

# KANSAS FARMER

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## BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeder's Directory for \$15 per year or \$3.00 for six months; each additional line, \$2.00 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

### HORSES.

PROSPECT FARM—CLYDESDALE STALLIONS, SHORT-HORN CATTLE, POLAND-CHINA HOGS.  
Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kas.

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PEDIGREED Holstein. M. H. Alberty, Cherokee, Kansas.

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OHIO IMPROVED CHESTER SWINE.—Pure-bred and registered. One hundred spring pigs at hard times prices. Also a few boars ready for service. H. S. DAY, Dwight, Morris Co., Kas.

BLUE MOUND HERD OF BERKSHIRE SWINE.—One hundred choice spring and fall pigs now ready for the trade; also some matured stock. M. Bronse turkeys, Barred Plymouth Rock and Light Brahma chickens. Prices right. Allen Thomas, Blue Mound, Kas.

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R. L. BLODGETT & SONS, BEATRICE, NEB.—R. L. Breeders of Poland-China, Chester White and Berkshire hogs. We have prize-winners. Took 21 premiums at Kansas and Nebraska State fairs in 1895.

POLAND-CHINAS FOR SALE.—Young Model 9857, King's Royalty 13977. Their get, either sex, Cotswold bucks. The above stock will be sold right if taken soon. Address H. H. Hague & Son, Walton, Kas.

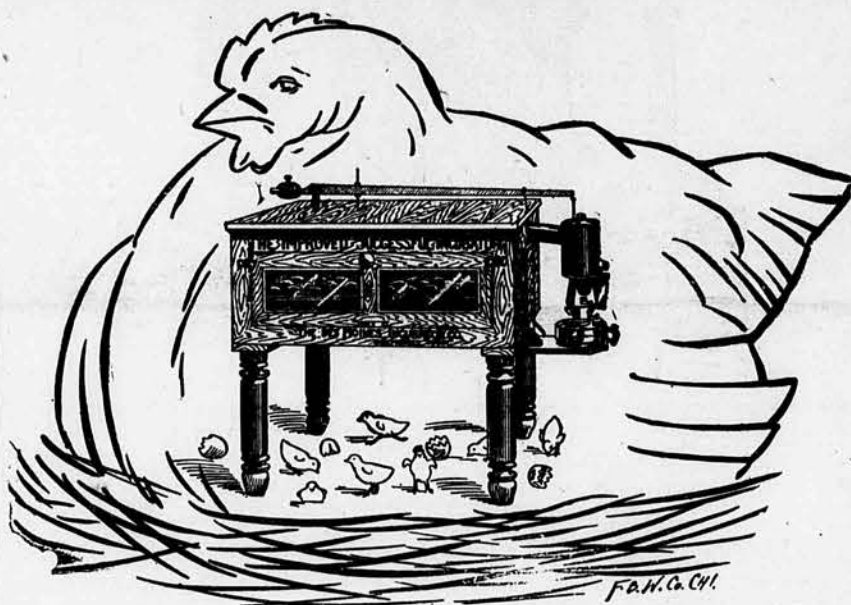
### POULTRY.

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We illustrate above something very suggestive from the Des Moines Incubator Co., of Des Moines, Iowa, showing how much more successful their Successful is than the ordinary every-day hen. They have not only put the hen to shame, but have been successful in winning in competition with other incubators this fall, premiums and medals of special worth, notably at the Mid-Continental Poultry Show, held at Kansas City, November 27 to December 3, 1895, three in competition with America's leading incubators, some of them claiming never to have been defeated in a show, etc.

The Successful were declared the victors, receiving first premium and medal. One special advantageous point about the Successful is the simplicity of their egg-turning device. They do not have to take the eggs out of the incubator to turn them.

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### POULTRY.

ROSE-COMB WHITE LEGHORNS.—Some fowls for sale. Eggs in season. Belle Dille, Box 2 Edgerton, Kas.

HERE WE ARE AGAIN!—With eggs from thoroughbred stock at hard-times prices. Buff Plymouth Rock, Buff Leghorn and Silver Wyandotte \$1 per sitting. F. H. Larrabee, Hutchinson, Kas.

EUREKA POULTRY YARDS.—L. E. Pixley, Emporia, Kas., breeder of Plymouth Rocks, S. Wyandottes, Buff Cochins, B. and White Leghorns, B. Langshans, M. B. Turkeys and Pekin ducks. Chicks at all times. Eggs in season.

EGGS FROM HIGH-SCORING B. P. ROCKS and B. C. Brown Leghorns for sale at \$1.50 per thirteen. Stock for sale with score-cards by Emery. Write your wants. P. C. Bowen & Son, Cherryvale, Kas. (Please mention FARMER.)

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### Barred Plymouth Rocks.

All the leading strains. Thirty young cockerels and twenty-five pullets for sale. A 93-point bird at head of the harem. Eggs \$2 per setting of thirteen. S. McCullough, Ottawa, Franklin Co., Kas.

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Partridge Cochins, Light Brahmas, White and Barred Plymouth Rocks, Single-combed Brown and White Leghorns and Silver Spangled Hamburgs. Eggs \$2 per thirteen. Fair hatch guaranteed. "Duff's Roup Cure," by mail, 25 cents per package. Try it. A. H. DUFF & SON, Larned, Kas.

### SWINE.

J. T. LAWTON, North Topeka, Kas., breeder of Improved Chester White swine. Choice young sows, bred to order. Light Brahma chickens.

### BERKSHIRES.

We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders.

WM. B. SUTTON & SON, Russell, Kansas.

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.

### SELECT HERD OF BERKSHIRES

For ten years winners at leading fairs in competition with the best herds in the world. Visitors say: "Your hogs have such fine heads, good backs and hams, strong bone, and are so large and smooth." If you want a boar or pair of pigs, write. I ship from Topeka. G. W. Berry, Berryton, Shawnee Co., Kas.

### Quality Herd Poland-Chinas.

For first choice pigs from stock producing winners of seven prizes World's Fair. Darkness Quality 2d and Ideal U. S. by Ideal Black U. S. head the herd. Both first-prize winners Kansas State fair 1894. Come or write your wants. Willis E. Gresham, Hutchinson, Kas. Secretary Kansas Swine Breeders' Association.

### CATTLE.

## SUNNY SLOPE FARM

C. S. CROSS, Emporia, Kas. We have one of the largest herds of registered **HEREFORD CATTLE** in the United States. Write for anything you want.

## SHANNON HILL STOCK FARM.

G. W. GLICK, ATCHISON, KAS. Breeds and has for sale Bates and Bates-topped **SHORT-HORNS**. Waterloo, Kirklevington, Filbert, Crags, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Winsome Duke 11th 115137 and Grand Duke of North Oaks 11th 115735 at head of the herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

## ROCK QUARRY HERD.

N. E. MOSHER & SON, SALISBURY, MO. Have twenty-two choice pure-bred **HEREFORD BULLS** for sale; twenty choice cows and heifers; all registered. Also ten choice Poland-China male pigs ready for service, sired by Mosher's Black U. S. and Faultless Wilkes. Write for prices. Mention FARMER.

### 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. STONBRAKER, Panola, Ill.

## E. E. AXLINE, OAK GROVE, MO.

Breeder and shipper of pure-bred **POLAND-CHINAS**. Best families. A choice lot of summer and fall pigs, sired by Roy U. S. 24185 A. and Western Wilkes 12846 S., for sale at reasonable prices. New catalogues free. Plymouth Rocks, best strains.

W. S. ATTEBURY, Rossville, Kansas, BREEDER OF **Chester Whites** Exclusively. Young stock at all times. Satisfaction guaranteed.

## THE WOOD DALE BERKSHIRES

Champions of Two World's Fairs. New Orleans, 1885, best herd, largest hog any breed. At Columbian, Chicago, won ten out of eighteen first prizes, the other eight being bred at or by descendants of Wood Dale. New blood by an 1894 importation of 21 head from England. For catalogue Address N. H. GENTRY, SEDALIA, MO.

## VERNON COUNTY HERD

PEDIGREED **POLAND-CHINAS**. Forty-five spring pigs sired by Silver Dick 14180 S. and out of high-class dams. Write or visit herd. J. M. TURLEY, Statesbury, Vernon Co., Mo.

## PLEASANT VALLEY HERD

REGISTERED **POLAND-CHINA SWINE** Westphalia, Anderson Co., Kas. Breeder of high-class pedigree Poland-China swine. Herd headed by Tecumseh Grand 9178 S., assisted by Guy Wilkes 3d 12131 C. Tecumseh Grand 9178 S. is now for sale, also fifty choice April pigs. Write. E. A. BRICKER.

## ELM BEACH STOCK FARM

IRWIN & DUNCAN, Wichita, - Kansas, Sedgwick Co. Breed and have for sale Bates and Bates-topped **SHORT-HORNS**—Waterloo, Kirklevington and other fashionable families. Also breed and have for sale the best thoroughbred **POLAND-CHINAS** that can be obtained. Write or come and see.

**\$1 BUYS A SITTING** of WHITE or BARRED **PLYMOUTH ROCK EGGS** from high-scoring chickens. Tompkins and Peers stock. No better birds anywhere.

T. E. LEFTWICH, -- LARNED, KANSAS.

(Breeder's Directory continued on page 18.)



## Agricultural Matters.

### ALFALFA.

By J. E. Fitzgerald, Jamestown, Kas., read before Cloud County Farmers' Institute.

The first alfalfa, four acres, was sown in Grant township in 1883. Since that time the acreage has increased until we now have more than 700 acres.

Alfalfa is grown in this locality under various conditions. It is raised on high, stony points, with scarcely any soil, and where water is only reached at a depth of 130 feet. It is grown on first and second creek bottom land, and also grows on gumbo and alkali ground. In fact, it seems, in this locality, to take root wherever the seed falls and is covered.

The past two years our section of the country has been so dry that a team and wagon could be driven along the bed of any of the creeks, where, prior to 1893, there was usually two to six feet of water. Common crops, such as corn, wheat and oats, could not be grown for want of moisture. Farmers who were lucky enough to have some of their land sown to alfalfa have been rewarded by good crops of hay and seed. In 1894, one of my neighbors realized from twenty-five and one-half acres of alfalfa \$1,558. The first cutting made two tons per acre, and was sold from the swath for \$3 per ton. The second crop was threshed to obtain the seed, which yielded ten bushels per acre, and was sold for \$4 per bushel. The threshed hay made two tons per acre and was sold the following winter for \$5 per ton. The third crop made one ton of hay per acre, which could have been readily sold for \$5 per ton in the stack. This crop was fed to stock on the farm. This shows nearly \$62 per acre for the use of the land one season and that season a very dry one. This land is second creek bottom, clay loam with some spots of gumbo in the field. The alfalfa on gumbo land grows so rank that it usually falls before being cut. In this field water is forty feet below the surface. Another field of eighteen acres on second creek bottom land has yielded over 100 tons of hay each season for the past three years. This is undoubtedly the best field in the township for hay but not so good as some others for seed. The land is a vegetable mold, usually moist to water, which is reached at a depth of eight to sixteen feet below the surface. Some writers claim that where water lies so close to the surface as in this field there is great danger of its being winter-killed. This field has not been damaged by frost, while many fields on high prairie were damaged last winter. Last February we had a heavy rain in this locality, followed a few days later by a heavy frost. The water was held close to the surface where the subsoil was hard and much of the alfalfa was killed.

There are many beautiful alfalfa fields in our township which, when in bloom, are a pleasing sight.

As a proof that alfalfa will grow on most any kind of soil in this locality, I will describe my farm, where I have been growing it for twelve years. My land is very rough, high prairie; all high points are stony, side-hills a gravelly loam; the low land has about ten inches of clay loam and the subsoil is gumbo. The high points were so stony that it was with great difficulty they were plowed. There is not more than two inches of gravelly soil; under this is shale and prairie lime, from three to five feet, then a layer of rock from six to twelve inches thick. Under this layer of rock is more shale, then rock, and so on for about fifteen feet, when we strike fifty or sixty feet of blue slate, through which we must pass before the first little seep of water is reached. To obtain a sufficiency of water for a well we must dig down 144 feet. It is claimed by some that alfalfa will not do well unless the roots reach permanent moisture. While the roots of this plant are wonderful in reaching down into the earth, yet no person will claim that they could penetrate the above-described matter to reach water. On the low land water is found at a depth of about fifty to eighty feet.

My first alfalfa, twenty-four acres, was sown in 1884, on side-hill land.

Seed at that time was very expensive, and as I was informed by the parties from whom I purchased the seed that one bushel of seed would sow eight acres, I accordingly sowed the twenty-four acres with three bushels of seed. In 1885 I cut and stacked 127 tons of hay from the field and sold \$600 worth of seed. I have an eight-acre field on which from seventy-five to 175 hogs have been pastured each season for eight years. Pigs three months old and over are not fed any grain during the summer, and when turned into the feed lot to be fattened take on flesh very rapidly. Fall pasturing does not seem to injure the alfalfa much if the weather is dry. It should not be pastured in wet weather, as heavy cattle and horses bruise the top of the roots, and if the winter be severe the roots in this condition will be killed by the frost.

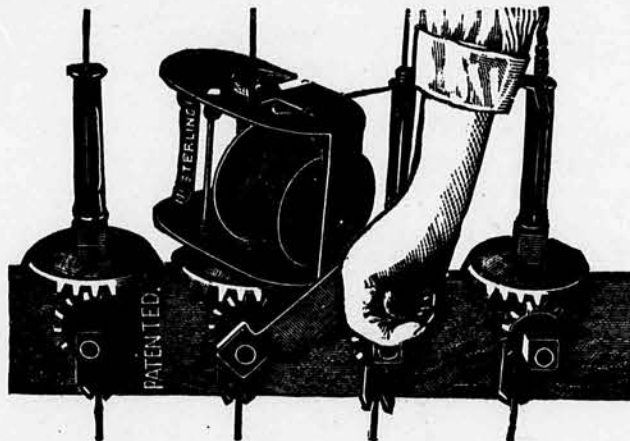
While alfalfa is the finest pasture I have ever seen for hogs, and mares raising colts, I do not consider it good for work horses, sheep or cattle. It is too soft for work horses and too dangerous to pasture cattle and sheep. They will bloat, and die so quickly, sometimes, that there is not time to relieve them. Cows that are pastured on alfalfa in wet weather, or even in dry weather where it is growing rapidly, will bloat; and if it does not prove fatal it will decrease the flow of milk and make it unfit for use. The only safe way to pasture sheep and cattle on alfalfa is to turn them on early in the spring and not allow them out of the

fifteen feet apart, regulating the plates so as to sow twenty pounds of seed per acre. By this manner of driving, the seed overlaps some and you will get an even stand, while otherwise it would be streaked.

When the alfalfa blooms it is ready to cut for hay, and should be cut before the leaves begin to turn yellow near the ground. The second crop is considered the best seed crop, as it matures in August, which is usually a dry month here. The dry weather is most favorable for a large seed crop.

If the weather is fine, the rake should be put to work not later than half a day after the mower, and the hay should be cocked at once. There is no danger, in this climate, that it will not cure in the cocks and be ready for the stack or barn in two or three days. If allowed to lie in swaths longer than half a day the leaves will fall off and much of the best hay be lost. When the alfalfa pods are nicely browned, in the crop left for seed, it is ready to cut. It should not be let stand until the pods blacken, as at this stage the pods will drop off and thereby waste much seed. When oats is not sown with the seed, care should be taken to keep down the weeds the first season. Mow often, and if the weeds are not so plenty that they cover the young alfalfa plants, they may be left on the ground.

I think the plan of sowing with oats and sowing early in the spring a very good one, as by the time the weeds start to grow the alfalfa has a good start and will keep abreast of them.



CARTER WIRE FENCE MACHINE.

The above cut illustrates the Carter Wire Fence Machine. We consider it worthy of special mention. It is simple of construction and easy of operation. It is cheap, durable and has nothing to get out of order. It weaves a first-class fence and does it rapidly. With it the farmer can weave his own fence at first cost, which is the price of the wire.

The firm sells the machine and 3,150 pounds of No. 10 and 12 galvanized wire for \$65, which will build 300 rods of the best woven wire

fence on earth, horse-high, bull-strong and pig-tight, for the same money that will buy 100 rods of any good woven wire fence on the market, and after you have built the 100 rods of fence you have the machine left, with which you can build more fence and weave fence for your neighbors. We believe this machine worthy of your consideration and investigation. It is manufactured by an old and reliable firm. Send for free catalogue. Address Carter Wire Fence Machine Co., Box 71, Mt. Sterling, Ohio.

pasture for any length of time. If they remain off long enough to become hungry, they will, upon being turned on, eat too rapidly and bloat. Turn hungry sheep on alfalfa, and in one hour's time they will begin to drop dead faster than an expert marksman could shoot them.

Alfalfa, on common prairie soil, will be killed if pastured three or four successive seasons. On gravelly soil it will last a few years longer. With the exception of sheep, it will last longer when pastured by light than heavy animals. Hogs should have rings in their noses when pastured on alfalfa, otherwise they will root down and pull the plant up by the root.

We find new ground is better than old ground for alfalfa. The new ground is usually cleaner and it seems easier to procure a good stand, as it grows more vigorously.

There seems to be no particular system of preparing the ground and sowing the seed. If the ground is good and well prepared, there doesn't seem to be much trouble about getting a good stand by sowing any time from early spring to the first of August.

I have sown some alfalfa nearly every year for twelve years, and have adopted the following method, which has proven very successful: The ground is plowed deep, one-half bushel of oats is sown to an acre and then we harrow the ground twice. Twenty pounds to the acre, of clean, fresh alfalfa seed is now sown with a broadcast seeder (the kind used on a wagon). Drive so that the wheels will be about

If, when harvesting the oats, they are cut low, the weeds will be garnered with them and no more difficulty experienced. The alfalfa has (some years) attained a height of six or eight inches by the time the oats were harvested. The butts of the oat bundles are a solid mass of green alfalfa. The oats not only afford protection to the alfalfa, but they also yield about half a crop. After the oats are cut the alfalfa branches out and grows rapidly, affording good pasture or a light hay crop the first fall.

