and good cultivation.

Catawba (pale red), tart in flavor but of high quality and much liked by those who find the Concord too sweet. Makes better jelly than any other grape I know. Does best in sandy soil.

Agawam (maroon), large, handsome and of peculiar aromatic flavor, resembling, it is said, some of the best foreign varieties, with one of which it is a cross. Needs good care but does well with me.

Duchess (white), by far the best keeper I know, but most folks like a more decided flavor. Vigorous, hardy and productive, but suffers from sun-scald sometimes.

These are the best out of a large list of sorts I have tested, many of which are worthless here. This list I can give, if desired, that others may know what to avoid buying.

Salina, Kas. F. E. HALE.

The program of Manhattan Horticultural Society for 1895, is printed on a neat card, and gives the date and place of each meeting and the two leading papers to be presented. It is certain, from a glance, that the horticulturists of that vicinity are up to date and right in season. Many of the writers whose names are given are recognized authorities on horticultural subjects.

The Mole Disgusted.

Dr. J. P. Stelle says, in the Fort Worth Gazette, that he has always been able to drive moles away from his garden by a very simple method, now to be described. Open small holes in the tunnels here and there and pour in a little cheap molasses. The molasses gums the fur of the animal, engenders disgust, and causes it to transfer its operations to more cleanly localities. Coal tar would probably be better than molasses, though more expensive and less convenient. One good application of the molasses has usually driven the moles away for the season.

Greenville and Gardner

STRAWBERRY PLANTS.
El Dorado Blackberry. Other new and varieties of Fruits. A general line of Nursery stock. Address
J. F. CECIL, Nurseryman, North Topeka, Kas.

BONNER SPRINGS NURSERIES

Apple trees, 2 and 3 years old, strong, \$6 per 100; \$45 per 1,000. Concord Grape, \$1.25 per 100; \$10 per 1,000. Asparagus, 2 year, strong, \$3 per 1,000. Strawberry plants, 50c per 100; \$3 per 1,000. Cherry and Pear, 20c each; Plum, 15c; apricot, 15c. Peach, 10c. Blackberries, \$3 per 1,000. Hardy Hybrid Perpetual Roses, 2 year, strong, 15c each, \$1.25 per 10. Climbing Roses, 3 year, 15c; per 10, \$1. Thirty Greenhouse or Bedding Plants, \$1—all different. Plants by mail or express. H. H. KERN, Manager, Bonner Springs, Kas.

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of more than 133 years in the manufacture of tobacco enables us to produce the very best article possible. Consumers of tobacco derive the benefit of this experience, and in using the celebrated

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Climax Plug

are assured of the highest quality. 'Tis a rich, lasting and delicious chew.

It's LORILLARD'S
Sold Everywhere.

UR invited to send for my latest price list of small fruits. Half million strawberry plants, 300,000 Progress, Kansas and Queen of West raspberry plants. B. F. Smith, Box 6, Lawrence, Kas. Mention this paper.

A. H. GRIESA, Prop'r Kansas Home Nurseries, Lawrence, Kas., grows trees for commercial and family orchards—the Kansas Raspberry, Blackberries, standard and new Strawberries—also shade and evergreen trees adapted to the West.

Something New in Musk-melons

The White Persian, the largest and best flavored on earth. Nothing better to be desired. Write for prices and particulars to Larkin Commission Co., Wichita, Kas. Mention FARMER.

ESTABLISHED IN 1873.

WILLIS NURSERIES.

Contain a general assortment of choice fruit trees and other nursery stock, which we offer for sale in lots to suit. Our prices are low—stock and packing the very best. Write for free catalogue and always mention name of this paper. A special lot of choice well-grown two-year-old apple trees for sale. Address A. WILLIS, Ottawa, Kansas.

Mount Hope Nurseries.

27th year. Have for sale a complete assortment of fruit trees, especially of the leading commercial sorts. Also making a specialty of extra hardy peaches. Crosby, Bokara, etc., 23 deg. below zero and a crop. For circulars and prices address the proprietors.
A. C. GREISA & BRUCE, Lawrence, Kas.



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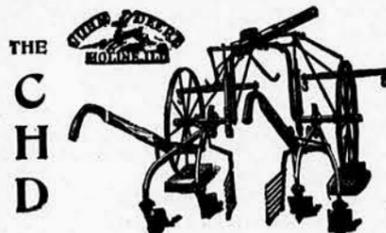
The best Pruner ever made. Will cut any limb not exceeding 1 1/4 inches in diameter. One man can do more work with it than five men can with any other. Agents wanted in every State in the Union. Address—
ORCHARD PRUNER CO., Ottawa, Kansas.

Broke the Record

No Cultivator ever had such a remarkable run the first season. Sales nearly 20,000 in 1894

and this year will be greatly increased. The C. H. D. is simply the best Walking Cultivator ever made and as yet has no imitators. It sells at sight. For sale by one dealer in a town. See it before you buy. Write us for illustrated circular.

Deere & Co. MOLINE ILL.



In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm. Address all communications Topeka, Kas.

Reviving Defunct Creameries.

Paper read by F. B. Fees, before the Kansas Dairy Association, at Topeka.

The subject assigned me is a very hard one, and of great importance. As I understand this subject, I come to you with something dead on my hands; and if I could tell this convention how to revive it, I would feel as though I had accomplished something. How they came by their death I do not know, and a great deal depends on the death, as to the means it would be necessary to use to revive them.