The third year after seeding alfalfa has reached its majority, and if not pastured too heavily will continue furnishing good hay and seed crops for years. I really cannot say how long, but in South America some fields have been growing alfalfa continuously for 200 years. Having plenty of alfalfa hay to feed, it will pay the farmer better to have his cows fresh in the fall. He will avoid fly-time; butter usually commands a better price, and the farmer has more time for milking than in the summer season, when he is busy with other work.

If forty out of every 160 acres in the State were sown to alfalfa, I predict that a few years distant the mortgaged farm would be a thing of the past.

If afflicted with scalp diseases, hair falling out, and premature baldness, do not use grease or alcoholic preparations, but apply Hall's Hair Renewer.

Send \$1.35 to KANSAS FARMER office for one year's subscription to KANSAS FARMER and Chicago Weekly Inter-Ocean.

## THE OLDEST AND THE BEST

Cough-cure, the most prompt and effective remedy for diseases of the throat and lungs, is Ayer's Cherry Pectoral. As an emergency medi-



cine, for the cure of Croup, Sore Throat, Lung Fever and Whooping Cough,

### AYER'S

Cherry Pectoral cannot be equaled. E. M. BRAWLEY, D. D., Dis. Sec. of the American Baptist Publishing Society, Petersburg, Va., endorses it, as a cure for violent colds, bronchitis, etc. Dr. Brawley also adds: To all ministers suffering from throat troubles, I recommend

## AYER'S Cherry Pectoral

Awarded Medal at World's Fair.

AYER'S PILLS Cure Liver and Stomach Troubles.

### Raising and Feeding Kaffir Corn.

Prepared and read before the Farmers' Institute at Cherryvale, Kas., February 21, 1896, by John H. Ellison, Mound Valley, Labette county, Kansas.

This is a subject that is commanding a great deal of attention, and is one that is well worth the consideration of every farmer. Owing to the fact that our summers are frequently too dry to raise corn successfully, the farmers of Kansas have been compelled to look for something that, taking one year with another, will yield a sure and profitable crop of grain and fodder. It has been found that Kaffir corn fills the requirements, and the increased acreage planted each year fully proves that the farmer is aware of the fact that it is the crop that is adapted to both our soil and climate. It will grow and flourish on poor land better than any crop known, and has the power to withstand droughts and hot winds that no other crop possesses, and being a great yielder of both grain and fodder, which is relished by all kinds of stock, makes it a profitable crop to raise.

Our first experience in raising Kaffir corn was in 1894. The year before we had noticed two small fields growing nicely during the dry weather. After the hot winds had parched the corn the Kaffir corn was still green and growing. We concluded to give it a trial. We did not know much about it and did not like to risk losing the use of our best land, so we planted it on the poorest part of the field, after our corn was all planted. Used a planter that dropped from four to eight grains in a hill from two to three feet apart, cultivating the same as corn. When we threshed, we topped two rows and threshed it to determine the yield. Got six bushels, or three bushels to the row. As there was seventeen rows in an acre, it made a yield of fifty-one bushels per acre. The corn, on better land, yielded forty bushels, making a difference of eleven bushels in favor of the Kaffir corn. As we had plenty of feed, we topped the Kaffir corn and let the stalks stand and pastured them with the rest of the stalks. The horses and cattle both seemed to prefer the Kaffir corn stalks. After topping it we fed it in the head to our horses and they would leave the ear corn to eat it. Both horses and hogs thrived and fattened on it.

After a year's experience raising and feeding it, planted a larger acreage last spring, but the ground being so dry it did not come up well. We topped most of it, as the year before, and stored it in the hay mow till thoroughly dry, and then threshed it, getting a yield of about thirty bushels. The corn yielded the same.

Some of our crop was planted after wheat was out. The ground was



plowed, covering the chinch bugs. The bugs got out about the same time Kaffir corn came up and killed it. We planted it again. Raised a fine crop of fodder. It being planted so late the early and heavy frost killed it, although there was enough seed to make it rich feed. We ground the seed and have been feeding it to cows, horses and hogs all winter. The cows gained in their milk as soon as we commenced feeding them and our horses and hogs are doing as well as with anything we ever fed. We have been feeding the fodder, and it has kept splendidly, standing out all winter, and is bright and sweet yet. Hogs like the fodder and will eat it up clean, stalks and all.

Before planting, your ground should be well plowed and harrowed down fine to make a firm seed-bed to get a good stand. This is planted, if for grain, in rows from two and one-half to three feet apart, dropping the seed from four to six inches apart, as it will stand closer planting than corn. We used a drill corn planter last year. Some people use an ordinary wheat drill, stopping up all the holes but two or three. If wanted for hay, from three pecks to one bushel is sown or drilled. It is claimed that this makes excellent hay and will yield from two to four tons.

Now, as to the worth of this crop compared with corn, the State Experiment Station last winter ground both Kaffir corn and corn and tried it, feeding it to eight hogs. Four were fed on corn and four on Kaffir corn. The corn was ground as fine as desirable, but their mill did not grind the Kaffir corn fine enough. Their reports show that 5.15 pounds of the Kaffir corn was required to make a pound of pork, and 4.38 pounds of corn. One bushel of Kaffir corn will produce 11.65 pounds pork; one bushel of corn, 12.78. Figuring pork at \$3.50, the present price of hogs, one bushel Kaffir corn is worth a fraction over 40 cents, one bushel corn a fraction over 44 cents. Now we'll figure the value of an acre of each, and I will base it on a comparison of yields at the State Experiment Station, given by Mr. F. C. Burtis and read before the twenty-fourth annual meeting of the State Board of Agriculture, in January, 1895, comparing the yields of Red Kaffir corn and corn, together with the fodder of each, for six years, beginning with 1889. I will quote this table, because it is accurately compared, and is official. I will estimate both fodders worth \$1 per ton, although the Kaffir corn fodder is the best, as the stock will eat more of the stalks than of the corn fodder. Below is the table of yields, with the value of the yield of each crop:

CORN.

Year.	Number bushels corn per acre.	Value at 40 cents.	Tons fodder.	Value of fodder.	Total.
1889.....	56	\$24.64	2.50	\$2.50	\$27.14
1890.....	52	9.68	2.50	2.50	12.18
1891.....	74	32.56	2.75	2.75	35.31
1892.....	90	36.00	4.55	4.55	40.55
1893.....	90	36.00	1.75	1.75	37.75
1894.....	.....	.....	1.00	1.00	.....
Average....	42.4	\$18.65	2.50	\$2.50	\$18.05+

RED KAFFIR CORN.

Year.	Number bushels seed.	Value at 40 cents.	Tons fodder.	Value of fodder.	Total.
1889.....	71	\$28.40	9.00	\$9.00	\$37.40
1890.....	19	7.60	4.20	4.20	11.80
1891.....	98	39.20	6.00	6.00	45.20
1892.....	50	20.00	5.00	5.00	25.00
1893.....	49	19.60	5.25	5.25	24.85
1894.....	.....	.....	2.00	2.00	.....
Average....	57.4	\$22.96	5.29	\$5.29	\$28.25
Difference..	15.0	\$4.31	2.79	\$2.79	\$6.32

DIFFERENCE IN EACH YEAR'S VALUE.

	Kaffir corn.	Corn.	In favor of:
			Kaffir corn. Corn.
1889.....	\$37.40	\$27.14	\$10.26
1890.....	11.80	12.18	.....
1891.....	45.20	35.31	9.89
1892.....	25.00	17.75	7.25
1893.....	24.85	14.95	9.90
1894.....	2.00	1.00	1.00

This is not all the difference in favor of Kaffir corn. You cut and shock it in the fall when it is cool. The leaves do

not dry up and blow away like corn leaves.

In conclusion, I will say the farmer that wants to make farming pay should raise Kaffir corn. It is going to be the redemption of Kansas and lead her farmers to prosperity. It will grow on land that is too thin to raise any other crop, and will make something always. It will make your pork, butter, beef, poultry, eggs, and will make bread and hominy for you. There is light ahead for the farmer that will raise Kaffir corn. Plant a field of it, enough to feed your stock if corn were to fail. Plant it anyhow; you need it in your business. Plant it, and when the dry weather and hot winds have withered and dried up your corn, and you have begun to think that your hopes are blasted, go and take a walk through your beautiful green and still flourishing Kaffir corn field. It is fine for the blues. You will be cheered up, and will declare that "next year I am going to raise more of this kind of crops."

## The Stock Interest.

### THE BACON HOG FOR THE ENGLISH MARKET.

Read by H. B. Cowles before the Kansas Improved Stock Breeders' Association, at Topeka, January 8, 1896.

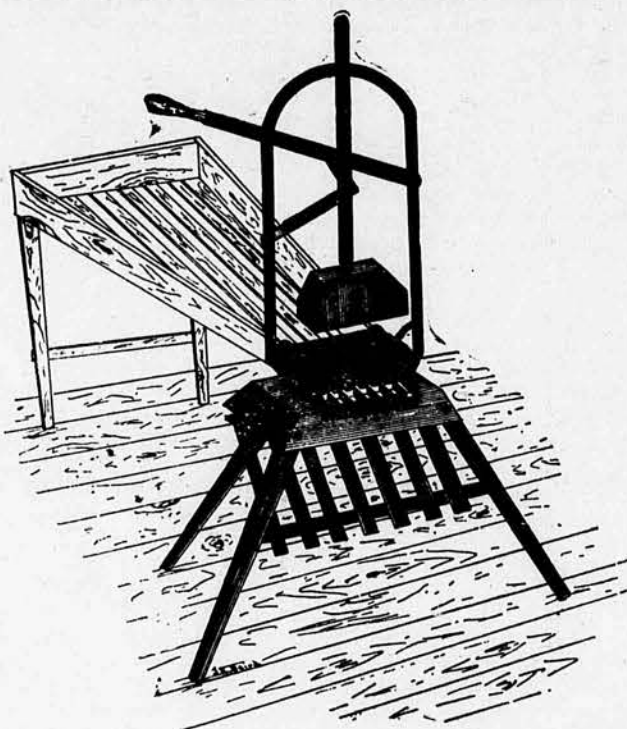
The subject that has been assigned to me for this occasion was suggested,

9 cents per pound, live weight, and running down to 7½ cents per pound for hogs not exceeding 240 pounds, and not having the fat more than three inches deep on the back. Under this system, the percentage of lean pigs received by this firm has doubled.

Of all the nations exporting hog products to England, Denmark has been the most successful in satisfying the English taste. Her annual shipments of bacon already amount to more than 50,000,000 pounds, and this brings from 18 to 20 cents per pound. The Canadian product suits nearly as well, and sells not more than a cent below the Danish, while the United States brings up the rear with bacon that brings only 10 to 14 cents.

Partly because of the low price doubtless, the United States is far in the lead as to quantity of hog products sent to England, the total value of such exports in 1894 reaching \$25,000,000 for bacon, \$13,000,000 for hams, and only a little over \$1,000,000 for salt pork.

Now, it is obvious that so long as the hog markets throughout the United States pay the highest price for the fattest hog, that is the kind that will go to market. It is albuminous foods that make lean meat, and such foods cost more than the fat-producing foods. We are not agreed as to the weight of



### THE LIGHTNING POTATO-CUTTER.

We present herewith a cut of Lightning Potato Cutter, which is considered the best and most rapid machine of its kind.

It can be operated by a boy just as well as by a man, and has a capacity of fifty to seventy-five bushels a day, owing to the speed of the operator and the size of the potatoes. Potatoes cut on the Lightning can be used in any potato planter. It does not mark or bruise the potatoes, but leaves them in excellent condition for planting. Any one raising potatoes for market cannot afford to be

without it. The time for cutting and planting potatoes is at a season when the farmer's time is valuable, and represents money to him.

The company manufacturing it furnish with each cutter a hopper or chute as shown in the engraving, so the work of the operator is greatly assisted by having the potatoes close at hand.

This machine has been on the market two seasons and its price complete, is \$10. Manufactured by the Kansas City Hay Press Co., Kansas City, Mo. Write them for circulars, etc.

as you will readily surmise, by the recent publication of certain hints from the Secretary of Agriculture as to the kind of pork products demanded for our export trade. What follows is chiefly a summary of the suggestions contained in the belated Year Book of the Department of Agriculture for 1894, with some gleanings from certain consular reports of the series issued from time to time under the direction of the Secretary of Agriculture, with the title, "The World's Markets."

The English demand is for a mildly-cured, not over-salt, very lean bacon. When they get what they want, they will pay 22 to 24 cents per pound for it. The standard of excellence, not simply in England, but throughout Europe, is the Wiltshire brand. This brings on the continent even higher prices, ranging from 26 to 35 cents.

The Wiltshire packers obtain their lean hogs by discriminating in the prices offered. For example, the firm of Charles and Thomas Harris, leading packers there, issue weekly circulars giving their scale of prices. From these it appears that the highest price is paid for pigs weighing from 130 to 190 pounds, and carrying not more than two and one-fourth inches of fat on the back, this price often being as high as

the hog that can be produced most cheaply, but we are pretty sure that it is above 130 and probably above 190 pounds. On the other hand, it is clear that the packer will get a smaller percentage of dressed meat out of a lean hog than out of a fat one.

Lean meat not only costs more than fat meat, but is also worth more, i. e., it is both more nutritious and more palatable. The difficulty here is that Americans generally don't know that it is worth as much more as it costs, and therefore they won't pay the difference in order to get lean bacon. I wrote to the Armour Packing Co. to inquire what encouragement there is to produce a bacon hog instead of a lard hog, and the general tenor of the reply was that they do not know of any. They say that "wheat and barley seem to produce a leaner hog than straight corn, but we doubt very much if the breeding of a special bacon hog would be followed by a willingness to pay the difference in price by the consumers until they had become thoroughly educated up to it." This company puts out a fancy bacon, made of light bellies, of the very finest qualities, and in regard to this they say: "Every day in the year when this is brought into competition with the fatter grades, the

## Woman's Work

Is never done, and it is especially wearing and wearisome to those whose blood is impure and unfit properly to tone, sustain and renew the wasting of nerve, muscle and tissue. The only remedy for tired, weak, nervous women is in building up by taking a good nerve tonic, blood purifier and vitalizer like Hood's Sarsaparilla. For troubles Peculiar to Women at change of season, climate or life, great cures are made by

## Hood's Sarsaparilla

The One True Blood Purifier. All druggists. \$1. Prepared only by C. I. Hood & Co., Lowell, Mass.

Hood's Pills do not cause pain or gripe. All druggists. 25c.

dealers tell us they cannot afford the difference in price; that they are brought into competition with such and such a bacon; that it seems acceptable to their trade, and they have not the time to educate their trade up to the difference in value. We sell, however, in the neighborhood of two million pounds per year of this fancy bacon, and on that basis we are inclined to believe that, through the process of education, a lean bacon would probably command a premium.

There is a clear tendency toward marketing at smaller weights. This undoubtedly means a somewhat larger proportion of lean, even though the smaller animal be equally well finished. The appreciation of leaner bacon is sure to come. When it is found that it does not cost any more to eat what we like we are sure to eat it. If knowledge of the value of pasture for hogs keeps pace with this change in the quality of pork demanded, it is not certain but the better pork can be furnished at no greater cost per pound. Pigs kept on alfalfa or on clover and blue grass for six months and then kept a month on corn ought to make the weight to suit the Messrs. Harris and still not measure more than two and one-fourth inches in depth of fat on the back.

It is an easy inference from the facts stated that each country is producing a pork suited to its conditions. Canadian bacon brings 50 cents more in England than United States bacon, because it carries from 10 to 15 per cent. more of lean; and it carries more lean because the Canadians raise oats and peas instead of corn. The Danes do still better in that market because they raise their pigs on milk and fatten them on barley or rye. From this it may be inferred that we are to look to our dairy States and our alfalfa States to furnish our export trade and our epicure trade.

Secretary Morton states that one step towards complying with the changed demand in England is to change the breed, Berkshires giving way to Tamworths and Yorkshires. Neither of these breeds is much raised in our surplus hog States, but it is not at all unlikely that they would suit better if we were getting more for lean hogs than for fat ones. Berkshire breeders here will still flatter themselves that they have the best hog for our market, leading the way in educating the people up to what pork ought to taste like, and still tipping the beam as quick as any breed. I think it is conceded that the Berkshire meat is better "streaked" than that of any other breed commonly raised in these parts, and that Berkshire hams contain more lean meat than those of any other breed. If we are to kill the pigs small, we need lots of them to start with or the total year's output will be small, and the cost of wintering the dams will eat up the profits. And, too, if we are going to raise cheap pork on grass, we need a hog that will eat grass.

The United States is at last ceasing to ignore foreign trade, and the figures given above show clearly that there is money in selling pork to Europe. The individual farmer or breeder cannot go into the export business, but there is a fine field for our great packing-houses, and they are beginning to occupy it. If they find that there is more profit in catering to the high-priced trade there, they can get lean hogs here by offering a premium, and I think such a thing may be looked for in the not distant future. The individual can increase the consumption of pork in this country by supplying his own locality with pork that is really appetizing, and that means lean.



## Irrigation.

### SUB-IRRIGATION A SUCCESS.

EDITOR KANSAS FARMER:—In the KANSAS FARMER of February 27, I see a paper by Edward M. Boggs, irrigation engineer of the Agricultural Experiment Station University of Arizona, on irrigation, in which he, to my mind, unjustly criticises sub-irrigation. I think from the reading of his article that he does it solely from hearsay evidence; at least, he does not claim that he has had practical experience in sub-irrigation. The tendency of his paper is to discourage sub-irrigation. Knowing that it is a practical way to apply water to soil, I wish to answer some of his conclusions.

He says: "The principal arguments in its favor are that by this method the moisture is applied directly to the roots, where it is to be used; that the loss by evaporation from the surface is almost wholly prevented; that a minimum amount of water will thus be used, and that the roots are trained downward, where they should go, instead of upward, where they should not go," all of which he pronounces fallacious, citing failure in California, great expense, etc., to prove his position. Because of its failure in certain soils is no reason that it should be condemned in our State. We know by personal experience that it is not a failure where used in proper soil. Again, in his paper, the cost is emphatically brought forward against it, whilst in the same paper he states that it often costs from one to two hundred dollars per acre in California for grading preparatory for surface irrigation. It certainly is humorous for a man after that to condemn sub-irrigation, which will cost at the present high rate of tile only \$50 to \$100.

He further says: "Any soil which is loose enough to allow water to spread laterally from an underground pipe is also open enough to permit a quantity to sink downward too deep to be recovered by roots," etc. It is a well-known fact that water will rise, spread laterally, as readily by capillary attraction as it will sink. In fact, the soil is in a poor physical condition for the growth of plants, or you either have put too much water on your ground when water sinks because of the law of gravity.

The author evidently accounts for the circulation of water in soils chiefly on the law of gravity, and in coarse, porous subsoils or rock substratum, where the force of capillarity is weak, his conclusions would be right; sub-irrigation would be a failure, and, in fact, has been a failure, as evidenced in Utah and California. Just the opposite condition prevails in Kansas. In our soils, outside of the sandy river bottoms, the water circulates almost wholly by capillarity, and in our river bottoms in central Kansas the soil is fine alluvial in character. As we go down it becomes very compact, which reduces its power in capillarity and wholly suspends the law of gravity, and by thoroughly subsiding the ground to the depth of twenty inches and then laying the tile, we make the surface in an ideal condition for plant growth, the favorable condition underlying soil as above indicated, consequently his fear of the water sinking too deep for the roots to recover is nil. As a matter of fact, in our soil, if we do not water-log, but allow the force of capillarity to act to its full extent, it will all in time be evaporated at the surface. Hence the putting of water a foot or more beneath the surface by the means of tile is our chief claim for economy, it evaporating slowly, enabling us to keep the surface perfectly mulched. Again, if we do use too much water, it does not do the harm that is done in surface irrigation in causing souring, baking, etc., but we store a large amount in the most perfect reservoir—Mother Earth—and if any waste to the underground water it is infinitesimal.

All this has been demonstrated in Osborne county. Having practiced this system the past three years with results beyond the most sanguine expectations, confirmatory to our claims,

we wish to quote experiments in Ohio, given in Bulletin No. 61, Agricultural Experiment Station. They claim that sub-irrigation is the cheapest. "The yield 40 to 100 per cent. greater than by surface." The quality better, less liable to suffer from overwatering and disease. The soil retains its original loose and friable condition. These good effects are supposed to be largely due to the fact that sub-irrigated soil is always in a condition for the air to penetrate it freely and that uniformity and constancy of moisture to the roots are assured by this method of watering. M. F. HUDSON.

Osborne, Kas.

### Reservoir and Irrigation in Sand-Hills.

EDITOR KANSAS FARMER:—Can I obtain, through you or your paper, information in regard to building a cheap reservoir on the top of a sand-hill in Kiowa county? Can sand-hills be successfully irrigated by wind pump, if a reservoir is built on the top? I will be very glad to hear from some one who has had experience or seen it tried. Warsaw, Ind. E. E. HICKMAN.

The above letter was referred to Hon. W. E. Hutchinson, of Garden City, Judge of the District court for the southwest part of Kansas, whose experience, observation and good judgment render especially valuable the following reply, which he has kindly furnished:

EDITOR KANSAS FARMER:—In response to your request that I answer, for publication, two questions propounded to you by a gentleman interested in Kiowa county, will say that I have had some experience in building a reservoir on sandy soil, and irrigating from such reservoir, land that was quite sandy. It is, however, strictly speaking, not sand-hills, but I have observed what others have done in sand-hills, and with no different result from my own experience.

A reservoir can be built on top of the ground where it is sandy, nearly as well as in other characters of land, but it will require more work. I followed the usual directions and suggestions for building a reservoir in ordinary localities, but was more careful than usual in endeavoring to have my banks well packed, and the soil and sand in the bottom of the reservoir pulverized, and then completely puddled and tramped. While constructing the banks of my reservoir by excavating the dirt from the bottom of the reservoir to the depth of a foot and a half below the surface, by means a scraper, I had three horses constantly tramping the banks, which made the banks so they were nearly as solid as old ground when finished. I did this without wetting the banks, but am not sure but what a little water on the banks as they are being built would make them better still. After completing the banks I pulverized the soil in the bottom of the pond to a depth of twelve inches. This I think was entirely too much; half that depth would have been sufficient. I then turned water in sufficient to wet all the loose earth in the bottom of the reservoir, and after it had dried a few hours I put in five horses, and had them tramp the bottom of the reservoir until it got so hard that it was impossible to see the impressions made by the feet of the horses. Owing to having it pulverized and wet so deep it was rather discouraging, as it took five days of such tramping in my small reservoir to get the ground in the condition last described, but at the end of that time it was just as good, and is yet, as if it had been cemented.

As to irrigating land that is sandy, will say that it can be done by constructing laterals through the garden, orchard or field, as the case may be, with sufficient fall to cause the water to run rapidly and thus reach the most distant points without sinking away in the laterals, and after using them a short time there will be no difficulty whatever, as the bottom and sides will become hardened and almost waterproof. I have observed the success of others in places more sandy than mine, in the construction of reservoirs, and particularly some places in Stevens county, where the surface seems to be almost exclusively composed of sand. I think the easier way, still, is to haul in a few loads of black soil or gumbo, if it can be procured, placing it in the

bottom of the reservoir, pulverize it thoroughly, then wet and tramp it as before described. This will undoubtedly be easier done and in most instances may give better results.

W. E. HUTCHINSON.

Garden City, Kas.

### Sub-Irrigation.

EDITOR KANSAS FARMER:—While there are many problems in relation to irrigation still awaiting solution, some important facts are absolutely known.

First.—We know that any man who has a good supply of water at a reasonable depth can irrigate at a profit an area limited only by the amount of water supply.

Second.—We know it costs money to lift water, the cost increasing, of course, with the increase of the lift.

Now, since it costs money to lift water, economy in its distribution is of first importance. The method of distribution by means of reservoirs and ditches is usually adopted. The method by means of tiling or pipes laid underground, but lately introduced in Kansas, is rapidly growing in favor. Its advantages over the surface method for gardens and small fruits are so numerous and so manifest that a mere mention of them is sufficient to commend it to every one.

First.—There is by this method no loss by evaporation.

Second.—The water necessary to irrigate a given area by the surface method will irrigate a much larger area by sub-irrigation.

Third.—The water is distributed below the seed-bed and in the best possible place and manner to be utilized in plant growth.

Fourth.—With wind power, after the plant is in, no further labor or expense is needed. It is self-operating.

Fifth.—Tiling are practically everlasting. No expense for operating except for windmill and pump repairs.

Sixth.—It is not only the ideal method of irrigating, but in the end it is the cheapest.

That sub-irrigation has these points of superiority over the surface method, is not a matter of speculation. Experiments at Osborne, Kas., conducted for a period of three years, fully justify the statement as true. Among the most prominent parties at Osborne who have conducted these experiments are Andrew Linn, Dr. M. F. Hudson and J. Q. Foster. For details write them.

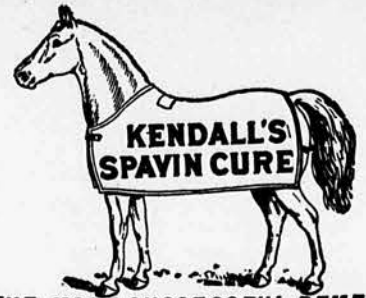
Mr. Linn, a year ago last fall, put in a plant, tiling two and a half acres. Last year he tiled an additional acre. The other parties mentioned also extended their plants, and many new plants were put in last year.

Not for all kinds of soil.—Let it be understood that sub-irrigation by means of tiling is not a success in all kinds of soils. An experiment at the Utah Station last year proved to be a failure, while at the Ohio Experiment Station, the same year, it was a great success.

That which caused the difference in results is found to be wholly in a difference in the texture and physical properties of the subsoil. In the former (Utah) the subsoil was sandy and very porous. In the latter it was clay and of fine texture.

In a coarse, porous soil the water passes down by gravity too rapidly, and the law of capillarity does not act with sufficient force to draw it laterally, while in a clay soil its action is complete. Nearly all the soil of Kansas, outside of sand-hills and sandy creek and river bottoms, is believed to be adapted to successful sub-irrigation.

Objections raised.—It is said, in California, where sub-irrigation has been tried, it was condemned because roots of trees penetrate the joints of tiling and obstruct the flow of water. This objection applies where trees are grown, but it does not apply to vegetable and fruit gardens. Tiling, however, can be made that will obviate the root difficulty. By making them sufficiently porous to admit of the passage of water through the pores the joints may be entirely closed by cement. It is believed that in this way roots can be effectually prevented from entering the tiling. Another objection raised is the



**THE MOST SUCCESSFUL REMEDY FOR MAN OR BEAST.**  
Certain in its effects and never bilsters.  
Read proofs below

### KENDALL'S SPAVIN CURE

BLUEPOINT, L. I., N. Y., Jan. 15, 1894.  
Dr. B. J. KENDALL Co.—I bought a splendid bay horse some time ago with a spavin. I got him for \$30. I used Kendall's Spavin Cure. The spavin is gone now and I have been offered \$150 for the same horse. I only had him nine weeks, so I got \$120 for using \$2 worth of Kendall's Spavin Cure.  
W. S. MARSDEN.

### KENDALL'S SPAVIN CURE

SHELBY, Mich., Dec. 16, 1893.  
Dr. B. J. KENDALL Co.—I have used your Kendall's Spavin Cure with good success for Curbs on two horses and it is the best I have ever used.  
AUGUST FREDERICK.

Price \$1 per Bottle.  
For sale by all Druggists, or address  
DR. B. J. KENDALL COMPANY,  
ENOSBURGH FALLS, VT.

expense. This objection is more apparent than real.

By underground distribution of water we have the greatest possible economy in the utilization of moisture for plant growth. Just how much is saved over the surface method we have at present no exact data to base a statement on, but those parties at Osborne, who have experimented with both, do not hesitate to say that in their judgment the saving is at least one-half; some say more. If the saving is one-half, then the plant which has a capacity to irrigate three acres by the surface method will irrigate six acres by the underground method; that is, the cost of the additional plant necessary to irrigate six acres represents the saving in water by sub-irrigation. What that cost is depends upon the depth of the well. It would, however, with the average lift be sufficient, no doubt, to tile at least half of the six acres. Then, again, the underground method of distributing water is practically self-operating, and the services of a man for the distribution of water by means of ditches is practically dispensed with.

Tiling for vegetable and fruit gardens are laid ten feet apart, and fifteen inches deep. For potatoes and deep-rooting plants they may be laid sixteen or more feet apart.

In Louisiana, where the subsoil is very compact, they are laid, we are told, forty feet apart, with good results.

Tiling, delivered on car at Kansas City, cost 1 cent per foot.

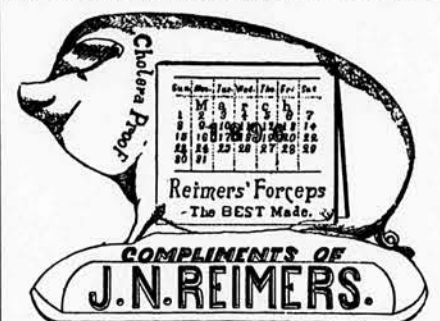
For vegetable and fruit gardens, all things considered, sub-irrigation is unquestionably the most economic way of furnishing moisture for plant growth, and with but few exceptions the average farmer will not, for some years to come, attempt to irrigate any more.

The saving by this method becomes greater as the depth of the well increases from which the water is lifted. In cases where all the water that is desired can be had from surface streams, the reservoir and ditch method will no doubt continue to be regarded the most desirable, but there are comparatively few such cases in Kansas.

M. MOHLER.

### A Cholera-Proof Pig Free.

Mr. J. N. Reimers, of Davenport, Iowa, requests us to say to our readers that any one who will send him the addresses of a dozen swine breeders and 50 cents in ex-



press order, together with the name of their hardware dealer, he will send them the above shown pig and a pair of his new steel pig forceps, in order to advertise them. Do not fail to name our paper. The goods are all right and are sure to be appreciated. Send before May 1, 1896. This proposition is limited to that time.



## Sore Mouth in Pigs.

EDITOR KANSAS FARMER:—I notice in a number of agricultural papers, complaints of losses of young pigs from sore mouth, scouring, etc., and being reminded that it is now nearing the time of year when such losses occur, I wish to give a simple remedy, which will be found very effective in checking losses from this source. Scours in young suckling pigs are caused from several things, among which is over-feeding the sow with rich slop, while she is still feverish, feeding the sow sour slop, keeping the litter in a damp place, etc. Scours thus started can usually be stopped by changing the feed, giving dry quarters and feeding a pinch of sulphur a day or two in the feed.

What I wanted particularly to call attention to was sore mouth. Whatever may be its cause, it is certainly very infectious, going through a whole drove of pigs in a few days. This affection is also often accompanied with diarrhea, and as pigs attacked with sore mouth waste away rapidly and the usual remedies for scours in this affection fail, many hogmen attribute the loss to scours, when it is, in fact, sore mouth that causes it. Usually the spot or canker sore is so completely covered with dust that it exactly resembles a little patch of dry dirt or mud, and would scarcely be noticed without close inspection. These little patches start on the nose and lips and spread rapidly. This trouble must be stopped without delay or the whole herd of pigs run down rapidly. The remedy I find so effective is the application of sweet oil compounded with about 10 per cent. of carbolic acid, a solution kept on hand on most farms for use in wire cuts. Each pig should be caught and the solution applied with a soft brush or feather. Two, or at most three, applications will cure the worst cases, but all pigs exposed by being in the same room should be treated, as this prevents the affection from starting on them. Where pens are infected with this disease, new litters put in several weeks later will often contract it, showing that the germ retains its vitality some time, and, of course, the bedding should be thoroughly cleaned out and the pens disinfected. If nothing else is convenient for this purpose, I might be pardoned for referring to Mr. Allardye, of Chicago, who has some goods which he is desirous of getting before the public.

By the way, I wish right here to disclaim any wilful and malicious intent on my part in paving the way for Mr. Allardye to spring his Anglo-American goods on the readers of the KANSAS FARMER. Am sorry the gentleman don't handle strictly American goods, especially as, according to his statement, a number of the great American States are about to follow his lead. What the gentleman says about the exponents of inoculation is really an entirely new idea. Prof. Billings has been pounded over the back a great deal, but who ever heard of him being charged with sending his patrons to the drug store and loading them down with drugs to be used in inoculation? The Doctor is an Anglo-American himself, but he will perspire when he learns of this additional charge. I think my friend Allardye is probably a pretty good fellow, and belongs to this century, perhaps, but, laying all joking aside, I believe he is over-enthusiastic. The proposition he makes to the KANSAS FARMER, if carried out and successfully, would be far from conclusive as to the infallibility of the remedy used. In case of a small number of hogs with a selected place for treatment, absolute cleanliness might be had, and disinfection be made thorough, then, with good disease-repelling powers, they might all survive. The same thing has occurred frequently where hogs having been exposed to cholera have been moved and kept moving day after day onto fresh ground. This would be the equivalent of thorough disinfection. Either one would be well worth doing, but, I repeat, thorough disinfection is next to an impossibility on a large drove of hogs, especially where the disease is under way. If Mr. Allardye will go to Kansas City, Omaha or Chicago

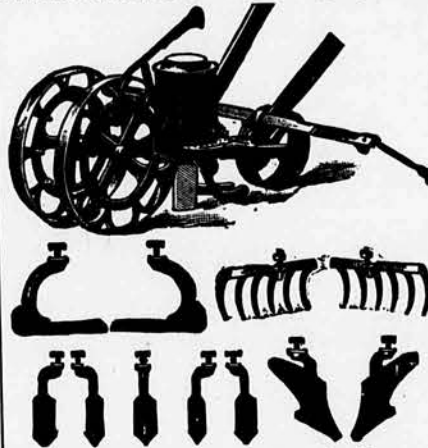
stock yards and take a bunch of fifty or 100 shoats that have never been exposed to cholera, use them as scavengers to clean up the pens, as some of the scalpers do, until they are infected thoroughly and the disease developed until one or more commence scouring, then remove them to a separate yard and keep them alive by killing the germs under their feet without giving them internal treatment for thirty or forty days, he will have made a crucial test and one that would be the equivalent of an ordinary farm case.

E. M. CRUMMER.

Belleville, Kas.

## Market Gardening With Seed Drills and Wheel Hoes.

In these days of large crops and small profits a great question with the market gardener should be the least expensive means he can employ for preparing the ground, for planting his crop and for cultivating it; and the proper planting of the crop is a very essential object in saving labor in after cultivation. A Seed Drill that has the reputation of many seasons' use, one that in operation opens the furrow, drops the seed accurately at the desired depth, covers it and lightly rolls



the earth down over it and marks the next row with such precision as to admit of cultivation with implements that are furnished as attached, is a safe article for the farmer to invest in. Prof. S. B. Green reports his experiments with such implements in his Bulletin No. 88, of Minnesota Experiment Station, speaking at length of the Matthews New Universal Combination Drill and Cultivator, which he recommends highly. This is made by the Ames Plow Co., of Boston and New York, who also offer the Seed Drills and Wheel Hoes as separate implements. The Matthews principle has been copied by nearly all makers of seed drills, which in itself is a strong recommendation for the genuine goods. As offered this year they embrace all the "up-to-date" improvements. You should send to these manufacturers for further particulars.

## Gossip About Stock.

Every breeder in Kansas should have the *Breeder's Gazette* (price \$2 a year) and the *KANSAS FARMER* (\$1 a year). Both journals are furnished by us for the price of one paper, viz., \$3.

Among the stock gossip items in our issue of March 5 we mentioned the famous boar Commonwealth, formerly owned by Geo. W. Null, of Odessa, Mo. The item should also have included Miss Lord Corwin, the 1,000 pound sow, which Dietrich & Gentry, of Richmond, Kas., have bred, as mentioned in their advertisement in same issue of *KANSAS FARMER*.