We have one that had several struggles at death, but gave up the struggle and died, so it was dead in every sense of the word. What all it took in our case may not be necessary to give in detail, but we will give you a few suggestions which may be profitable to some one, and some that may be used with success in any case.

Our farmers had about reached the conclusion that in order to run a creamery he must steal, lie or perform some miracle, but not so. We explained to them it cost almost as much to take care of 1,000 pounds of milk as it did to take care of 5,000, and if we could get 5,000 we were sure to run. We started three years ago last month with 175 pounds of milk and two patrons. At the end of the month we had six patrons. Gentlemen, I want to inform you that it takes a sort of a good-humored man with almost an unlimited amount of patience and a degree of stick-to-it-iveness, especially when some one has the cheek to say that you are getting rich off an average of 300 pounds of milk a day and paying \$1 a hundred. It will make one think something if he does not say it. I have found, and all other creamerymen have, no doubt, that we must take care of the little things, for they make up most of the great thing.

We had in our employ, when we first started, a large man who was busy working in the room where I was working butter, and a reporter came in and asked the large fellow where the proprietor was. He said (pointing to myself), "There he is." "That little fellow?" "Yes, sir." The reporter said: "Well, it doesn't take much to run it, does it?" So it seems to one just looking around a creamery that it doesn't take much to run it, but it takes a great many little things which must all be kept in order.

One of the first and most important things to do in reviving a defunct creamery is to gain the confidence of your patrons, and not them alone, but the entire community. Make them know that when you say anything they can depend on it. Do not say one thing and mean another. When your patrons ask what you are going to pay for milk, tell them as near as you can and be sure to not tell them more than you can pay; always pay more than they are expecting, if it be possible. One of my best patrons said to me the other day: "Billy"—for that is what they call me—"what are you going to pay for milk?" I told him what I would like to pay, and he said: "Be careful; I want all I can get out of my milk, but not more than you can give." Our farmers are most all intelligent business men, and they know we must have a profit to run.

Yet we have a few like some people who sell hogs and cattle; if the shipper just gets out or loses a little money they are satisfied; so some want more than can be got out of their milk. We have as reasonable a class of patrons as can be found any place, and I not only like to do business at Whiting but I like to live there.

One important item is to be on time, so a man knows when he leaves home that he will not be delayed by waiting on you.

Get good machinery and take good care of it; keep it well oiled and cleaned. Keep a sharp look-out for your belts, and if any of them look as if they were going to break, fix them before they break and cause a great deal of damage or scare your patrons, for if they

get scared they will run and leave everything. If they are outside filling cans, they will run to the street and leave the tank open and waste a barrel or two of milk.

Another important item is to keep everything clean, even to the butter-maker, for ladies sometimes visit the creamery (for they do it at our place), and if they see the butter-maker chewing tobacco and spitting around on the floor, or see his arms dirty (for of course he keeps his hands clean), they will tell it to every woman in the village and it naturally will be carried all over the county. You who are married men know how a woman can talk, and if any of you fellows doubt it, just come up to our place and be convinced. So this hurts your trade, for you cannot sell any butter at home.

The home trade speaks well for a creamery. The opinion of the people in your community of your butter and your creamery has an influence that would be difficult to estimate. You will remember I told you we started three years ago the first of October with 175 pounds of milk and two patrons. We had this last month 4,000 pounds of milk and sixty patrons, so we think we have been successful in reviving one defunct creamery at least.

Mr. Hoffman:—I would like to ask if it is the duty of the manager to keep the butter-maker neat and clean?

Mr. Fees:—Yes, sir. If you have one that won't keep clean get another.

Mr. Nissley:—About four years ago we tried to take hold of a creamery that had started three or four times under three or four different managements. They did not succeed, so we were induced to take hold of it on very liberal terms without any expense to us. We took a lease something like this: We were to have the use of the plant free of charge until such time as we would receive 2,000 pounds of milk or over. We were then to pay \$10 per month. We ran it a year, and, to make a long story short, we never paid any rental for the factory. We started in with about 500 or 600 pounds and ended with about that much. We paid as high as \$1.10 or \$1.15 per hundred. You can readily see why our experience was not very satisfactory. In short, it is a very hard matter to revive a defunct creamery. With one that has run down three or four times it is next to impossible, and I think Mr. Fees can congratulate himself on his success.

Mr. Monrad:—Don't you think it harder to revive a dead creamery than to start a new one?

Mr. Hoffman:—It depends on how defunct the creamery is. A defunct creamery is one that has been started and done an unprofitable business and closed down. I believe, if the patrons have not been left without pay for their milk, it is not such a hard matter to revive it. The second time it will be a little harder. We started one on the 10th of October and found that the creamery had gone down twice, and the patrons were very anxious to have it started again and offered the building a year without any cost. We found the people all willing and they said: "Start it and we will bring the milk." We had full confidence that they would bring the milk if they had it, but on going down the last time they had become discouraged and those that had cows and could do so, sold to those that did not have cows. They let the calves run with them, and consequently there are not many milch cows there. How it will terminate, we do not know, but have full confidence that it will go all right. I will say that we have started paying them very moderately. They do not want co-operation at all. They want to know what they will get for their milk during the month. Gave 70 cents during the month of October.

Mr. Fees:—Mr. Hoffman has stated our experience; that is, when we began a year ago. The trouble was that they had to run on wind and water for nearly two years. The last time they lost about six months of milk. This spring one creamery broke down at Effingham. They ran for about six weeks and skipped out with the money for the milk. The patrons then sent for us to run it.

"BROWN'S BRONCHIAL TROCHES" will quickly relieve Bronchitis, Asthma, Catarrh and Throat Diseases. Sold only in boxes.

HAVE YOU FIVE OR MORE COWS?



If so a "Baby" Cream Separator will earn its cost for you every year. Why continue an inferior system another year at so great a loss? Dairying is now the only profitable feature of Agriculture. Properly conducted it always pays well, and must pay you. You need a Separator, and you need the BEST—the "Baby." All styles and capacities. Prices, \$75 upward. Send for new 1895 Catalogue.

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CRYSTAL CREAMERY.

It's constructed on a new principle—is something you can't afford to be without. Our booklet, "Good Butter, and How to Make It," free. Agents wanted. Crystal Creamery Co., 29 Concord St., Lansing, Mich.

DAVIS CREAM SEPARATORS

Combined Separator, Feed Cooker, and Churn Power.



Simple, Practical, Effective, Durable, Cheap and Good. Complete Dairy in itself. Saves Time, Labor and Money. Book Mailed Free, write for it. AGENTS WANTED. DAVIS & RANKIN BLDG. & MFG. CO. Chicago, Ill.

WE WILL SELL YOU THE BEST BUGGY

Cart, Harness, Phaeton, Spring Wagon, Surrey or Saddle in the world at lowest wholesale prices. Shipped anywhere to anyone with privilege to examine without asking one cent in advance. All goods fully guaranteed. Send for large illustrated catalogue and testimonials. Free. Write to-day address (in full) CASH BUYERS' UNION, 158 West Van Buren Street, B 64, Chicago, Ills.

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THE BIT OF BITS. Will control the most vicious horse. Sales Greater Than Ever. Sample mailed XC for Nickel, \$1.50. Station Bits 50 cts. extra. RACINE MALLEABLE IRON CO., RACINE, WIS.

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Holds but DOESN'T HARM your stock. Can be built to STAY TIGHT all seasons. Get circulars & estimates from dealers or

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THE "TIP TOP" CORN PLANTER

has all the latest improvements, including Check Rower, Drill and Fertilizer. It does excellent work, is very neat and strong; all steel and iron. Purchasers always like it. Send for full description.

KEYSTONE MFG. CO., Sterling, Ill.

We have Branch Houses well located. Mention this paper.

FRENCH BUHR MILLS

28 sizes and styles. Every mill warranted. For All Kinds of Grinding. A boy can operate and keep in order. "Book on Mills" and sample meal FREE. All kinds mill machinery. Flour mills built, roller or buhr system. Reduced Prices for '95. NORDYKE & MARION CO., 285 Day Street, Indianapolis, Ind.

PERINE'S NEW SUBSOIL PLOW

Specially designed to break up the hardest subsoil. It can be run 2 feet deep which lets in all the rain, storing it up for all crops, which insures against drouth and standing water on the surface. For further particulars address, PERINE'S FLOW WORKS, Topeka, Kas.

METAL WHEELS

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Any size you want, 30 to 66 in. high. Tires 1 to 8 in. wide—hubs to fit any axle. Saves Cost many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, logs, &c. No resetting of tires. Call free. Address EMPIRE MFG. CO., Quincy, Ill.

SPRAY YOUR FRUIT TREES & VINES

STAHLS' Excelsior Spraying Outfits kill insects, prevent leaf blight and wormy fruit. Insure a heavy yield of all Fruit and Vegetable crops. Send 6 cts. for catalogue and full treatise on spraying. Circulars free. Address WM. STAHL, Quincy, Ill.

W. L. DOUGLAS \$3 SHOE

IS THE BEST. FIT FOR A KING. \$5. CORDOVAN, FRENCH & ENAMELLED CALF. \$4.35 FINE CALF & KANGAROO. \$3.50 POLICE, 3 SOLES. \$2.50 \$2. WORKINGMEN'S. EXTRA FINE. \$2.17 1/2 BOYS' SCHOOL SHOES. LADIES. \$3.25 \$2.17 1/2 BEST DONGOLA. SEND FOR CATALOGUE W. L. DOUGLAS, BROCKTON, MASS.

W. L. Douglas \$3 & \$4 Shoes

All our shoes are equally satisfactory. They give the best value for the money. They equal custom shoes in style and fit. Their wearing qualities are unsurpassed. The prices are uniform, — stamped on sole. From \$1 to \$3 saved over other makes. If your dealer cannot supply you we can.

CARRIAGES, BUGGIES, HARNESS

and Bicycles, at Factory Prices. Work guaranteed and 20 to 40 per cent saved. Our goods received the highest awards at the World's Fair. Our 1895 Mammoth Illustrated Catalogue is free to all. It shows all the latest styles and improvements and reduced prices. It has 200 pages and is the largest and most complete catalogue ever issued. "A" Grade, \$45. Write to-day. Alliance Carriage Co., Cincinnati, Ohio.

You've Lost 1/2 Your Opportunity

For a Crop if you do not Subsoil this Season. Subsoiling will secure a crop where other methods fail. The drouth of '94 makes subsoiling necessary where before it has been thought superfluous. Many farmers will Subsoil in '95 or Starve in '96. Don't buy a subsoil plow of inferior make when you can have the best at about the same price. Iron King is Best. For sale by one dealer in a town. Write us for illustrated circular, DEERE & CO. MOLINE, ILL.



Gossip About Stock.

J. A. Worley, Sabetha, Kas., writes that everything is in fine shape at Pleasant View stock farm since the fine rain, and pigs doing nicely. Mr. Worley claims October 3, 1895, as the date for his annual sale of Poland-China swine."