W. B. McCoy, the veteran poultryman of Valley Falls, Kas., writes a very happy letter, saying that he shipped to Moran Kas., a fine lot of his pure-bred birds, the first week in March, amounting to \$31.75, and last week received an order for more amounting to \$18. His poultry establishment is extensive and will stand many more such drafts.

Kansas hog-raisers will be interested in a new "ad." in this issue of the *FARMER*, addressed to swine breeders. This party has something which he is backing with a great deal of money, and from our personal acquaintance with Prof. Noel, we think he should have a fair chance to demonstrate the value of his remedies. One thing is certain, he is no fakir.

R. S. Cook, of Wichita, Kas., the owner of the Champion herd of Poland-Chinas, writes that his stock of prize-winners was never in better condition, and that he can furnish "any number of finely marked young sows with nice heads and ears, straight, broad backs, nice, straight, black coats, short limbs and bred to that grand breeder, Banner Boy, the best breeder as well as the best hog in the West." Mr. Cook is an enthusiast in his business of rearing fine stock and is excusable and justifiable in asserting that he has the very best.

## Feeding Tests.

Bulletin 28 of the Missouri Agricultural College Experiment Station gives the details and results of a number of feeding tests with different breeds of cattle. We shall, in this notice, only refer to the experiment to determine the amount of feed required to grow a pound of beef of each breed. Omitting details, the following table shows the pounds of food required to make one pound of increase:

Angus.....	9.3 pounds.
Grades.....	9.6 "
Scrubs.....	9.6 "
Short-horns.....	10.3 "
Herefords.....	10.4 "

The following table shows the daily increase in pounds of each breed:

Angus.....	1.79 pounds.
Grades.....	1.69 "
Herefords.....	1.67 "
Short-horns.....	1.66 "
Scrubs.....	1.51 "

This, then, is also the order of merit: In point of economy—Angus, grades, scrubs, Short-horns, Herefords. In point of time and rapid growth—Angus, grades, Herefords, Short-horns, scrubs.

The third period of feeding (120 days) was devoted to testing the pounds of feed per day required to maintain the animals without increase or decrease. The following table shows the result:

	Pounds of feed.	Proportion.	Pounds live weight.	Proportion.
Scrubs.....	9.43	1.000	877	1.000
Angus.....	10.05	1.066	922	1.055
Herefords.....	11.25	1.193	1035	1.180
Short-horns.....	11.31	1.199	1052	1.199
Grades.....	11.60	1.230	1079	1.230

These results show that heavier animals require more feed to keep them in maintenance than lighter animals, and breed has nothing to do with the question.

## A Remarkable Advertisement.

This issue of the *KANSAS FARMER* prints a remarkable advertisement from a remarkable newspaper—The *Chicago Record*. The *Record* is Chicago's leading morning newspaper in point of circulation. In fact, next to the *New York World* it claims the largest morning circulation in America—160,000 a day. It is but fifteen years old, yet it has made a record of remarkable achievement within that comparatively short period. It has a way of doing new and strange things. Its latest enterprise is the institution of a competition among the authors of the world for the best original stories of a type which it calls "mystery stories." A year ago it offered \$30,000 in cash prizes to authors for the best stories of this kind. The award of prizes has just been made, and the publication of the first prize story, which won for its author \$10,000, is announced in the *Record's* advertisement in this issue of the *KANSAS FARMER*. Not satisfied, however, with this unusual achievement the *Record* "broke the record" by announcing that in connection with the publication of its great prize story it will distribute \$10,000 in cash for the best 889 guesses as to the true explanation of the mystery of the story as disclosed in the final chapter, the publication of which will be delayed a week or ten days beyond the rest of the story to give an opportunity for readers to frame and send in their guesses to the office of the paper. But perhaps the strangest feature of this unprecedented competitive contest, both as to authors and readers, is the unique condition imposed on the guessers that "only women and girls may guess and win the prizes." We refer our readers to the advertisement in another column, which sets forth in more detail the *Record's* remarkable announcement. The concluding feature—that new readers may send 10 cents

## MEN of all AGES



Quickly, Thoroughly, Forever Cured. Four out of five who suffer nervousness, mental worry, attacks of "the blues," are but paying the penalty of early excesses. Victims, reclaim your manhood, regain your

vigor. Don't despair. Send for book with explanation and proofs. Mailed (sealed) free.

ERIE MEDICAL CO., Buffalo, N. Y.

and get The *Chicago Record* ten days on trial, is a peculiarly happy and wise conclusion to this most unusual enterprise.

It may be added that in the publication of its first series of "mystery stories," last year, the *Record* distributed cash prizes to the best guessers, but on a more modest scale than it now announces.

Its list of those who won and received prizes for best guesses in 1895 counts up 500 names and aggregates over \$5,000. The complete list of these fortunate guessers, with their addresses, has been sent us by The *Chicago Record* and it makes a truly formidable and interesting showing.

## How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75 cents per bottle. Sold by all Druggists. Testimonials free.

## Millions of Gold

In sight at Cripple Creek, Colo. Only twenty-three hours from Topeka by the Santa Fe Route, the only broad-gauge route passing right by the "Anaconda" and all the famous mines. See the nearest Santa Fe agent for all particulars, or write to Geo. T. Nicholson, G. P. A., Chicago, Ill., or W. J. Black, A. G. P. A., Topeka, Kas.

## The Ideal Highway

from Chicago to Ft. Wayne, Cleveland, Erie, Buffalo, with solid trains to New York and through cars to Boston, is the Nickel Plate Road, which operates one of the most conveniently arranged and punctual train services, with all the necessities tending to promote the safety, comfort and pleasure of the traveler. For information as to rates, routes, time-tables, etc., address J. Y. Calahan, Gen'l. Agent, 111 Adams St., Chicago, Ill. 59

1,000 Peach Trees with freight prepaid to any station east of the Mississippi river, 2 to 3 feet, for \$25. Other sizes in proportion. List of varieties or samples sent on request.

R. S. JOHNSTON, Box 17, Stockley, Del.

## Evergreens and Forest Trees

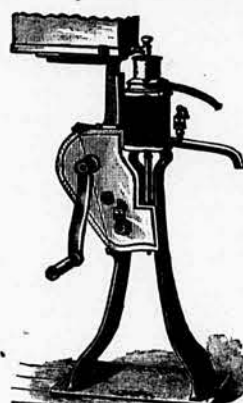
At \$1 per 1,000 and upwards. Price list free. Address C. A. COAGNE & CO., Mention *FARMER*. Sawyer, Door Co., Wis.

1000 ASH \$1. 100 APPLE, 3 to 4 ft., \$5. All leading sorts. Cherry, 3 to 4 feet, \$15. Concord Grape Vines, \$2. Complete Price List FREE. JANSSEN NURSERY, Janssen, (Jeffers Co.), Neb.

## Carnahan's Tree Wash and Insect Destroyer

Destroys the bore worm and apple root louse, protects the plum from the sting of the curculio and the fruit from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas.

## FACTS



like the following are what make our competitors writhe so in the agony of defeat:

I have no trouble in convincing others of the superior merits of the Improved United States Separator, as anyone can ascertain by enquiring in this section, as I have sold to my neighbors 10 Improved U. S. Separators, seven of these in my own town, where there have been in the last five months placed on trial, 5 DeLaval's, 4 Sharples and 1 Empire, and at the present time no one in town owns any other Separator than the Improved United States.

W. N. DUNKLEE. South Vernon, Vt., Mar. 7, 1896.

I have placed nearly 20 Improved United States Separators in 30 days, and have not had one complaint.

C. E. HULBERT. Downsville, Del. Co., N. Y., Dec. 30, 1895.

Cornell University Bulletin No. 105, page 109, gives 19 tests of the Improved United States Separator, running through February and March, the average of all being only 0.05 of 1 Per Cent. of fat, excelling all dairy Separators at the Station.

Send for Catalogue.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.



## The Home Circle.

Written for KANSAS FARMER.

### THE OLD WILLOW TREE.

BY FRANK W. ELLIOTT.

Last night as I tossed on my pillow,  
Wearied and worn with the city's mad  
strife,  
There came to me dreams of an old-fashioned  
willow  
That stands in the meadow, at home, on the  
farm.

An old-fashioned willow, wide-spreading and  
green,  
The home of the dove through the long  
summer day,  
'Neath whose branches the cattle at noon-  
time are seen,  
Finding hither a welcome from the sun's  
beaming ray.

Just over the brink of the low meadow bank,  
Quite hid 'neath the shade of the old willow  
tree,  
There bubbled a spring, where the rushes  
grew rank  
And the red-wing sang to his mate to be.

An old-fashioned willow, with the creek flow-  
ing by,  
Sparkling and dancing on its way to the  
sea;  
Branches wide-spreading, drooping down  
from the sky,  
Kiss the waves as they rush past the old  
willow tree.

'Tis now thirty years since, light-hearted and  
free,  
Companions and I gathered there by the  
spring  
Bent on desecration of the old willow tree,  
By hanging therein an old-fashioned swing.

Though winters have come and summers  
have flown  
Since I swung o'er the creek that flows to  
the sea,  
I feel as 'twere yesterday the breezes fresh  
blown,  
As I dream of the swing in the old willow  
tree.  
Denton, Kas., March 8, 1896.

### THE DAUGHTER'S PART.

She Can Do Much Toward Making Home  
Life Ideally Pleasant.

One of the sweetest things a girl can  
do is to receive friends graciously, par-  
ticularly at home. In one's own house  
a cordial manner is particularly fit-  
ting. Do not stand off in the middle  
of the room and bow coldly and formal-  
ly to the friend who has called. Walk  
over to meet her; give her your hand  
and say pleasantly that you are very  
glad to see her again. Stiff, cold and  
formal ways of greeting acquaintances  
are not proper in a girl welcoming  
guests to her father's house.

A daughter's part is to assist her  
mother on every social occasion. The  
girl pours the tea in her mother's draw-  
ing-room when friends drop in at five  
o'clock. Quite often, when no maid is  
present, she helps the guests to the  
sandwiches and the cakes which are  
served at five o'clock tea, and herself  
hands the cups and takes them from  
the guests who would like to be re-  
lieved.

Apart from and more important even  
than her manner to a guest who hap-  
pens in for an hour or a day is the man-  
ner of a daughter to her father and  
mother. The father returns to his  
home after a wearying day at business.  
He is tired in body and mind. Coming  
back, as his latchkey turns in the home  
door, he throws off care; he is joyous  
at the thought of the dear ones he will  
meet after hours of absence.

His young daughter, in a pretty  
gown, with the bloom and freshness  
only girlhood wears, should be ready  
to give him the attention he loves—the  
kiss, the cheery word—to help her  
mother and the rest in letting her father  
see how much he is loved at home.  
Men give up a great deal for their fami-  
lies—their time, their strength, the  
knowledge they have gained in life's  
experiences—they spend everything  
freely for their home's sake, and the  
home should pay its debt in much out-  
spoken love.—Harper's Round Table.

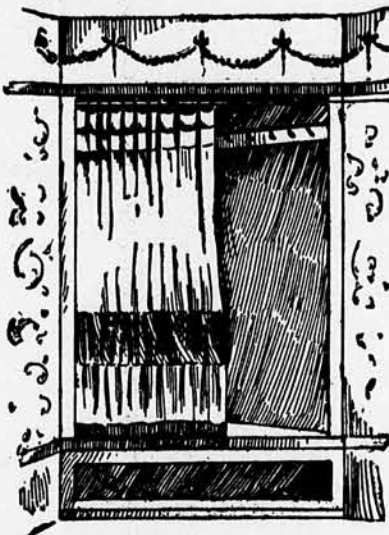
#### How to Make the Hair Wave.

Soft, natural-looking waves of hair  
are made by rolling the hair over large,  
soft papers or kid curlers, rolling from  
the top of the curl towards the end.  
The hair should be wet and left on the  
rolls over night. If that is not done  
pinch the curls with a hot iron. If you  
wish to have the hair set out around  
the face turn the teeth of your side  
combs toward the face, not away from  
it. Catch them through the end of  
your waves and you can fluff the hair  
as little or as much as you choose.

### DOMESTIC ECONOMY.

How to Add Clothes Closets to Rooms  
That Have None.

It is common to find, especially in  
houses some time built, sleeping-rooms  
with no provision made for hanging  
clothes; or, if provision has been made,  
it is often inadequate. Houses now be-  
ing built are usually well provided with  
closets, but some of us are obliged to  
live in dwellings built by a former gen-  
eration. To introduce a closet into a  
room is not always an easy matter. One  
of rectangular shape, built out into a  
room, is likely to be stiff and also in the



ADDED CLOTHES CLOSET.

way. The illustration shows how a  
corner has been utilized to give closet  
space to a room without that conven-  
ience. The work has been skillfully man-  
aged here to make the closet appear to  
be a natural part of the room and not  
an after-thought.

To this end the frieze of the wall-  
paper is carried across the front part  
of the closet, as is also the picture rail,  
thus forming a finish at the top of the  
open space. At the bottom the base-  
board has, in effect, been carried across  
the front of the closet, though in reality  
it has in it a hinged panel, which is the  
front of a triangular drawer, or box,  
that can thus be brought out, disclosing  
a place for boots, shoes, etc. The open  
space above has a curtain to conceal  
and protect from dust the clothing  
within.—Webb Donnell, in Country Gen-  
tleman.

#### Feathers as Popular Trimmings.

Feathers are everywhere. Combined  
with imitation jewels and jet they make  
most elaborate trimmings. Vandyke  
points made of black ostrich plumes  
are strikingly effective on light col-  
ored evening gowns. Small curly tips  
are used for outlining décolleté bodices.  
In the stores narrow feather trimming  
is sold by the yard for expensive cloth  
costumes. It is applied to the bodice  
to simulate a vest or to outline seams.  
Spangles are frequently combined with  
a feather fringe. Trimmings formed  
of feather pendants are another novelty.  
The pendants swing from a jeweled  
band, and outline a corsage beautifully.  
The newest satins for evening gowns  
have raised velvet flowers for the de-  
signs and are wonderfully soft and  
beautiful.

#### A Word About Birthdays.

A lonely woman, one who was bear-  
ing patiently a great sorrow, surprised  
a friend one day by saying: "Come with  
me next Tuesday, it is my birthday,  
and I want you to help me celebrate it."  
"Why should she care to celebrate her  
birthday?" thought the friend. But  
the next week she learned, for the sor-  
rowful one went loaded with gifts to an  
institution in which she took a keen  
interest. "I want some one to be glad  
that I was born," said she, and that is  
the noblest, best and happiest thought  
that can come to us on our birthdays.  
It is pleasant to be remembered and to  
receive presents, but whether surround-  
ed with love or suffering from neglect,  
which is more often thoughtlessness  
than intention, we can make some one  
happier because we were born.

TRULY ASTONISHING.—Miss Annette N.  
Moen, Fountain, Minn., says: "Ayer's  
Cherry Pectoral has had a wonderful effect  
in curing my brother's children of a severe  
and dangerous cold. Is was truly astonish-  
ing how speedily they found relief after  
taking this preparation."

Highest of all in Leavening Power.—Latest U. S. Gov't Report

# Royal Baking Powder

## ABSOLUTELY PURE

### THE USEFUL HAT-PIN.

Women Employ It as a Weapon of Of-  
fense and Defense.

"The idea of making the hat pin a  
weapon of defense first dawned upon  
me when I was in the east," says a  
bright-eyed dame, who is always  
watching for a chance to exploit Cali-  
fornia, climate, morals and all.

"Of course, you all know that a wom-  
an can't go about alone with any de-  
gree of comfort when she gets away  
from western chivalry. Well, as I  
wanted to study art in New York while  
I visited my brother in Newark, I was  
obliged to use the suburban trains al-  
most every day. I had a bookful of  
unpleasant experiences before I learned  
the magic power of that simple little  
hat-pin.

"Finally a man who was packed be-  
side me in a car became simply unen-  
durable. I squeezed myself meekly up  
against the window, giving mine enemy  
three-fourths of the seat. Gazing out  
into the darkness I became positively  
depressed and felt like offering an  
apology to somebody for presuming to  
cumber the earth.

"Mine enemy made the mistake of  
encroaching still further upon my ter-  
ritory.

"It was too much. My wrath blazed  
up and I drew my hat-pin. I said not  
a word and did nothing to attract at-  
tention. Nevertheless that man was  
glad to vacate my full share of that  
seat, and perhaps a little more. I held  
my weapon in a position which indi-  
cated to him the boundary line, and I  
assure you that he understood the in-  
sinnuation and left me in peace. Ever  
since that day I have been as inde-  
pendent and self-respecting as a Span-  
ish senorita with a dagger in her honi  
soit, etc."

This fiery little anecdote, told over  
the teacups, was followed by a perfect  
chorus of stories of the uses of the hat-  
pin. The picking of locks, the office of  
can-opener, paper-cutter, insect-de-  
stroyer, these were among the lesser  
things. A tale of the repairing of a  
broken harness at a critical juncture  
vied for second honors with the history  
of the timely mending of a torn sail.  
First place was given, without a dis-  
senting voice, to the story of the hat-pin  
as a modern and always available  
weapon of defense.—San Francisco  
Chronicle.

THROAT DISEASES commence with a  
Cough, Cold or Sore Throat. "Brown's  
Bronchial Trachea" give immediate and  
sure relief.

### CARE OF THE SKIN.

Painstaking Care Is Necessary to Remove  
Seemingly Trifling Troubles.

There are many little skin troubles  
which are both persistent and trouble-  
some, and vex one's very soul by ap-  
pearing on the face. A greasy skin  
may arise from various causes, but gen-  
erally from lack of cleanliness or de-  
bility of the skin. Only an astringent  
has any effect upon it, and a very sim-  
ple, entirely harmless one may be made  
from one pint of rosewater, half a pint  
of vinegar and a few drops of essence  
of rose. This lotion may be applied  
with a piece of soft linen or a very fine  
sponge.

Blackheads are very difficult to get  
rid of, and are caused by the clogging  
of the pores of the skin by dust or for-  
eign matter. Alcohol, ninety per cent.,  
applied by the means of a piece of  
chamois skin, will give tone to the skin  
and remove unsuspected dirt and dust,  
at the same time stimulating the small  
glands and removing, by constant use,  
the blackheads.

Tan and freckles may be removed by  
the use of the following lotion: Two  
drachms of powered sal ammoniac,  
four fluid drachms of eau de cologne,  
one quart of distilled water. Lemon  
juice and borax are both very effica-  
cious, and are home remedies.

Many skins will not stand constant  
washing, but need to be cleaned after  
a dusty ride or walk by other means  
than soap and water. Lait Virginal is  
a delicious preparation, and can be  
made as follows: One pint of rose,  
orange-flower or elder-flower water,  
half an ounce of simple tincture of  
benzoin, and ten drops of tincture of  
myrrh.

After being exposed to harsh or  
chilling winds, it is a good plan upon  
retiring to rub a quantity of fresh  
cream on the face, removing after five  
or ten minutes, to be applied again, fol-  
lowed by a generous puffing of rice  
powder.—Housekeeper.



### FREE TO SUFFERING WOMEN.

I suffered for years with uterine troubles,  
painful periods, leucorrhoea, displacements,  
and other irregularities, and finally found  
a simple, safe home treatment, that cured  
me without the aid of medical attendance.  
This is no quack doctor's medicine; but  
nature's own remedy for women. It costs  
nothing to convince yourself of its merits,  
for I send it free with full instructions  
to every suffering woman. Address,  
MRS. L. HUDNUT, South Bend, Ind.

### Wanted, an Idea.

Who can think of some sim-  
ple thing to patent? Protect your ideas; they may  
bring you wealth. Write John Wedderburn & Co.  
Patent Attorneys, Washington, D. C., for their  
\$1,800 prize offer and list of 200 inventions wanted.



## FEMALE TROUBLES

Many of the disorders pecu-  
liar to women are caused  
by diseased conditions of the  
Liver, Kidneys and Bowels.

Restore these organs to a healthy state by using

## Dr. J. H. McLEAN'S LIVER AND KIDNEY BALM

It will assist the female organs to perform their regu-  
lar functions, and the sufferer will be strengthened  
and cured. Ladies from all parts of the country  
testify to its marvelous success in curing them

FOR SALE EVERYWHERE. PRICE, \$1.00 PER BOTTLE

THE DR. J. H. McLEAN MEDICINE CO., ST. LOUIS, MO.



## The Young Folks.

### WHEN MOTHER DARNED OUR STOCKINGS.

"Oh, what a hole," the mother says, While in her great chair rocking, "How can I ever mend this 'ere? Oh, isn't it too shocking?" But still she sits and still she rocks, While teardrops fall and glisten, And low-breathed words, "Oh, Rob, how could you"—for other words we listen.

"I s'pose he couldn't help it, dear, He's such a noble fellow," And then and there tears fall adown, From memories rich and mellow. To Mollie, who comes flying in, "You've hardly to your name A garment that is 'worth the while,' But, dear, you're not to blame."

Dear mother, with your stocking bag, With "pairs" almost unnumbered, With weavers well encumbered, Dear mother, as she sits and fits, While in her great chair rocking, Unspoken words are breathed in tears, On the "holey," well-worn stocking.

Dear mother, in her quiet home, Reading, sewing, knitting, Her thoughtful hours of love and life, With busy moments fitting, As moments pass, and years increase, Still in her great chair rocking, The warp of love with soul-throb woof, Is woven in each stocking.

How tenderly she scans each piece, And asks "Can it be mended?" Then, with a prayer, as mothers pray, Needles and prayers are blended; Oh, little did we think or heed, The calls that without knockings Came to our thoughtless, youthful souls, When mother darned our stockings. —Good Housekeeping.

### PATROLING THE BEACH.

#### A Duty Which the Life Savers Are Called Upon to Perform.

The patrol from sunset to sunrise is one of the most important duties in the service, and the most careful rules are laid down in regard to its performance. When stations are near together, as on dangerous coasts, the two patrolmen from Station "B," starting along the beach in opposite directions, walk until they meet patrolmen from "C" and "D," with whom they exchange checks, and return to their own station. At the end of a week the checks are returned to their proper stations, and this is kept up during the season, week after week.

The keepers of lonely stations provide the surfmen with time-detectors. A time-detector is similar to a clock with a hinged cover, fastened by a



PATROLMEN EXCHANGING CHECKS.

lock—the key to which is retained by the keeper; beneath the cover a revolving plate supporting a paper dial is placed and a die so arranged that when a patrol-key is inserted and turned in the clock a mark is made upon the paper dial recording the hour of striding. At the end of the "beat" is a post to which a key is affixed; when the patrolman reaches this he winds the clock—the dial-plate is marked; failure to be at the clock, without good and sufficient reason, is punished by dismissal.

At midnight, at such a station, the keeper gives to the two patrolmen a clock containing fresh dial-plates, and these two men, going in opposite directions, patrol the beach till four in the morning. When these return to the station, two other men take their places till sunrise. The next night, at sunset, two new men keep guard until eight in the evening, and at that hour their places are taken by two others until midnight. Then, returning to the station, the keeper is called, new dial-plates are inserted in the clocks,

they are looked and given to two new patrolmen, who walk till four in the morning. So from sunset till sunrise our American coasts are patrolled by solitary watchmen, on the lookout for vessels in danger.

No weather is severe enough to daunt these brave men, and they trudge all night in rain, hail, wind or snow, while we are comfortably sleeping.

The patrol duty at a station is so arranged that those men who have the long patrol one month are put on the short patrol the next; the night-watches are divided into three watches of four hours each.—"The Story of a Life-Saving Station," by Teresa A. Brown, in St. Nicholas.

### HIS MOTHER'S LOOK.

#### How a Wild Boy Repented and Became a Most Worthy Man.

The following touching incident was once related by a Jesuit father:

"I have known a student whose dissolute and wicked life had caused him to be cast into chains and locked up in the fortress of Ehrenbreitstein. His father was long since dead. His mother, therefore, had to bear alone the grief caused by the degenerated child.

"It is difficult to express how keenly it gnawed on the mother's heart; in the soul of the criminal, however, it was, and remained as dark as in the prison where he was chained, not the least sign of repentance. No wonder that such sorrow, which by day and by night afflicted the poor mother of the impenitent son laid her on the bed of death.

"Seeing the hour of dissolution approach, she sent a petition to the commander of the fortress to bring her child once more before her dying bed. He granted her request. The next day the son appeared, escorted by armed soldiers, at the bed of his mother. But she, pale and consumed with grief, spoke no words—no, not a word, but long and piercing she looked at him, and, having penetrated him long and deeply, she turned her face and signaled to lead him away.

"As he came, so he went—cold and sulky, like as if there was in him an incarnate obstinacy. But in the prison it came upon him—the look of his haggard, dying mother, thin and wasted, and with this look everything—repentance, punishment, admonition, entreaty, mother's anxiety, mother's love. Had she spoken to him the whole month long, unceasingly, she could not have spoken so earnestly and thrillingly to his heart as she did with her dumb look from her deathbed.

"What a storm of emotion agitated the soul of the wicked youth. As never before he was moved, and broke forth in such vehement ejaculations that one would think that his heart must break. We need not be astonished that, all at once, he struck his brow, burst into tears and loudly exclaimed: 'O God! to what have I come!' He stopped, not with recognition—no, he converted sincerely; he even entered a monastery and became a Jesuit missionary, and now we see him—the young criminal—here standing before you in the pulpit."

It was Father Hasslacher himself, the celebrated German Jesuit, who died in 1876.—Boston Herald.

#### What Men Need Most.

"What is man's greatest need?" asked the principal, of several hundred boys and girls, ranging in age from seven to twelve years.

Up went many little hands in all parts of the room, but to a little girl in one of the front rows of seats, who seemed particularly eager to answer, the principal said:

"Well, little girl, what do you think is man's greatest need?"

"Soap and water," was the proud and confident reply.—Golden Days.

#### Appreciation.

Papa—Here's a nice little savings bank for you, Willie.

Willie—Won't you give me a quarter, papa?

Papa—A quarter, what for?

Willie—To put in my little savings bank.—Truth.

The sooner you begin to fight the fire, the more easily it may be extinguished. The sooner you begin taking Ayer's Sarsaparilla for your blood disease, the easier will be the cure. In both cases delay is dangerous, if not fatal. Be sure you get Ayer's and no other.

### DRAWING THE LINE.

#### How Aunt Jane Did Not Meddle with Other Folks' Affairs.

The most inquisitive persons often affect indifference regarding the affairs of others, and flatter themselves that they are keeping their curiosity well in hand at the very time that they are giving full rein to it. Aunt Jane Jasper belonged to this class. It was her boast that she had "all she could do to tend to her own business, without meddling with the affairs of other folks," and that she "never bothered her head about things that did not concern her."

She was one day telling about a conversation she had "struck up" with a woman sitting beside her on a street car.

"She was a real nice-appearing woman," said Aunt Jane, "and I thought we might as well be talkin' together as settin' there mum and glum; so I spoke to her, and she answered back real pleasant, and we talked for three miles.

"I asked her name and where she lived, and if she was married and what her husband did, and how many children she had; and I found out about a family trouble that was worrying her a good deal.

"She was trying to break her mother's will, and she wasn't on speaking terms with her own brothers and sisters, and her husband and her didn't get along very well together.

"She had on a beautiful diamond ring that she told me cost \$200, and she'd an elegant black silk that cost three dollars a yard, for I asked her the price of it."

"Did you ask her where she had it made?" asked Aunt Jane's listener, whereupon the old lady bridled visibly, and said, sharply:

"Why, of course I didn't! Did you s'pose I'd be that inquisitive?"—Youth's Companion.

#### Tommy's Winter Wish.

"Whenever we have a big snowstorm," Says Tommy, "It always makes Me wish it was powdered sugar, and A lot of coconut cakes." —Truth.

### CATARRH OF STOMACH.

#### What the Doctors Used to Call Dyspepsia Dr. Hartman Calls Catarrh.

There is a disease of the stomach known to physicians as gastritis. Dr. Hartman has shown this disease to be simply catarrh of the stomach, producing all the symptoms of dyspepsia and indigestion. He cures thousands of such cases, which are supposed to be incurable, because he has discovered the secret of their trouble—chronic catarrh. A letter recently received from Mrs. Lulu Giddle, Storm Lake, Iowa, is to the point:

"I was taken with catarrh of the stomach two years ago. I was treated by three of the best doctors in the city. I grew worse under their treatment. I was so low I could not retain my food on my stomach at all. I was advised by a friend to try Peru-na, which I did at once, and now feel better than I have for a year. I can do my work without that tired feeling. I cannot praise your medicine enough for saving my life. I would be glad to have my letter published if it would help any one who is afflicted as I was. I will try and answer all letters that are sent to me, for I know just what Peru-na did for me. I would be glad to recommend it to any one who has catarrh."

A sixty-four-page book devoted exclusively to catarrh and catarrhal diseases, and written by Dr. Hartman, will be sent free to any address for a short time by The Peru-na Drug Manufacturing Company, of Columbus, Ohio.

It is the medicine above all others for catarrh, and is worth its weight in gold. I can use Ely's Cream Balm with safety and it does all that is claimed for it.—B. W. Sperry, Hartford, Conn.



### CATARRH

ELY'S CREAM BALM opens and cleanses the Nasal Passages, Allays Pain and Inflammation, Heals the Sores, Protects the Membrane from colds, Restores the Senses of Taste and Smell. The Balm is quickly absorbed and gives relief at once.

A particle is applied into each nostril and is agreeable. Price 50 cents at Druggists or by mail. ELY BROTHERS, 66 Warren Street, New York.

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### KEYSTONE WOVEN WIRE FENCE



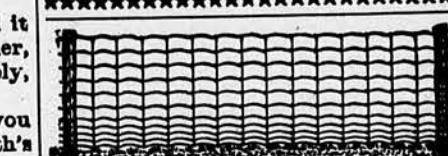
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**TURKEYS BY THE ACRE** The February Hustler gives a view of a five acre Turkey Park, Fenced with Page, from which over two thousand fine birds were shipped last fall. Send for free copy. **PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

Washburn College, Topeka, Kansas. For catalogue, address the Registrar, Washburn Academy. For information, address the Principal.

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# KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Thursday by the

KANSAS FARMER COMPANY.

OFFICE:

No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

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

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Special reading notices, 25 cents per line.

Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

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

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

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

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

Address all orders—

KANSAS FARMER CO., Topeka, Kas.

The Kansas Agricultural college will this year graduate about seventy-five students.

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

Mr. J. F. Shump, of Herington Kas., writes the FARMER at length regarding correspondence published about "Corn Stalk Disease," and blames the losses to poor care and leaving the cattle too long in the stalks at the beginning and not watering them at the right time. He had 500 head of cattle in stalk fields this season without loss, and does not expect any. Mr. Shump ridicules the idea of any poison in the stalks which affects cattle in any manner.

There has been left at the FARMER office specimens of peanuts and cotton, grown at Topeka, by one of our enterprising school children, Master George A. Kline, of Potwin. The peanut crop was a grand success, producing a large yield. The cotton did fairly well and produced many bolls, some nearly perfect. It makes a beautiful growing plant. No one who owns any land should be without a field of peanuts for the family use, and if any to spare, there is a ready market at fair prices.

Those of our friends who are about to renew their subscriptions will do well to note the following clubbing list—KANSAS FARMER one year and any of the following at prices named: Semi-Weekly Inter Ocean, \$1.35; New York Tribune, \$1.25; Topeka Capital, \$1.50; Topeka State Journal, \$1.50; Topeka Advocate, \$1.50; Kansas City Journal, \$1.30; Kansas City Star, \$1.25. Our columns have been so crowded for the last few weeks that it has not been possible to run advertisements of our premium offers. But by referring back a few weeks you will find them. Our subscription list is doing remarkably well, but we can always stand a little more of this kind of prosperity.

B. S. Schermerhorn, of Portland, Oregon, recently carried over to China a sample lot of fine butter with a view to opening a market, says a Western paper. Although the steamers have no refrigerator service, he got the samples over in fair condition, despite the hot weather encountered at Honolulu, and he obtained better prices than he could have realized at home. He says that to better develop the trade the butter should be put up in tin instead of wooden tubs and such a condition is imperative, because Australia is doing it, the butter keeping and selling at higher prices. Australia is pushing the trade all over the Orient, but the United States need have no fear of her, as her season is from September to January, and when we have a surplus to sell in the summer the grass is very short in that country. If the business is developed the steamers will provide refrigerator service for the Pacific coast.

## CAPTURE AND CORRAL THE MOISTURE.

There are reported, from the several sections of Kansas, varying conditions of the soil with respect to moisture. In almost all portions of the State the surface soil is in excellent condition and the wheat makes a fine appearance. In much of the State the subsoil holds considerable reserves of moisture, but there is nowhere excess, while under vast areas the subsoil is dry. This condition does not necessarily portend a bad season, but leaves the future of crops dependent more upon the precipitation of the future and its careful conservation by proper treatment of the soil than would be the case were the subsoil more generously filled with that prime necessity for the production of crops, water.

In some portions of the State there is seldom much loss of water from run-off from the surface of cultivated fields; but in most portions, if rains come in torrents, though but of short duration, much water runs away to the streams even though the subsoil be dry. Indeed, an excessively dry soil or subsoil takes in moisture more slowly than a fairly moist one, so that the fact that a heavy shower produces a run-off is quite as likely to indicate lack as excess of moisture below. The first problem, then, in nearly all of Kansas is how to get the spring rains down into the soil. This is a problem which may have different solutions for different localities. Certain it is that a hard, unworked soil is less readily entered than that of a well-cultivated field. Subsoiled land allows ready entrance of water to greater depth than does land which is only surface-cultivated and is hard below. In some portions of the State it is claimed that the depth of ordinary plowing is sufficient to admit the water and that subsoiling adds no advantage. In some portions it is thought that spring subsoiling produces no advantage for the first season, while for subsequent years its advantages are very marked. The problem of getting the moisture into the soil is then one which varies considerably and requires intelligent and careful study by each farmer according to the conditions of his locality and may vary with difference in fields on the same farm. As a rule, hard ground receives but a small amount of water and that reluctantly, but when it comes to the reverse process of giving up its moisture it parts with it readily and rapidly.

The amount of water actually used by the plants in the production of a good crop of any of the usual farm products, except alfalfa, is not equal to the rainfall of any recording meteorological station in Kansas for even the driest year of the record, being about equal to seven acre inches. The excess of this amount either runs away before entering the soil, seeps out and runs away after entering, or is stolen by evaporation from the surface. In most parts of Kansas the thief, evaporation, gets more than his share. The greatest problem, then, is that of locking the door on our moisture supplies. Even where irrigation is practiced this problem is found to be, regardless of the abundance of the available supply of water, one of prime importance. Indeed, the irrigators whose moisture supplies represent cash cost as well as useful value, were the first to systematically use scientific methods of reducing the loss by evaporation, as they were the first to discover the great advantage of liberal stores of reserve moisture in the subsoil. The most noticeable practice of well-informed and successful irrigators is that of cultivating the soil as soon after each irrigation as the soil comes into suitable condition to be worked. The efficacy of this method is well illustrated by the experience of Col. C. D. Perry, of Englewood, Kas., who finds, at his location, where the 100th meridian crosses the south line of the State, an irrigation in the fall or winter, followed by plowing and harrowing, stores and retains sufficient moisture to assure a crop the next season. Under this system it is necessary with all crops where cultivation is possible to follow each rain with cultivation, whether or not there are weeds. The surface thus be-

comes a mulch and keeps down the moisture, which, were the surface allowed to remain compact, would be conveyed to the surface and evaporated by the sun and wind. (It should not be understood that Col. Perry neglects spring and summer irrigation, but his fall and winter irrigation are referred to here for illustration.) On this point F. H. King, professor of agricultural physics in the University of Wisconsin, in his excellent book, "The Soil," says:

"Plowing land in the fall has a very appreciable influence on the per cent. of water the surface three or four feet of such soil may contain the following spring, and the writer has observed a mean difference of 2.31 per cent. more water in the upper three feet of immediately adjacent lands plowed late in the fall, as compared with that not plowed, the surface of neither having been disturbed until May 14. The larger quantity of water in the fall-plowed ground, in this case amounting to not less than six pounds to the square foot, was due partly to two causes; namely, the loose, open character of the overturned soil, causing it to act as a mulch during the fall, and again in the spring, after the snows had disappeared; and the more uneven surface, which tended to permit more of the melting snow and early spring rains to percolate into the soil.