H. S. Day, Dwight, Kas., says: "Ohio Improved Chester White pigs are coming on nicely. Fifty February and March pigs will be ready to ship May 1, and immediate applicants can get bargains for the next twenty days. Eighteen sows yet to farrow and this first fifty must be sold at once."

D. P. Norton, Council Grove, Kas., reports a recent sale of two young Short-horn bulls to Mr. Oscar Wilkins, of Anamora, Colo., for use on his ranch, viz., the yearling Ranger and calf Major. Mr. Wilkins also got four more in Morris county and two from Peter Sim, of Topeka—one two and a half years old, that is a grand show animal, and a fine six-months bull calf. The lot of fifteen in the car included some Herefords from Topeka.

Among the number of testimonials received from the Howsley Spaying Co., regarding the success of their spaying mixture, we note one from Gunn & Tyler, Bonner Springs, Kas., who say: "We have tested your spaying mixture by using it on a number of sows, about three months ago, and by watching the effects on the sows we spayed we see that it is much better than you claim for it. The sows fatten much faster than any others in the same feed yard. We recommend it as being perfectly safe, not like the old way of using the knife and losing one-half of the sows by its use."

DR. ORR'S BOOK.—Readers of the KANSAS FARMER will be pleased to know that arrangements have been made whereby they can obtain this concise and well nigh invaluable "Farmer's Ready Reference or Handbook of Diseases of Horses and Cattle" in combination with this paper at a slight saving in cost.

The separate prices of these are: Dr. Orr's Book.....\$1.25 KANSAS FARMER, one year.....1.00

Total.....\$2.25 Two dollars sent either to the Kansas Farmer Co., Topeka, or to Dr. S. C. Orr, Manhattan, will secure both, making a saving of 25 cents.

Hon. T. A. Hubbard, Rome, Kas., writes: "Hogs doing nicely. My Large English Berkshires are annihilating all records by farrowing and raising from ten to twelve pigs, while the Polands are having only fairly good litters—in fact, rather small litters. Hogs the picture of health and ready to eat their scanty rations. I have about twenty-five boars ready for business, weighing from 150 to 200, and about seven or eight weighing 400 and 500 pounds. Some fine show boars. Also sows bred to farrow in April and May. Will sell cheap if ordered immediately. I want the room for small pigs or sows farrowing now. The Poland-China males are rather blocky and good. The Berkshires are as long as a rail and will grow very large and do any one good. Order right away. Hogs will be high next fall. I think one-half of our wheat ground will be put into oats and corn, and with a bountiful crop hogs will fly."

George W. Berry, Berryton, Shawnee county, Kansas, writes: "Among the things offered for sale now from the Select Herd of Berkshires, are two yearling sows, a very fine yearling boar and ten boars and eight sows, 4 to 6 months old. Some of the last are show-yard pigs, and the yearling boar is a good one to head a herd, and, if well fed till fall, should make a hard yearling to beat. The sows with litters now, or due to farrow this month, are Silver Tips XVII. and Royal Empress III., bred to Majestic Lad; Lady Metcalf, bred to Imp. Western Prince; Rosa-Lee and Silver Tips XIV., bred to Longfellow's Model, and Laura Lee, bred to Onward II. I have lately added to my herd the well-bred sow Lady Metcalf, sired by Earl of Fame. She is perhaps the shortest-nosed, widest between the eyes sow in America, and is deep-bodied and compactly built. Two sows and a fine young boar by Imp. Warwick Hope, he by Waterloo and out of Warwick Poetess, a noted and successful show yard sow in England, and is one of the best sows now in this country. Breeders desiring new blood will do well to keep an eye on the youngsters by the English-bred Majestic Lad. Onward II., that carried off the highest honors at the State fair last year, winning first in class, sweepstakes and breeder's ring, has reduced to breeding condition without showing any creases, and is one of those hogs that holds his form, even in thin flesh."

Improved Horse Market.

Our Chicago correspondent writes: "The market during the present week fulfilled the predictions of last week. Unusual activity all around. Plenty of buyers for all classes, quite a stir in both Eastern and Southern horses. Prices, however, were

no better, except on the extra actor and nice carriage horse. Quite a little retail trade for gentlemen's roadsters. Considerable inquiry for nice saddle horses for city trade. Eastern buyers are still picking up anything in the way of a chunk or well-turned draft horse. All the country shippers seem to be making money. They should take advantage of the present activity and make hay while the sun shines, as it is hard to tell how long the present state of affairs will continue. Prospects for the coming week are very fair. Advices indicate that there will be about the same market as during the present week, plenty of buyers for most everything.

"Mule market quite active. Plenty of trading in everything from fourteen and three-quarters to sixteen hands. Buyers want as much quality and finish as they can get hold of. Good big miners are in pretty good demand. Prices steady."

The latest results of pharmaceutical science and the best modern appliances are availed of in compounding Ayer's Sarsaparilla. Hence, though half a century in existence as a medicine, it is fully abreast of the age in all that goes to make it the standard blood purifier.

Interesting circulars sent to farmers. Send name to Bureau of Immigration, Spokane, Wash.

J. P. Vissering, the artichoke man, of Melville, Ill., informs us that he has still on hand a goodly supply of the White French artichokes at \$1 per bushel. They may be planted until May.

Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for homeseekers.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

Spraying Fruit Trees.

There is no work on farm or garden that pays better than spraying fruit trees. The ravages of insect pests are said to cost the fruit-growers of the United States \$400,000,000 annually, and it is claimed that 75 per



cent. of this loss can be prevented by the proper use of insecticides, fungicides, etc. The actual cost of spraying is small; it is work that can be easily and quickly performed, and any one who has a dozen fruit trees can well afford a spray pump.

We have just received from the P. C. Lewis Manufacturing Co. a valuable treatise on spraying, together with a report from the Cornell University Experiment Station and a spray calendar, which tells what kinds of trees and plants to spray, when to spray and what to spray with. The formulas given are the latest from the Department of Agriculture at Washington. We notice articles in this book under the heads of "A Word of Advice," "How to Spray," "Automatic Mixers," etc., that should be read by every person thinking of purchasing a spray pump. Write them for illustrated catalogue and treatise on spraying, which will be sent postpaid and absolutely free. The above firm is a pioneer firm in the spray pump business. They give a three years' warranty on their spray pumps and also guarantee each pump to give absolute satisfaction or money refunded. Their address is P. C. Lewis Manufacturing Co., Catskill, N. Y. Mention this paper.

You Dye in 30 minutes Our turkey red dye on cotton won't freeze, boil or wash out—all others will. Tonk's French Dye are different from others. Just the thing for hard times. Make the carpets, dresses, capes and clothing as bright and attractive as new. Anyone can do it. No misses if you have Tonk's Try them and see. Send 4c. for 8 pkgs., or 10c. for one, any color. Big pay for agents. Write quick. Mention this paper. FRENCH DYE CO., Vassar, Mich.

CENTROPOLIS HOTEL.

Fifth and Grand Ave., Kansas City, Mo. A strictly first-class house at moderate rates. Central location. Half block from new million dollar court house and half million dollar city hall. On direct Fifth street cable line from Union depot and stock yards. 225 choice rooms, all newly decorated. Lighted by electricity. Rates, \$2 per day. Rooms with bath and parlors, \$3.50 per day. E. K. CRILEY & CO., Proprietors.

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

EGGS FOR HATCHING—From Light Brahmas, Buff and Partridge Cochins, White and Black Langshans, B. P. Rocks and S. C. Brown Leghorns, from birds scoring from 91/4 to 95 points, none in any yard scoring less than 91/4 points. Every pen won first prizes at several fairs last fall. Eggs \$1.50 for fifteen. Adam Rankin, Box 442, Olathe, Kas.

PARTRIDGE COCHINS ARE BEST.—Eggs \$1.25 per thirteen. Douglas, 1241 Fillmore street, Topeka, Kas.

ONE HUNDRED AND FIFTY (150) BUSHELS Orange cane seed for sale, at 75 cents, sacked, with cost of sacks added. Z. Pettley, El Dorado, Kas.

STRAWBERRY AND RASPBERRY PLANTS—Twenty-five cents per hundred. J. C. Banta, Lawrence, Kas.

FOR SALE—One hundred and sixty acres in Rooks county, Kansas. Suitable for irrigation. Will sell cheap. Address John O'Connor, 1428 Santa Fe St., Atchison, Kas.

WE HAVE A LARGE SURPLUS OF CRESCENT and Miner strawberry plants. Also Souhegan raspberry plants. Send for price list. J. H. Logan & Sons, Nevada, Mo.

IRRIGATION NOT REQUIRED—For Brown Durra corn; hot winds do not affect it; \$1.15 per fifty bushels. Red Kaffir corn same price. Sacks included. H. S. Rowe, Hough, Kas.

FOR SALE OR EXCHANGE—Two imported Shire stallions, draft mares, jennets and young jack stock. Also thoroughbred Galloway bull and heifer calves. Address Chas. E. Musick, Hughesville, Mo.

FOR SALE CHEAP—Or will trade for cattle, one fine imported French Coach stallion and several young registered French Draft stallions. E. J. Small, North Topeka, Kas.

CHAMPION WHITE PEARL SEED CORN—Never fails to give satisfaction. Stands drought well, yields 100 bushels per acre, matures quick, no chance for the worm to get in. Price \$1 per bushel, sacked. Also full-blooded Bronze turkey eggs, \$2 per eleven. Order soon. A. Ostertag & Bro., Topeka, Shawnee Co., Kas.

I HAVE A LIMITED QUANTITY OF SEED CORN of the White Prolific variety, which I will put on the cars at Shenandoah, Iowa, for one dollar per measured bushel, sacks included. Address B. Frank Gordon, Shenandoah, Page Co., Iowa.

WANTED—Four hundred cattle to pasture at \$1 per hundred-weight gain; 2,400 acres; five lots, all joining; one mile from Comisky, Lyon county, Kansas, on Missouri Pacific railroad; five-wire fences; water in each lot. Cattle taken on long or short time. Reference—Farmers & Drivers' Bank, Council Grove, Kas. J. W. Troutman, Comisky, Kas.

RED CLOVER SEED—For sale by W. T. Orabood, R. Pauline, Shawnee Co., Kas.

JACKS FOR SALE.—Four choice black proof jacks for sale. Prices reasonable. Theo. Welch-selbaum, Ogden, Kas.

WANTED—Sale bills, horse bills, catalogues and other printing, specialty at the Mail job printing rooms, 900 North Kansas Ave., North Topeka.

FOR SALE OR TRADE—STANDARD STALLIONS.—Will sell or trade two standard trotting stallions, Hoke 22966 and Lennox 7256. Address S. E. Wheat, Leavenworth, Kas.

\$395 WILL BUY A QUARTER SECTION—Of pasture in Rosalie, Butler county, Kansas, on St. Louis & Fort Scott railroad. Part on time. H. Boynton, Augusta, Maine.