"Late fall plowing, leaving the surface uneven and the furrows in such a direction as to diminish washing, works in a decided manner, on rolling land, to hold the winter snows and rains where they fall, giving to such fields a more even distribution of soil water in the spring. And when it is observed that heavy lands, after a dry season, seldom become fully saturated with water during the winter and spring, the importance of fall plowing in such cases can be appreciated.

"From the standpoint of large crops, which result from the best use of the soil moisture, there is no one thing more important for a farmer to strive for than the earliest possible stirring of the soil in the spring, after it has sufficiently dried so as not to suffer in texture from puddling. When the soil is wet, when its texture is close from the packing which has resulted from the winter snows and early spring rains, the loss of water is very rapid, as has been pointed out; it may be more than twenty tons daily per acre, and this loss may extend to depths exceeding four feet."

## WHEAT AND TIMES IN INDIA AND IN ARGENTINA.

The most generally trusted review, particularly of grain markets and production, is *Beerbohm's London List*. Its information is gathered from the most reliable sources in every country, and though often appearing under dates which would make a telegraph editor laugh at their "antiquity," its showings are eagerly sought by interested persons who demand first of all reliability. In a recent number *Beerbohm's* quoted from the *Bombay Price Current* as to the position of grain in India an article in which the following serious expressions occurred: "Wheat is practically a dead letter, and only interesting to the local flour mills and bakers." As to the weather, the article quoted says: "The prospects can scarcely be said to have improved as regards the districts from which we draw our supplies of grain, although reports have been received of some small fractions of an inch of rain in the districts where it was so much required. That the position is not worse is all that can be said, and as the rain has ceased, the probability of serious scarcity must be faced in large areas in the north of India."

A correspondent of *Beerbohm's* at Buenos Ayres, Argentina, says that the heavy rains that fell at Christmas in Santa Fe appear to have destroyed a large amount of wheat, etc.

*Beerbohm's* quotes the *Review of the River Plate*, in its information from Rosario as to the condition of business: "The state of affairs in camp, owing to the disasters that have overtaken the wheat and linseed crops, is something too pitiable. Colonists by the hundred are being sold up, and numbers are clearing out, almaceneros are generally

in the last stage of hard-upness, and scarce is a mild word with which to describe the dearth of paper money."

Those who think troubles of this kind are purely local and are peculiar to Kansas or to the United States, will do well to cast an eye occasionally over the other parts of the productive world.

## KANSAS CHINCH BUG REPORT.

Chancellor Snow, of the State University, has issued a very comprehensive report of his work during 1895, in the war on the chinch bug. It is a pamphlet of fifty-five pages, and enters into the details of the work in such a way as to be readily understood by persons who have not the advantage of a college education.

It is well known that Prof. Snow has devoted much labor to the subject of diseases of these pests and possible methods of spreading these diseases, in the hope of ultimately exterminating the ill-smelling enemy. The varying degrees of success which have attended the experiments have led to the general conclusion that under some conditions the infection is successful, under others only partially successful, and under still others without considerable effect upon either the numbers, the health or the appetite of the bugs. It is confessed in the report that, while it is known that dry, hot weather is favorable to the bugs and damp weather is favorable to the spread and fatality of the disease, yet it is not certain that all of the conditions favorable to the most efficient action of the disease are yet known.

The report advocates and describes the use of the "barrier method" of protecting fields as one reasonably sure to succeed if the infection fails to destroy the bugs. On this method we condense from the report, as follows:

"The bugs go on foot in these migrations, and the winged ones are seldom known to fly. At such times it is possible to trap and destroy the bugs almost utterly. The plan found most effective was that of turning a double furrow with a plow and thus forming a ridge, and putting the tar, etc., on top of this ridge. On the side of the ridge next to the small grain, post-holes were dug, broadening toward the bottom, about 100 feet apart. The bugs were retarded in their march by the ridge, and being repelled by the tar, etc., would swarm along the ridge, and in so doing would crowd each other into the post-holes. In some cases, when the holes were nearly filled with bugs, dirt was thrown in and packed down; in others a little petroleum was poured. Both methods were effective in killing the bugs. It was found that where the holes were deep the bugs died without any special effort to destroy them.

"After the ridges are thrown by the plow it is best to smooth and pack down the top and sides somewhat, in order to keep the tar, etc., from sinking in deeply and to protect the ridge from too great washing away by rains. This process was necessarily slow and tedious by hand, and to obviate this a drag with a concave bottom of the form of the ridge was made, and when weighted with rocks or dirt and drawn by horses over the ridge it did very effective service, saving a vast amount of time and doing the work better than could be done by hand. The bottom of the drag was found to scour much better when covered with sheet zinc.

"Coal tar as it comes from the gas-works, crude petroleum as taken from the oil well and kerosene mixed with salt were used on the ridges. These substances are offensive to the bugs, and they seldom attempt to cross or even come close enough to touch them, but on approaching these offensive substances the bugs turn and run along the ridge in the evident hope of finding a gap through which they may pass.

"Coal tar is the best of the substances named in that it stands on the surface better and is not so readily washed away by rains. The coal tar can be easily applied by means of an old teakettle, sprinkler or coffee-pot. The stream poured upon the ridge need not be more than half an inch in diameter, and when of this size the operator should walk rather rapidly in applying it.

"Equally good results were obtained



with kerosene oil mixed with salt. If the ridge is not formed and the offensive substances are simply spread upon the ground the bugs, when in great numbers, crowd each other across the barrier, those in front being unwillingly carried forward by those behind; or, if the post-holes are omitted, the bugs are not destroyed, and manage finally to straggle into the corn field after the barrier has become damaged by the weather."

A plan of defense against chinch bugs is proposed which involves careful search early in the spring for chinch bugs and also for evidences of the disease. If the bugs are found and the disease is not present it should be at once introduced. If bugs are numerous in the wheat they should be kept out of the corn and destroyed by the barrier method. It seems quite possible with information now at hand to protect the fields against great damage from chinch bugs.

This report, we believe, is for free distribution to Kansas farmers, and may be had by writing to the station, at Lawrence, or by calling at the office of the County Commissioners of any county.

### "THE PUBLIC" AND "THE PREPONDERANT MASSES"

In writing of and for "the financial interests that center in Wall street," Henry Clews is apparently becoming a "calamity howler." In his circular of March 14 he says:

"In most trades here, there is considerable complaint of dullness and more or less show of a pessimistic spirit. Merchants' sales are not proportioned to their stocks and buyers see that something is the matter among the distributors and are therefore disposed to pursue a hand to mouth policy of buying."

With instincts as true as the needle to the pole, he points to Congress as the author of New York's financial woes:

"All we have previously said as to the depressing effects of political agitation and Congressional folly upon the financial markets may be again repeated. Congress has given itself to the creation of sensations and deceptions for effect upon the coming party conventions and the elections to follow. \* \* \* When the legislative chambers can be prostituted to such dangerous methods of playing politics, there is no certainty of what may not happen. \* \* \* Nothing short of the adjournment of Congress will abate the public anxiety. This is one of the factors that is preventing the revival of confidence in trade circles and in the financial interests that center in Wall street."

"Public anxiety" is, of course, anxiety in Wall street. The "preponderant masses," however, are reputed to be having a frightful influence upon Congressional action. There appears to be a new classification of people. The "public" is Wall street, and "the financial interests that center in Wall street," while the "preponderant masses" comprise all the rest of us. Well, if this is the understanding, there appears to be very little reason for objection from our side.

### The Farmers' Institute at Berryton.

To say that the two days' session of the farmers' institute at Berryton was a success, would be putting it very mildly. In point of attendance and the high class of papers offered, it was one of the most successful meetings of the kind ever held in Shawnee county. This is made more significant from the fact of its being the first institute ever called in that vicinity. To analyze each paper separately, and give the discussions that followed, is not possible in this article, but we will merely say that the subjects embraced a wide field of ideas of great interest to farmers at this time. The road question created much interest, as did the addresses on "Subsoiling," "Rotation of Crops," "Poultry for Profit," "Orchard Culture," "Fruit Every Day in the Year," "Tame Grasses" and "The Prevention of Chinch Bugs." Two excellent papers, not foreign to farm topics, "Our Farmers' Boys," and "How May Our Farmers' Girls Obtain a Competency?" were presented by Mr. E. M. Cockrell and Mrs. Bina Otis, respectively.

The noon hour brought the people together in groups to discuss the merits of a basket lunch prepared by the good housewives.

Mr. Geo. W. Berry was elected Pres-

ident for the current year and Miss Popenoe, Secretary.

The organization of a Grange at Berryton, recently, was the factor in prompting the institute. We predict for it an abundance of success. The KANSAS FARMER hopes to publish a number of the papers in the near future.

### The Average Annual Rainfall in Kansas.

EDITOR KANSAS FARMER:—Under the direction of Mr. T. B. Jennings of the United States weather bureau, much climatic data of our State is being accumulated from year to year. A vast store of useful information relative to temperature, wind and rainfall, etc., of Kansas has already been collected, but owing to the lamentable fact that the Legislature has not seen fit to make a small annual appropriation for printing, this valuable information is of necessity almost unknown to by far the greater part of our population.

Iowa, Nebraska, Oklahoma Territory and even New Mexico have thriving weather services backed by State and Territorial appropriations for printing the climatic data collected by the United States weather bureau and voluntary observers. These States and Territories thus derive much practical benefit from their weather service and it is to be hoped that our Legislature next winter will recognize the real practical worth that may be obtained from the Kansas weather service by providing for the printing of the climatic data which is collected under the direction and at the expense of the general government.

The accompanying cut shows some

distribution of rainfall records and other climatic data of the State would lead to the discovery of profitable facts regarding the relation of the growing period of certain crops to the annual rainfall distribution in different localities and thus save much capital which is frequently wasted in almost useless agricultural experiments.

W. S. BELDEN,

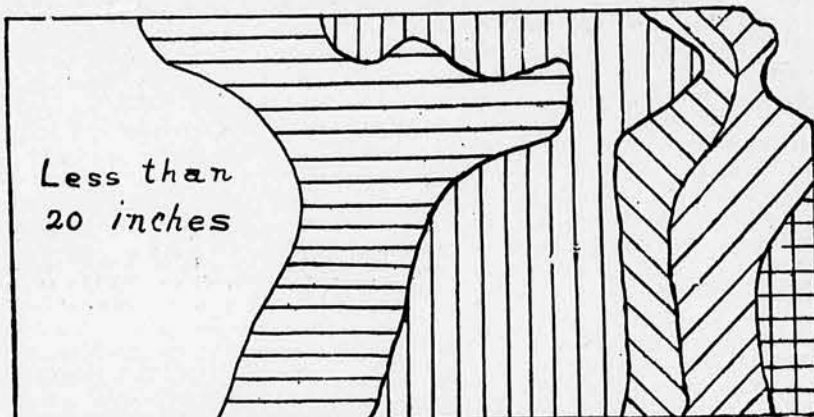
Ex-Assistant Under Supt. Jennings.

### To Start a Blue Grass Lawn

EDITOR KANSAS FARMER:—In reply to Wm. Kurtenbach's inquiry in KANSAS FARMER, March 5, asking how to start a Kentucky blue grass lawn, I will give my experience while a resident of Butler county, Kansas, and I made a complete success of my lawn there.

I broke the prairie sod and cultivated it for three years (raising a crop of potatoes on the ground each year), in order to subdue the wild nature and to entirely kill out the prairie grass, for if it is not all killed out it will come back again. About the last of March, I plowed the ground, harrowed it, and dragged with a plank until it was very smooth and level. Then sowed the seed, at the rate of three bushels to the acre, and dragged it over very lightly with the plank. Kept the weeds mowed down the first summer, leaving them lie where they were out. The next spring, early in March, I sowed again without disturbing the ground, when it was beginning to rain—so that the seed were carried down to the soil, and not blown away.

I do not believe it is possible to get a good sod the first season, even here in west Missouri, where it is compara-



Scale of shades in inches  
20 to 25 25 to 30 30 to 35 35 to 40 over 40

THE ANNUAL RAINFALL IN KANSAS.

interesting facts regarding the average annual rainfall of Kansas, as shown by the records of eighty-five stations located in all parts of the State. At forty-one of these stations a record has been kept for a period of time varying from five to forty-three years, thus enabling us to determine the average annual rainfall of our State with considerable accuracy.

In the eastern tier of counties the average annual rainfall is about forty inches and it decreases gradually and quite uniformly to the western tier, where the average is about fifteen inches. Cherokee county has the greatest average, amounting to 42.20 inches, while Wallace county has the least, which is fourteen inches.

With respect to rainfall, the State is generally divided into three about equal parts, the eastern, middle and western divisions. The average annual rainfall of the eastern division is 33.55 inches, middle 24.44, and western 18.30.

Although the annual rainfall of the western division is lightest, it receives during the growing season, from April 1 to October 1, 77 per cent. of its total rainfall, while the middle receives 73 per cent. and the eastern division 71 per cent. of their total rainfall for the same time, thus showing that the average rainfall for the growing season increases as the average annual rainfall decreases.

The average annual rainfall for a few stations are as follows:

Independence, 36.83 inches.  
Lawrence, 36.15 inches.  
Topeka, 34.13 inches.  
McPherson, 29.02 inches.  
Concordia, 25.76 inches.  
Hays City, 20.88 inches.  
Dodge City, 19.95.

The prompt publication and proper

tively easy to grow blue grass. In the first summer, towards fall, it will look like there is very little blue grass, only in spots, but those spots will spread very rapidly the second season, and so, by sowing the second spring, it will soon be seeded all over, and will well repay the trouble and care. Mine was a delight all the time in a country where a really good blue grass lawn was rare. Any reliable seed dealer will furnish the seed at about \$1.75 per bushel of fourteen pounds.

W. H. LITSON, JR.,

Nevada, Mo.

Nurseryman.

"Two years ago last October I was taken with muscular rheumatism, and was unable to move or to be moved for forty-eight hours. I began taking Hood's Sarsaparilla together with Hood's Pills, and in a week's time I was as well as ever." L. M. Venard, Rest, Kas.

Hood's Pills cure sick headache, biliousness.

### The Limited Fast Express Train

leaving Chicago daily at 1:30 p. m. via the Nickel Plate Road, arriving at New York city the following evening at 6:30 and Boston at 8:45, is unrivalled, peerless and incomparable for speed, comfort and safety, with rates that are as low as the lowest. Trains consisting of baggage cars, buffet sleeping and elegant day coaches, lighted by gas, heated by steam and with all modern improvements, are run through without change from Chicago to New York with through cars to Boston. J. Y. Calahan, Gen'l. Agent, Chicago, Ill.

Send for program for inaugural meeting of the El Paso County Horse and Bicycle Association, May 30, June 1, 2 and 3, 1896, to J. W. Miller, Secretary, Room 2, Bank Building, Colorado Springs, Colo.

Milk is about 85 per cent. water.

### ROLLER BEARINGS THE FOE TO FRICTION.

Apt Illustration of a Cleveland Preacher—Likens Christianity To Ball Bearings.

Rev. W. W. West, of the Oakland Baptist church, Cleveland, Ohio, two years ago preached a sermon on "Ball Bearing Christianity." He described how ball bearings in machines brought about the condition in which friction was reduced to the minimum. "All the clank and noise," he said, "all the jar and wear have been done away with by the ball bearing idea. The life of the machine has become pleasanter, quieter, more prolonged. Similarly Christianity enters a life, and men no longer strive and contend; the friction of life is done away with, giving place to a smoothness that makes peace for the soul."

So great is the saving accomplished by roller bearings and ball bearings that they are being introduced into all kinds of machines from rolling mills to roller skates.

The whole secret of the value of the "rolling bearings"—whether rollers or balls—lies in the fact that they change the ordinary sliding contact of the axle or shaft, to rolling contact. For instance, it would be impossible to skate on a steel pavement with ordinary steel skates, while steel roller skates would roll over the surface without friction. Roller bearings put roller skates under the axle.

Our farmer friends are to be congratulated that through the enterprise of the Deering Harvester Co., of Chicago, they are given the benefit of these wonderful savers of draft and power and friction and wear and expense. The Deering binders and mowers have roller or ball bearings wherever there is the greatest friction to be overcome. These bearings make the Deering binders universal two-horse machines even where as many as four horses are needed on machines without such bearings. As applied to mowers they reduce friction to such an extent that the farmer can use a Deering mower with a cutter bar one-third longer than he had been accustomed to use, accomplishing fully one-third more work with the same team each day.

The Deering Harvester Co. has agreed to send free of charge to all of our readers asking it and mentioning this paper a copy of an interesting pamphlet called "Roller and Ball Bearings on the Farm."

### A Splendid Business Offer.

The FARMER takes pleasure in calling the attention of its readers to Perine's subsoil plows. That subsoiling is no longer an experiment has been satisfactorily proven and demonstrated. Mr. A. B. Perine, of this city, is the inventor, manufacturer and patentee of the original Perine's subsoil plow. No higher compliment could be attributed to the popularity of the plow, than the fact that other plow companies are trying to profit from its success, by attempting to imitate Mr. Perine's invention. During the months of February, March and April, 1896, Mr. Perine was not nearly able to supply the demand for his plows, and present indications are that he will experience another rush this season. He has enlarged his plant and secured additional machinery. But as a special inducement for early orders he will include a year's subscription to either the KANSAS FARMER or Topeka Advocate to those who will purchase a plow before February 15, 1896.