PEKIN DUCKS.—Pure-bred eggs for sale at 50 cents a setting. Mrs. E. L. Jones, Box 224, Topeka, Kas.

EGGS FOR SETTING.—From Light Brahmas, pure Felch strain, \$1.25 for thirteen. J. E. George, Burlingame, Kas.

LIGHT BRAHMAS AND S. L. WYANDOTTES.—Light Eggs from pure Felch strain Light Brahmas and selected S. L. Wyandottes at \$1 per fifteen or \$1.75 per thirty. Wm. Plummer, Osage City, Kas.

3,000 BUSHELS SEED SWEET POTATOES! for sale. Ten best kinds. Also plants in their season, at bed-rock prices. Inquire of N. H. Pixley, Wamego, Kas.

THE FINEST HONEY—Is gathered from alfalfa and clover blossoms. You can buy it of the bee-keeper, cheap and in any quantity, by freight, and know it is genuine. Address Oliver Foster, Las Animas, Colo.

BERKSHIRE SOWS—Safe in pig to imported Lord Comely. Individuality and breeding the best. Wm. B. Sutton & Son, Russell, Kas.

LISTED CORN CULTIVATORS.—We have for sale 150 listed corn cultivators at \$5 each. Former price \$10. Only fifty will be sold. Blue Valley Foundry Company, Manhattan, Kas.

FOR SALE—The tried and grand breeding boar, Kansas King 8911 S., sired by Dandy Jim 5442 S. and out of Broadback (11913). Weighs 700 pounds. He is a desirably-bred hog, extra good in conformation, having broad back and extra good ham. Sunny Slope Farm, Emporia, Kas.

EGGS FOR HATCHING.—Light Brahma, Buff Cochins, Barred P. Rocks, \$1 for fifteen. Buff Leghorn, \$1.50 for fifteen. Toulouse goose eggs, 10 cents each. Mrs. E. E. Bernard, Dunlap, Morris Co., Kas.

VALLEY FALLS POULTRY YARD—Light Brahmas, Buff Cochins, Partridge Cochins, Black Langshans, White and Barred Plymouth Rocks, S. Langshans, White and Barred Plymouth Rocks, S. and R. C. Brown Leghorns, White and Black Minorcas, Silver-spangled Hamburgs. Choice birds, \$1 each. Eggs, \$1 per fifteen. W. E. McCoy, Valley Falls, Kas.

JERSEY FOR SALE—A fine yearling heifer, solid fawn, of excellent breeding, bred to Torquill 2d 24808, is for sale. Address Prof. Georgeson, Manhattan, Kas.

EGGS—For setting, from Black Langshan prize-winners, \$1.50 per thirteen. T. V. Codrington, 1701 Hantoon St., Topeka, Kas.

WHITE PLYMOUTH ROCK ONLY—At Nottawa farm. Eggs fifteen for \$1. Mrs. W. P. Poppenoe, Berryton, Shawnee Co., Kas.

GALLOWAY BULLS.—We have four thoroughbred Galloway bulls, 1 year old, for sale. Geo. M. Kellam & Son, Richland, Shawnee Co., Kas.

THE SENECA NURSERY—Has a larger stock of well-grown and better fruit trees, etc., than ever before. Northeastern Kansas had a fair crop season the past year, and we are willing to divide with those more unfortunate in this and adjoining States. Therefore we mark down everything in the nursery at just one-half of our regular prices. Drop a card for prices as reduced. B. J. Baldwin, Seneca, Kas.

TWO-CENT COLUMN—CONTINUED.

WANTED—Yellow and white millo maize seed by F. Barteldes & Co., Lawrence, Kas.

FOR ALFALFA SEED, DIRECT FROM THE grower, address E. G. Jones, Syracuse, Kas.

BERDEEN-ANGUS BULLS—Sired by the \$850 Erica Boy and out of imported cows. Two and three-year-olds. Individually very choice. Wm. B. Sutton & Son, Russell, Kas.

FOR SALE—Seven head of extra good Poland-China boars ready for service. Address H. W. McAfee, Topeka, Kas.

SKILLED ENGINEER, MACHINIST AND BUTTER-maker, with years of experience, whose butter always brings 1/2 to 1 cent above Western extra, will be open to engagement March 1. Best testimonials from past and present employers. Investigate. W. M. Burgess, Horton, Iowa.

FOR SALE—Hereford bulls sired by a son of Mr. Funkhouser's celebrated Hesiod. Apply to Peter Sim, Wakarusa, Kas.

40 POLAND-CHINA FALL OF 1894 PIGS—Both sexes, for sale, sired by Riley Medium 12306 and Tecumseh J. Corwin 10744. Cannot well use the latter boar longer, hence will sell him. E. T. Warner, Princeton, Franklin Co., Kas.

THREE HOLSTEIN BULLS—A two-year-old, a yearling and one 6 months old. Registered and belong to the Korndyke family. For further particulars write H. L. Liebfried, Emporia, Kas.

SUB-IRRIGATION PIPE.—Do not be disappointed for not ordering 100 feet of 3/4-inch galvanized sheet-iron pipe. Cost, \$1.25. Address Alex Richter, Hollywood, Kas.

WANTED—Buyers for Large English Berkshires. One hundred pure-bred pigs, farrowed in March and April, are offered for sale at from \$10 to \$15 each. Farm two miles west of city. Riverside Stock Farm, North Topeka, Kas.