The prices of the genuine Perine subsoil plows are as follows:

No. 1 plow, for four horses.....\$12.00  
Extra points..... 2.25  
No. 2 plow, for three horses..... 11.00  
Extra points..... 2.00

Address all communications and make remittances payable to

PERINE'S PLOW WORKS,  
Topeka, Kas.

The Star Woven Wire Fence Machine, manufactured by Kitzelman Bros., of Ridgeville, Ind., has been steadily advancing in popularity among the thousands of farmers and others who have tested it. The manufacturers have recently been compelled to enlarge their plant at Ridgeville in order to produce the machines and the completed fence fast enough to meet the demands for the same. Their fine catalogue has reached this office and its appearance certainly warrants a flattering notice. Any one interested in building woven wire fence should write for their new catalogue.



## Horticulture.

### IMPORTANT POTATO HINTS.

EDITOR KANSAS FARMER:—A card from Jesse Hesseltine, Berwick, Kas., says: "Would you kindly inform us through the FARMER how to apply sulphur to seed potatoes to prevent scab?"

Bulletin No. 112 of the New Jersey Agricultural college says, in summary: "Manure increases the scab and soil rot. Lime increases the scab, but diminishes the soil rot and tends to make sweet potatoes sound. Kainit diminishes the scab but increases the soil rot. Corrosive sublimate diminishes greatly the scab and soil rot. Sulphur is, all things considered, the best remedy for the scab and soil rot that the experiments suggest. For the Irish potato it is suggested that the flowers of sulphur be used with the freshly-cut seed in the hopper of the planting machine."

This bulletin is intensely interesting, and the results here noted are worth ten years subscription to the FARMER to any large potato-grower in Kansas.

A field was selected that was so thoroughly infested with scab, as to have proved an entire failure the year previous. Seed was used that was covered all over, or 100 per cent. of scab. Lime, sulphur, manure, corrosive sublimate, kainit, sulphate of copper, were all tried. Seed rolled in flowers of sulphur proved the best of all. Sulphur at the rate of 600 pounds per acre, killed 20 per cent. of the plants and yielded on the test plot three and one-half bushels, as against 100 per cent. stand in the untreated check plot, with a yield of four and one-half bushels and 47 per cent. scab.

Three hundred pounds sulphur per acre, gave 100 per cent. stand and yielded four bushels; scabby 1 per cent. One hundred and fifty pounds sulphur gave a stand of 100 per cent., yield of three and one-half bushels and 1 per cent. scab. Seed rolled in sulphur gave a stand of 100 per cent., yield five bushels, scabby 5 per cent.

It will be seen that the latter treatment produced the best yield, while 300 pounds of sulphur per acre, also 150 pounds, reduce the scab to 1 per cent. Corrosive sublimate, seed soaked, yielded just the same as the untreated plot, or four and one-half bushels, and reduced the scab to 1 per cent. No treatment entirely annihilated the scab, but to roll the damp seed in flowers of sulphur increased the yield to the yield the manure in the hill produced, while the sulphur gave only 5 per cent. scab to 55 per cent. for the manure in the hill. This seems to be a cheap way to increase the yield and reduce the scab. Flowers of sulphur can be bought by the fifty pounds of any druggist for 2 cents per pound, and the results seem to make it advisable to try it.

Charles Fraughburg, of Kaufman, Tex., writes as follows: "I am a reader of the KANSAS FARMER. It is a good paper and deserves all the patronage it can get. We can plant here only the early and second early potatoes, as late potatoes will not make tubers. It seldom rains here in July more than a trace, that does no good, and the late potatoes are consequently a failure. July and August are always dry here. Last year was an exception, and we had lots of rain in July and August, and our corn crop doubled in yield. We plant potatoes here in February. If the tops are not cut off by late frost, such early-planted potatoes make the largest crop. But this killing of the tops by frost happens nearly every year, and then the crop is cut short more or less, according to the size of the tops when they are killed. The safer way is to defer the planting till the first week in March. Even then the frost sometimes gets in its work, but not nearly so often. Our way of planting is still the same as it was when the plow was invented. The ground is plowed and then we mark out with the bull-tongue plow for the seed. Seed are dropped about one foot apart and are covered by running a turning-plow around each row of potatoes, throwing the dirt on the row each way. Care is taken to run the plow

shallow, so as not to make the ridges too high. After they are up they are cultivated just like corn—once only. There is no use of cultivating more, as they grow quick, and unless the field is very foul, keep the mastery over the weeds. When it gets very warm the crab grass starts, but the potatoes have the advantage and it does no harm, and by the end of June are dug and must be taken up. By irrigation we could raise three crops of early potatoes a year on the same ground. We must dig them when the lower leaves of the vines become yellow. Should we wait till the vines become dry, as they do in the northern countries, they would rot either before or after digging. Our yield is from fifty to 300 bushels per acre, according to soil and season. We do not make a crop of potatoes for the market, simply for our own table, except a few market gardeners. We could make money on them, could we hold them well through the summer, but here the trouble comes in. Our summers are too hot and long. Cellars we do not have. Some Northern people have made cellars and put their cabbage in, but they would not keep. They would rot. The best we can do with potatoes is to put them in a chute with doors open day and night, and openings enough in the chute to permit the winds to strike through constantly. Even then, 25 to 40 per cent. will rot in our hot summer. What are left by the first of October are safe for table use but of no account for seed. It pays us to get Northern seed. If we could raise a second crop in the fall those second-crop potatoes would make us good seed, but it is so dry in the fall that it hardly ever pays. We can hardly raise turnips, it is so dry in the fall. We have had only a few frosty nights since Christmas and I have seen some elm trees in bloom to-day (February 1). We had greens to eat to-day. I live in the Ozarks and the greens are the Indian cabbage, that grows wild here in fair timber land. Our county is about one-half post oak and half prairie. We raise principally cotton and corn and wheat on the prairie."

I have written to the Chief of the Weather Bureau and he has kindly given me the average date of the last killing frost for Kaufman county, Texas, and it is about March 31. Fort Smith averages the last killing frost April 15, which is five days later than the average for Kansas City for the past six years. By this data we see that our friend should not plant before March 10.

Here, again, we see that potatoes keep best when the bin resembles an "all-slatted" crate. Bins should be made with open cracks in the floor and the sides and ends made of woven wire lath fencing, same as is used for corn-cribs and partitions to allow of the escape of gases should be frequent. The potatoes should never be allowed to touch the solid wall or floor, but this slat fencing should be between to allow perfect ventilation.

I will soon give a letter from a potato-grower in the American bottoms of the Mississippi river and his plan will help the Texas man some. I have received several letters asking me to hurry these letters up, so as to be of use this season. This shows the immense interest taken in potato-raising in Kansas and speaks highly for the FARMER. Be patient, and file the FARMERS away and write me your views on the articles.

Morantown, Kas. C. J. NORTON.

### Peach-Raising in Kansas.

EDITOR KANSAS FARMER:—In your issue of February 13, I was interested in a short article from Hans Rasmus on "Seedling Peaches," and later one from F. Holsinger, that followed the same line, just to my notion. Kansas is not a poor peach country. No State in the Union has better flavored peaches. The trees are usually thrifty and free from disease, especially if fairly well cultivated. The trouble has been that not one orchard in fifty has been well cared for. The reason for this neglect is partly because they seem to get along without cultivation and partly because they do not make a crop every season. But here is a mis-

take. No tree will respond quicker to good treatment than the peach. As to frequency of crops, will say that on my orchard, which has been in good bearing age only nine years, I have gathered five good crops, and the land, which I considered too rough for anything else, has made more clear money per acre than my very best soil in other crops. High rolling land is better than low land, as the buds are much surer to pass the winter in good condition.

After a suitable location has been found, one should use more than ordinary care in selecting varieties, no matter whether one uses budded stock or seedlings. Many of the budded varieties grown in the East are not suitable for Kansas, like some Eastern apples not worth their room here in the West. Some reader may think that we are trying to urge on a little fight against budded varieties, but such is not the case. Two years ago we planted 700, last season 1,800, and this season will put out 2,000 more, so as to have forty-five acres, with trees 20x21 feet, all these being budded varieties except about one hundred, which are grown on the spot from Heath Cling pits. Seedlings are more hardy as a rule than budded stock, and if one will take pits from the Smock, Heath Cling, Indian Blood Cling or any other good peach which is known to reproduce its kind, he may have just as good an orchard as if he had expended hundreds of dollars for trees. In proof of this, I point to Mr. S. H. Mitchell, of Longton, Kas., who has probably sold more fine peaches from Smock seed than any one else in his part of the State.

If we should predict that Kansas will furnish more bushels of fine peaches during the next ten years than the State of Michigan, many of the friendly 'Ganders would shake their heads with doubt, but while the trees in that State are dying by thousands with the disease commonly known as the "yellows," trees in our own State, if under fair cultivation, are pictures of health. Some one has said: "But peach crops are uncertain." So is a good apple crop uncertain. I am quite well satisfied if my apple orchard of 2,600 Ben Davis, Missouri Pippin and Winesap in bearing, makes me a good crop every two years on the average. In conclusion, will say that I will be deeply interested in those new seedlings spoken of by our friends, Rasmus and Holsinger, and hope they will add to the list of hardy Kansas peaches.

Lawrence, Kas. J. C. BANTA.

The standard cure for cold and cough, Dr. Bull's Cough Syrup, should be kept by every mother who loves her darlings.



## Class in History— Stand Up!

QUESTION—Who invented the first successful Reaper?

ANSWER—Cyrus Hall McCormick, in the year 1831.

Q.—Who builds the best grain and grass-cutting machinery at the present time?

A.—The McCormick Harvesting Machine Co.

Q.—Were their machines operated in the World's Fair field tests?

A.—They were.

Q.—Were the machines of their competitors so operated?

A.—They were not.

Q.—Why?

A.—Because they were afraid of the McCormick.

Q.—What proportion of the world's annual supply of harvesting machines is made by McCormick?

A.—About one-third.

Q.—Why did the farmers of the world buy 60,000 McCormick Mowers in 1895?

A.—Because the McCormick No. 4 Steel Mower is the best grass cutter ever built—that's why.

The new McCormick Light-Running Open Elevator Harvester and Binder, the McCormick No. 4 Steel Mower, and the McCormick Corn Harvester are unequalled for capacity, light-draft, efficiency of service and long life. Built, sold and guaranteed by the McCormick Harvesting Machine Co., Chicago.

Agents Everywhere.

## SOIL MOISTURE!

HOW BEST TO CONSERVE IT. Send us your name and address, mentioning the paper in which you saw this advertisement, and we will send you a pamphlet giving our own experience, together with the experience and conclusions of fifty more of the best farmers in Nebraska and Kansas. Also our wholesale price list of choice FRUIT TREES, plants and ornamentals. Address YOUNGERS & CO., Geneva, Neb.

## Plant Trees and Orchards in 1896.



The old reliable Hart Pioneer Nurseries, of Fort Scott, Kas., have large supplies of choice stock for sale at special prices. 600 acres in nursery, 240 acres in orchard. Extensive growers for the wholesale trade. Write and obtain prices before placing your orders elsewhere. No transfer or exposure of stock. We take up, pack and ship from the same grounds. Send for our

Illustrated Planter's Catalogue and Price List.

We solicit your correspondence and invite inspection of our stock.

Reliable Agents Wanted.

Address

**HART PIONEER  
NURSERIES,**

FORT SCOTT, KANSAS.

Early Ohio Grape, Six Weeks Earlier Than Concord.



# CREAM ♦ SEPARATOR ♦ INFRINGERS.

Some of our correspondents call our attention to the fact that certain infringers of the De Laval Patent Rights deny that their machines infringe such Patents, and are now talking of "protection" to buyers.

Certainly nobody can have expected these infringers to publicly acknowledge that their imitations of the De Laval machines do infringe our Patents.

## Infringers Already Enjoined.

That could scarcely be expected of such infringers, notwithstanding that some of their own agents and representatives--and many of the unfortunate buyers of their machines--have already been perpetually enjoined from the further use of same. Concerns which have long opposed the advance of centrifugal separation, in the selfish manufacture of impractical gravity setting apparatus, and then when forced to abandon same, have turned round and brazenly attempted to appropriate the just and lawful Patent Rights and invested interests of another are no better in any sense than those who would take anything else of value, and no more to be trusted by any one.

WESTERN OFFICES:  
ELGIN, ILL.

**THE DE LAVAL SEPARATOR CO., 74 CORTLANDT ST., NEW YORK.**

## Avail of Offers of Protection.

If these offers of "protection" are made in good faith, users of such infringing machines will do well to immediately avail themselves of same, and they should in self safety demand a Bond given and secured by the endorsement and guarantee of some bank or other responsible persons in their own county and State, since it is safe to assume that such infringing manufacturers, whose actual financial responsibility is at best limited and doubtful, will in the near future have all they can well provide for in the shape of direct damages on their own account, and advertising guarantees are of absolutely no actual value to any one.

## Further Caution.

That no infringing maker, agent, dealer, or user can have reason to complain at the possible outcome of such further proceedings as are pending and as may be necessary in protecting and maintaining our just and lawful Patent Rights and business interests, due and repeated caution is again given in this respect.

GENERAL OFFICES:

## Grape Culture.

By W. H. Coultis, Tevis, Kas., read before Shawnee County Horticultural Society.

The grape, the longest known, the earliest cultivated of all fruits. Long before research folded back the curtains of time, long before the breath of history crystallized incident and event, beautiful clusters of the grape ripened under sunny skies. The Bible, itself, tells us how, after the great flood, Noah planted a vine, which, according to legend, was a gift of God himself. But whether the grape vine is a native of Asia, and has followed the footsteps of man from the shores of the Caspian sea, and intertwined its tendrils with civilization and refinement in every age, or whether the thousands of varieties that now exist spring from different forms or species, certain it is that, although the grape vine may be found in Europe, from the tropic of Cancer to the Baltic sea, and in America from ocean to ocean, the vine is peculiarly the growth of different climatic conditions.

In Kansas, the grape vine succeeds well as far as growing the vine is concerned, but the dry weather about the time it needs rain does a vast amount of damage to the fruit. How can we avoid this calamity?

Grape-growing has reached a point from which but little further progress can be made without a close recognition of the requirements of the plant. Where the atmospheric conditions are favorable, satisfactory results may be obtained from very poor soil.

The location should be a very rolling piece of land, well exposed to the south-east, so the morning sun can dry up the dew very early in the morning, which will prevent mildew.

The best grape climates are those where there are no dews, that is why California stands first as a grape-growing State.

We are of the opinion that, with our increasing facilities of transportation, grape culture cannot be made remunerative. We believe grape culture may exist for home use only in Kansas. We are neither early nor late, so we come on the market when the market is glutted and prices rule very low. A locality found in the Ozark mountains of Missouri, seems to promise a combination of advantages, such as soil, climate, altitude, atmospheric conditions, and is two or three weeks earlier than we are here. And, then, cold storage cuts a figure, and reduces the price here. My judgment is, we cannot hope to get any profit from our vineyard in this locality in the future.

If I were planting a vineyard, I would have Moore's Early and Dracut Amber only. Get the earliest grape you can if you wish to grow for market. Medium or late varieties will not pay for picking.

Prune to two buds on a spur and leave to three vines on a plant, and do not put your wires over three and one-half feet high. The sun is more liable to spoil the fruit, and the wild wind will blow off the foliage and lean on

the trellis while the vine is loaded with fruit.

Never plant a variety that does not retain its foliage until the fruit ripens.

Surface cultivation is best. Repeat twice a week if possible.

## In the Dairy.

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

### The Business Jersey Cow.

Mr. Myron Reightmyer, of Schoharie county, New York, has a herd of business Jerseys of which he is justly proud. This herd was originally started by J. D. Mitchell, of Bovina, and when the celebrated "cow census" of Delaware county was taken, it was found that an average of 362 pounds of butter for each cow in the herd had been actually sold to a New York commission house. This was aside from the milk and butter used in the family and considerable whole milk that was fed to calves. In 1894, under like conditions, the herd averaged 367 pounds of butter per cow--the herd numbering about fifty. Of course, there are three things that contribute to this success. In the first place, the cows are well bred. They are chiefly of the St. Lambert and Stoke Pogis 3d strains, and not only were the foundation animals good, but by watchful selection and skillful mating, their good qualities have been developed and improved. In the next place, the cattle were fed and cared for so that they were kept happy and satisfied; and last, but not least, they were crossed with the kind of man who knows how to make a success of dairying. Cow, feed and man are the great dairy trinity, and it is hard to say, after all, which is most important.

In speaking of his herd and his methods of caring for it, Mr. R. says:

"I have my cows fresh in February and March, and make butter the entire year, milking until within two weeks of coming in. This is something that must be done in order to secure a great butter record. I feed my milch cows one bushel of fine cut ensilage morning and night, and two quarts of grain thrown on the ensilage each time. At present, the grain is one-half buckwheat middlings at \$13 per ton, and the other one-half is corn-and-cob meal. At noon, they are fed straw or stalks, and are watered twice each day. Young cattle are fed the same, except their grain, which is equal parts whole oats and wheat bran. I have running water in the barns, and my cattle are not let out in storms. The cattle are very thoroughly groomed.

"We feed ensilage until grass comes. I sow five acres to oats and peas for twenty cows--three bushels to the acre, one and a half bushels oats and one and a half peas. I sow at three different times. The first sowing is just as early in the spring as possible, the next ten days later, and again in ten days. Each sowing is cut and fed until the grain becomes too hard, when it is cut for

grain. These three successive sowings give the very best of a sowing crop for six weeks. This is succeeded by sweet corn planted May 20--ten days later than the general corn crop. Besides this, I feed from 200 to 500 bushels of apples each fall, many loads of pumpkins and bushels of small potatoes. This method of dealing with the cattle makes them return me a gross income of \$100 per cow. My butter is made by the Cooley cold-setting process, is packed in tubs and one-pound prints, and is mostly sold to the Fifth Avenue hotel, New York city, and the remainder to the Delevan hotel, Albany, N. Y. The prints are in the form of a square, wrapped in parchment paper, shipped in special cases, and are sold for a fancy price."--*Rural New Yorker*.