MAMMOTH YELLOW DENT—And Hill's Large White corn, \$1.25 per bushel; five bushels \$6; sacks free. James Bottom, Onaga, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

WHITE W. H. WILLIAMS, TORONTO, KAS., for Comet Sprayer, a triple air-chamber force pump. Throws continuous stream. Agents wanted.

FOR PURE GARDEN AND FIELD SEEDS—Go to Edson & Beck, 212 East Sixth Ave., Topeka, Kas. Mention the KANSAS FARMER.

SWEET POTATOES FOR SEED—All leading varieties. Plants in their season. Lowest prices. Correspondence solicited. B. F. Jacobs, P. O. Box 122, Wamego, Kas.

FARMERS WHO WANT FARM AND GARDEN SEEDS suited to southern Kansas should write to Ross Bros., Wichita, Kas., for catalogue. Their seeds grow.

WANTED—For cash or exchange, farms, ranches, real estate or merchandise of all kinds. We control large amount of valuable properties for sale or exchange at 1895 prices, for property in Missouri, Kansas, Texas and other States. Send full description of what you have and what you want, but do not inflate values and thereby prevent sale or exchange. Jno. M. Phillips & Co., 330-331 New York Life Building, Kansas City, Mo.

STRAWBERRIES.—I have tested many varieties in my eight years experience, but for earliness, lateness and productiveness have had none to equal Barton's Eclipse, Princess and Parker Earle. Twelve plants of either, by mail, 25 cents; 100, \$1. By express, 1,000 \$5, not prepaid. Have Timbrell, Robinson and others. Wm. Brown, Lawrence, Kas.

CHOICE SEED POTATOES FOR SALE—Yielded 225 bushels per acre last year. Address J. C. Randall, Hamburg, Iowa.

IRRIGATION PUMPS.—For prices of irrigation pumps used by the editor of KANSAS FARMER write to Prescott & Co., Topeka, Kas.

PUPS FOR SALE CHEAP.—Great Danes, English greyhounds, and English fox terriers—the best rat-killers known—and from imported stock. Emporia Kennels, W. H. Richards V. S., proprietor, Emporia, Kas.

STRAYS.—Strayed, from the Wallace Dennis farm, two miles southeast of Kelly, Kas., one white horse, 16 years old, seventeen hands high, weight 1,400 pounds; also one iron-gray horse, 11 years old, fifteen hands high, weight 1,200 pounds. Any one having taken up or knowing the whereabouts of the above described property will receive a suitable reward for information that will lead to their discovery. Address Charles Rieschick, Kelly, Nemaha Co., Kas.

HIGH-CLASS PURE-BRED POULTRY.—Two hundred and fifty extra good Light Brahmas, Fifty cockerels, Felch, Upson and Barker strains. Seventy-five M. B. turkeys—World's Fair and State show winners. Young toms averaged, last February, thirty-three pounds. One hundred and fifty Barred Plymouth Rocks, of Conger, Munger, Felch and Hawkins breeding. Stock and eggs at reasonable prices. Address the breeder of eighteen years practical experience, Mrs. Thomas W. Ragsdale, Paris, Monroe Co., Mo.

Kansas Tannery.

ESTABLISHED IN 1889. Does a general tanning business, including robes, rugs, etc. Tanning Galloway hides for robes. All specialties. First-class work, reasonable prices. All kinds of leather in stock—best quality. Have you any oak bark? Good prices paid for it. Write me. M. C. BYRD, Lawrence, Kas.

\$2.49 CASH WITH ORDER buys this Automatic Self-Loading, Nickel Plated, Rubber Handled, 8 Shot Revolver, \$2 or \$3 C. O. D. \$1.99 and allow examination. FIRE ARMS CO., Winstons, N. C.

Cures Epilepsy!

Every person in the United States suffering with Epilepsy (or Fits) can have one of my large size bottles of EPILEPSY CURE—FREE. I CAN CURE YOU. My treatment is endorsed by the highest medical authority. Address DR. FRED E. GRANT, P. O. Box 344, Kansas City, Mo.

Chichester's English Diamond Brand. PENNYROYAL PILLS. Original and Only Genuine. SAFE, always reliable. LADIES ask Druggist for Chichester's English Diamond Brand in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Refuse dangerous substitutions and imitations. At Druggists, or send 4c. in stamps for particulars, testimonials and "Relief for Ladies." In letter, by return mail, 16,000 Testimonials. Name Paper. Chichester Chemical Co., Madison Square, Philada., Pa. Sold by all Local Druggists.

The Poultry Yard

FEEDING PIGEONS.

Plan of a Hopper Suitable for About One Hundred Birds.

It is a very convenient way to feed pigeons from a hopper. The birds, especially if allowed to fly at large, and thus obtain abundant exercise, do well. Whether it is the best plan is open to question, but it is a plan generally pursued by pigeon-keepers.

A hopper consists of a narrow box, say about a foot wide, with openings in front for the pigeons to feed from. These openings are usually about three inches wide and five or six high, square at the bottom and rounded at the top. The following rough sketch (Fig. 1) will give an idea of the front of the hopper:

The back of the hopper should be considerably higher than the front, so that the top, which is hinged as a lid,

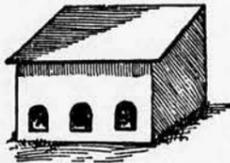


FIG. 1.

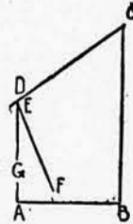


FIG. 2.

will permit the droppings rolling off. Or the top ridge may be constructed with sharp spikes projecting upwards, and thus prevent the birds from roosting upon it.

Inside the box, starting from the front edge, where the bottom of the lid rests, is placed a board of the width of the inside of the box, slanting sufficiently to carry its bottom out two or three inches from the front side of the inner part of the hopper, and terminating within about an inch of the bottom. When it is united in place, the grain runs out beneath its lower edge as rapidly as the pigeons eat the food. The diagram (Fig. 2) will perhaps make this description clearer. A B is the bottom of the hopper, C D the top, hinged at C. A D is the front, and G the opening at which the pigeons feed. E F is the slanting board inside the hopper, the grain passing out under F into the space between F and A. The grain is poured into the hopper by lifting the lid, C D.

Eighteen inches is a very good height for a hopper. If one is made for a hundred birds it should be long enough to have at least ten or twelve openings, each one at least four inches distant from any other. This would make the dimensions say four or five feet long, twelve inches wide and eighteen inches high. Several smaller ones can be used instead of one large one, and we believe this is the better plan, for they are more readily emptied out should this be necessary.

Mice sometimes get into the grain and give it a flavor which is distasteful to the pigeons. To prevent this, the hopper is sometimes placed on a table in the middle of the loft, the table itself being supported by a single smooth metal leg which prevents the mice from reaching the grain.

It scarcely seems necessary to urge the importance of keeping the hopper filled, but it is a fact that many neglect this, because the supply given will last some days. After a little time one can get acquainted with the time the supply of grain will last and can then fix certain definite days for the filling of the hopper. By observing these set times the supply will be constant and the birds will not lack for food.—Country Gentleman.

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	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1894.....	1,772,545	2,547,077	589,555	44,237	107,494
Slaughtered in Kansas City.....	359,646	2,050,784	387,570		
Sold to feeders.....	308,181	11,436	69,816		
Sold to shippers.....	495,718	468,616	45,270		
Total sold in Kansas City, 1894.....	1,674,555	2,530,836	503,116	28,903	

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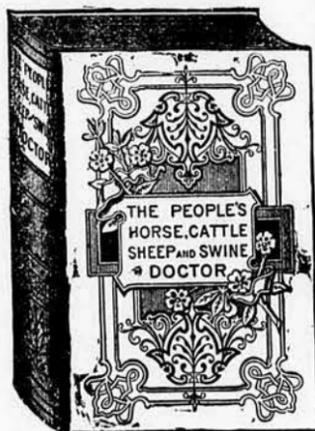
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(Continued from page 1.)

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THE STRAY LIST.

FOR WEEK ENDING MARCH 27, 1895.

Phillips county—I. D. Thornton, clerk.
TWO PONIES—Taken up by J. Den Hollander, in Beaver tp., March 8, 1895, two bay pony mares, about fifteen hands high, each has white strip in forehead and white hind feet from ankles down; valued at \$5 each.

FOR WEEK ENDING APRIL 3, 1895.

Cherokee county—P. M. Humphrey, clerk.
PONY—Taken up by W. R. Glasebrook, in Garden tp., one roan pony mare, thirteen and a half hands high, left hind foot white, white spot in forehead; valued at \$15.

FOR WEEK ENDING APRIL 10, 1895.

Greenwood county—J. F. Hoffman, clerk.
MULE—Taken up by A. B. Doward, in Fall River tp., P. O. Eureka, December 10, 1893, one bay mare mule, no marks or brands; valued at \$15.

Brown county—J. V. McNamar, clerk.

MARE—Taken up by R. A. Henry, in Walnut tp., March 25, 1895, one four-year-old bay mare, silt in right ear, no other marks or brands.

Gove county—W. J. Heiney, clerk.
TWO MARES—Taken up by W. J. Heiney, P. O. Gove City, January 31, 1895, two mares—one dark bay and one sorrel; sorrel mare branded somewhat similar to on right hip; bay mare hind feet white; valued at \$35.

Pratt county—M. C. Briggs, clerk.

BROOD SOW—Taken up by C. Decker, in Springvale tp., P. O. Springvale, March 5, 1895, one black brood sow, 18 months old; valued at \$5.

SIX SHOTS—By same, six black shots, five males and one female, 6 months old; valued at \$8.

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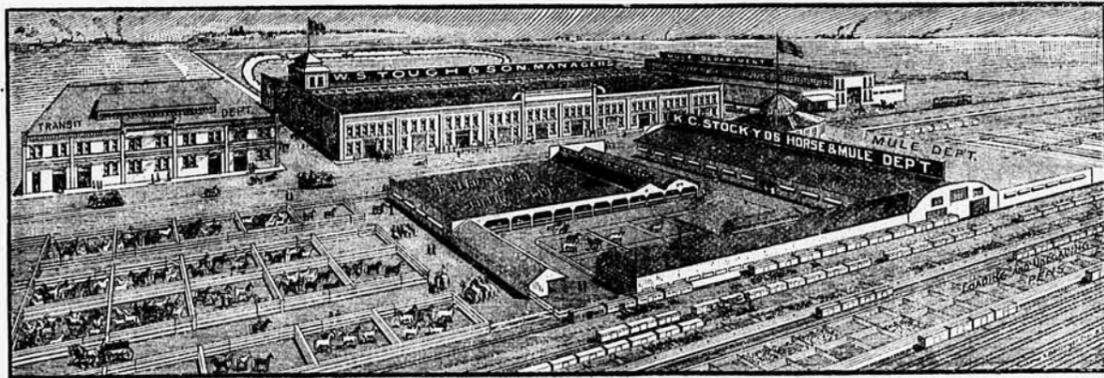
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