### About Watering Stock in Winter.

If you have no way of heating water for stock, do the next best thing by giving them water as it comes from the well. After the cattle have finished drinking if the weather is freezing let out of the trough what water is left. Then when the next water is pumped into the trough it will not have a lot of ice with which to make ice water. Water as it comes from the well is generally at a temperature of fifty-five degrees. This is warm enough for all intents and purposes if it can only be given to the cattle at that temperature. If the trough is in a sheltered place and the water is pumped only as the cattle drink it, and not allowed to stand until it is at a freezing temperature, there will have been a great advance over the old way of breaking the ice to allow the cattle to drink. If your cattle have to drink water in which there are pieces of ice, take a four-gallon tin bucket, fill it with the ice water, place it on the stove, and by means of the thermometer and watch see just how long it will take to heat up to ninety-eight degrees.

After you have satisfied yourself reflect that this is just what the cow does every day, only she warms it up by burning your corn instead of wood, and her stove is not cast-iron but a delicate machine of nerves, flesh and blood.

The innumerable testimonials in the possession of its proprietors show the good work Salvation Oil is doing. 25 cents.

### Where Did You Get This Coffee?

Had the Ladies' Aid Society of our church out for tea, forty of them, and all pronounced the German Coffeeberry equal to Rio! Salzer's catalogue tells you all about it! 35 packages earliest vegetable seeds \$1.

If you will cut this out and send it with 15 cents, stamps, to the John A. Salzer Seed Co., La Crosse, Wis., you will get free a package of above great coffee seed and our 148-page catalogue! Catalogue alone 5 cents for mailing.

CATALOG FREE.



## MONEY MAKING SEEDS

Every planter wants them. We sell GUARANTEED BEST SEEDS CHEAP. HALF REGULAR PRICE. Large pkts. 2 CTS. & up. Extras with orders. Send for FINEST BOOK PRINTED. Mailed FREE. Market Gardeners ask for Wholesale Price List.

ALNEER BROS., No. 24 Alneer Bldg., Rockford, Ill.

## PLANTING

well begun is half done. Begin well by getting Ferry's Seeds. Don't let chance determine your crop, but plant Ferry's Seeds. Known and sold everywhere.

### Ferry's Seed Annual

for 1896. Contains more practical information for farmers and gardeners than many high-priced text books. Mailed free. D. M. FERRY & CO., DETROIT, MICH.

## \$100.00 FREE

To the persons making the largest yield from VINELESS GOLD COIN PROLIFIC our year. Here is a chance to MAKE MONEY EASY, besides getting the best Sweet Potato on earth. Send for 1896 Catalogue. Yellow Globe Danvers, postpaid, 70c. per lb. Red Wethersfield, 80c. per pound. MELON SEED, all leading varieties, 35c. per pound, postpaid. Can you beat this? RADISHES, 45c. per pound, postpaid. Peas, Beans and all Vegetable Seeds at correspondingly low prices. It will pay you to let us hear from you before you buy. We are the Market Gardener and Farmer's friend. OUR PRICES SUIT THE TIMES.

THE HUNTINGTON SEED CO., Indianapolis, Indiana.

### ASK YOUR DEALER FOR

## W. L. DOUGLAS \$3. SHOE BEST IN THE WORLD.

If you pay \$4 to \$6 for shoes, examine the W. L. Douglas Shoe, and see what a good shoe you can buy for \$3.

OVER 100 STYLES AND WIDTHS, CONGRESS, BUTTON, and LACE, made in all kinds of the best selected leather by skilled workmen. We make and sell more \$3 Shoes than any other manufacturer in the world.

None genuine unless name and price is stamped on the bottom. Ask your dealer for our \$5, \$4, \$3.50, \$2.50, \$2.25 Shoes; \$2.50, \$2 and \$1.75 for boys. TAKE NO SUBSTITUTE. If your dealer cannot supply you, send to factory, enclosing price and 36 cents to pay carriage. State kind, style of toe (cap or plain), size and width. Our Custom Dept. will fill your order. Send for new illustrated Catalogue to Box M.

W. L. DOUGLAS, Brockton, Mass.



## KNOCK THE SPOTS OUT.

A sore spot, green, black, or blue, is a

## BRUISE

Use ST. JACOBS OIL and watch the color fade, the soreness disappear.

IT IS MAGICAL.







## MARKET REPORTS.

**Kansas City Live Stock.**  
KANSAS CITY, March 16.—Cattle—Receipts since Saturday, 3,797; calves, 193; shipped Saturday, 1,932 cattle, 58 calves. The market was active and steady on the native side and strong on the Texas side. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price.	No.	Ave. Price.
15.....	1.621 \$4.20	61.....	1.784 \$4.15
21.....	1.300 4.03	18.....	1.430 4.00
39.....	1.464 3.90	33.....	1.417 3.90
15.....	1.404 3.90	21.....	1.452 3.85
3.....	1.170 3.80	60.....	1.382 3.80
24.....	1.148 3.70	29.....	917 3.70
3.....	1.220 3.40	20.....	830 3.40
2.....	1.025 3.30	21 Hol.....	964 3.15

TEXAS AND INDIAN STEERS.			
No.	Ave. Price.	No.	Ave. Price.
46.....	1.180 \$3.62½	81.....	1.158 \$3.55
110.....	1.044 3.52½	43.....	1.107 3.40
130.....	1.054 3.39	65.....	978 3.25
67.....	1.004 3.15	109.....	976 3.10

COLORADO STEERS.			
No.	Ave. Price.	No.	Ave. Price.
46.....	1.383 \$3.82½	36 stk.....	1.036 \$3.40

OKLAHOMA STEERS.			
No.	Ave. Price.	No.	Ave. Price.
18.....	938 \$3.05	3.....	1.010 \$2.65

OKLAHOMA COWS.			
No.	Ave. Price.	No.	Ave. Price.
5.....	828 \$2.40		

WESTERN STEERS.			
No.	Ave. Price.	No.	Ave. Price.
21.....	1.234 \$3.60		

TEXAS AND INDIAN COWS.			
No.	Ave. Price.	No.	Ave. Price.
1.....	660 \$2.25	7.....	802 \$2.23
1.....	1,070 2.23		

COWS AND HEIFERS.			
No.	Ave. Price.	No.	Ave. Price.
60.....	785 \$3.40	5.....	1,014 \$3.40
2.....	920 3.35	35.....	727 3.35
110.....	1,210 2.95	1.....	1,100 2.85
1.....	1,200 2.85	8.....	1,170 2.85
5.....	1,163 2.75	2.....	1,160 2.70
2.....	1,139 2.70	2.....	1,100 2.70
12.....	1,136 2.60	1.....	780 2.55
3.....	1,100 2.55	3.....	1,150 2.45
2.....	1,210 2.40	1.....	510 2.35
3.....	916 2.10	1.....	840 2.00

STOCKERS AND FEEDERS.			
No.	Ave. Price.	No.	Ave. Price.
31.....	580 \$3.90	4.....	385 \$3.85
21.....	823 3.70	8.....	870 3.65
10.....	1,163 3.60	3 yr.....	513 3.50
20 s. hf.....	230 2.35	25 s. hf.....	416 2.25

Hogs—Receipts since Saturday, 3,007; shipped Saturday, 508. The market was steady to be lower. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.
61.....	218 \$3.85	72.....	279 \$3.85
75.....	296 3.85	90.....	192 3.82½
80.....	180 3.80	76.....	220 3.80
88.....	234 3.80	70.....	245 3.80
81.....	208 3.80	68.....	232 3.80
78.....	217 3.80	69.....	248 3.80
80.....	244 3.80	68.....	233 3.80
28.....	196 3.80	59.....	301 3.80
63.....	211 3.77½	64.....	223 3.77½
33.....	226 3.75	50.....	222 3.75
20.....	262 3.75	47.....	127 3.75
58.....	246 3.75	68.....	245 3.75
19.....	331 3.75	59.....	275 3.75
28.....	303 3.72½	77.....	183 3.70
19.....	118 3.70	74.....	150 3.70
64.....	150 3.70	95.....	184 3.65
13.....	127 3.67½	5.....	328 3.60
10.....	100 3.50	4.....	117 3.50

Sheep—Receipts since Saturday, 2,375; shipped Saturday, 259. The market was steady to 10c higher. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.
187 N. M. L.....	71 \$4.10	185 Ariz. w.....	102 \$3.35
48.....	103 3.80	56.....	82 3.25

Horses—Receipts since Saturday, 150; shipped Saturday, 36. There was only a fair attendance at the opening of the week's auction sales at noon to-day. There was a little trading at steady prices. The receipts are extremely light compared with a month ago and there may be a firmer market before the week is over. Several new buyers came up from the south yesterday and more are expected tomorrow, which will give the market some impetus to strength. Mules are in very light request.

## Chicago Live Stock.

CHICAGO, March 16.—Cattle—Receipts, 18,000; market steady; fair to best beefs, \$3.50@4.65; stockers and feeders, \$2.75@3.80; mixed cows and bulls, \$1.50@2.75; Texas, \$3.00@4.00.

Hogs—Receipts, 41,000; market weak to 10c lower but active; light, \$3.85@4.10; rough packing, \$3.80@3.90; mixed and butchers, \$3.90@4.05; heavy packing and shipping, \$3.90@4.05; pigs, \$3.40@4.03.

Sheep—Receipts, 14,000; market 10c higher; native, \$2.75@3.75; western, \$3.40@3.75; Texas, \$2.75@3.25; lambs, \$3.75@4.75.

## St. Louis Live Stock.

ST. LOUIS, March 16.—Cattle—Receipts, 2,200; market steady; native steers, \$3.60@4.40; Texas steers, \$2.60@3.80.

Hogs—Receipts, 6,000; market 5 to 10c lower; heavy, \$3.70@3.90; mixed, \$3.50@3.85; light, \$3.75@3.95.

Sheep—Receipts, 1,000; market 10c higher.

## Chicago Grain and Provision.

March 16. Opened High'st Lowest Closing

Wh't—March..... 60½ 60½ 61½ 62½  
May..... 62½ 62½ 61½ 62½  
July..... 63 63 62½ 62½

Corn—March..... 28½ 28½ 29½ 29½  
May..... 29½ 29½ 29½ 29½  
Sept..... 31½ 31½ 31½ 31½

Oats—March..... 20½ 20½ 20½ 20½  
May..... 20½ 20½ 20½ 20½  
July..... 20½ 20½ 20½ 20½

Pork—March..... 9 61 9 61  
May..... 9 75 9 75 9 75  
July..... 9 92½ 9 92½ 9 90

Lard—March..... 5 47½ 5 47½ 5 47½  
May..... 5 53 5 53 5 53  
July..... 5 53 5 53 5 53

Ribs—March..... 5 22½ 5 22½ 5 20  
May..... 5 22½ 5 22½ 5 20  
July..... 5 32½ 5 32½ 5 31

## Kansas City Grain.

KANSAS CITY, March 16.—Offerings of wheat were very light to-day and demand was lighter still. Trade was practically at a standstill. Prices were nominally about a cent lower. No. 2 spring was held at 61½ to 62c, with practically no demand from any source. No No. 2 hard or soft winter wheat was offered.

Receipts of wheat to-day, 21 cars; a year ago, 19 cars.

Sales were as follows on track: Hard, No. 2, nominally 61c; No. 3, 1 car 45c, 1 car 50c, 1 car 55c; No. 4, 1 car 42½c, 1 car 42c, 2 cars 40c; rejected, nominally 35c@40c; no grade, nominally 30c@35c. Soft, No. 2 red, nominally 72½@73c; No. 3 red, 1 car 65c, 2 cars 64½c, 1 car 63½c; No. 4 red, 1 car 51c; rejected, nominally 40c@50c.

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A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY AND FIRING. Impossible to produce scar or blanch. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

Spring, No. 2, nominally 61c; No. 3, nominally 57c@59c; rejected, nominally 45c@52c; white, nominally 55c@60c.

Corn met with little demand. A few cars sold at irregular prices on special terms, but the best bid for No. 2 mixed was 22½c, and it was even refused at 22½ to 22c, buyers were so indifferent. White corn was salable at 23 to 23½c, with not any offering. May corn sold—20,000 bushels—at 24c.

Receipts of corn, to-day, 21 cars; a year ago, 19 cars.

Sales by sample on track: No. 2 mixed, nominally 22½c; No. 3 mixed, 2 cars 22½c; No. 4 mixed, nominally 21½@23c; white, No. 2, 23½c bid; No. 3, nominally 22½c.

Oats were firmly held, but there was not much demand for them.

Receipts of oats to-day, 8 cars; a year ago, 9 cars.

Sales by sample on track: No. 2 mixed, nominally 16½@17c; No. 3, 15½@15c; No. 4, nominally 14½@14c; no grade, nominally 13c; No. 2 white, 1 car 20½c, 1 car 19½c; No. 3 white, nominally 18½@19c, 1 car choice 19½c.

Hay—Receipts, 42 cars. Market very firm. Timothy, choice, \$11.00@11.50; No. 1, \$9.00@10.50; No. 2, \$8.50@9.50; No. 3, \$4.50@6.00; choice prairie, \$7.00@7.50; No. 1, \$5.50@6.00; No. 2, \$4.00@4.50; No. 3, \$3.50@4.00; straw, \$3.50@4.00.

St. Louis Grain.

ST. LOUIS, March 16.—Receipts, wheat, 22,107 bu.; last year, 7,182 bu.; corn, 81,000 bu.; last year, 43,275 bu.; oats, 46,300 bu.; last year, 31,100 bu.; shipments, wheat, 15,000 bu.; corn, 82,000 bu.; oats, 15,100 bu. Closing prices: Wheat—Cash, 70c sellers; March, 78c; May, 59c bid; July, 59½c bid. Corn—Cash, 26½c; March, 26½c; May, 26½c; July, 27½c. Oats—Cash, 18½c; March, 18½c; May, 19c; July, 19½c bid.

Kansas City Produce.

KANSAS CITY, March 16.—Butter—Creamery, extra separator, 19c; firsts, 17c; dairy, fancy, 14c; fair, 13c; store packed, fresh, 10c@11c; packing stock, 7c; country roll, fancy, 13c; choice, 11c.

Eggs—Strictly fresh, 8c per doz.

Poultry—Hens, 6½c; spring, 8c; broilers, 2 to 2½ lbs., from \$2.50@3.00 per doz.; roosters, 15c; young, 17½c; turkeys, hens, 11c; gobblers, 10c; ducks, 8½c; geese, fat, 5½c@6c; pigeons, 90c@1.00 per doz.

Fruits—Apples, fancy, \$3.25@3.75 per bbl.; choice, \$2.00@3.00.

## Robt. C. White

Live Stock Commission Company.

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## Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with the order. Stamps taken.

DISEASES OF YOUNG AND OLD MEN—Private and skin diseases a specialty. Wm. H. Richter, Ph. G. M. D., 503 Kansas Ave., Topeka, Kas. Correspondence solicited.

EGGS.—Barred Plymouth Rocks, \$1 per fifteen. Mammoth Bronze turkey, \$1.50 per line. Selected stock. D. Trot, Abilene, Kas.

160 ACRES.—Well improved, to exchange for unimproved land in eastern Kansas. Joseph Miller, Ramona, Marion Co., Kas.

STRAYED OR STOLEN.—A light bay pony mare, about 9 years old, white star in forehead, top-knot clipped rather short. Also dark brown horse mule colt, about 11 months old, tall and mane never clipped. Left the rock-crusher, nine miles west of Topeka, March 9. James Holmes, Wanamaker, Kas.

KAFFIR CORN SEED.—Any quantity, sacked, 25 cents per bushel. W. D. Harry Grain Co., Conway, Kas.

FOR SALE.—Six extra good summer boars, large enough for service—Wilkes and Admiral Chip strains—\$15 apiece. John Bollin, Kleckapoo, Kas.

FOR SALE.—Dwarf broomcorn seed, German millet and Red and White Kaffir corn seed. Evans Bros., Sterling, Kas.

LIGHT BRAHMA EGGS FOR SALE.—From fine stock, \$1.50 per fifteen. Bert Killough, Richmond, Kas.

EGGS FROM HIGH-SCORING B. P. ROCKS.—I bought my birds direct from Mrs. Walters, of Emporia. They score from 92½ to 98 points. Eggs from this pen \$2.50 per fifteen. From any other pen \$1.50 per fifteen. Buff Leghorns the same. Mrs. E. E. Bernard, Dunlap, Kas.

STRAWBERRY PLANTS.—Best varieties, \$1.50 per 1,000. J. C. Banta, Lawrence, Kas.

FOR SALE.—Pure-bred Duroc-Jersey boars. Good individuals and in line with World's Fair winners. J. F. Stodder, Burden, Kas.

THE MIAMI COUNTY NURSERIES.—Have surplus of soft maple seedlings which they offer at \$1.50 per 1,000, boxed. A full line of nursery stock. Cadwallader & Fort, Louisburg, Kas.

EGGS FROM PRIZE-WINNERS.—Langshan, Leghorn, Plymouth Rock, Minorca, Wyandotte and Hamburg fowls, bred in the purple. A few more pedigreed Yorkshire boars for sale. James Burton, Jamestown, Kas.

FOR SALE.—A very desirable eighty-acre improved farm at a bargain. Ten miles southwest of Topeka. Apply to Chicago Lumber Co., Topeka, Kas.

RED KAFFIR CORN AND LARGE GERMAN millet seed, 50 cents per bushel. Ziller's Mammoth yellow dent and Hill's Large White dent seed corn \$1 per bushel or six bushels for \$5. M. H. Osborn, Danville, Harper Co., Kas.

FOR SALE.—Six yearling Short-horn bulls, sired by Amos Cruickshank, pure Cruickshank bull, out of Cruickshank-topped cows. Write for prices and descriptions. Address Charles Lotholz, Eudora, Kas.

FOR SALE.—Forty good birds. Five W. P. Rocks, 5 B. P. Rocks, 5 Black Langshans, 2 Light Brahmas, 1 Black Java, 1 R. C. W. Leghorn, 3 R. C. B. Leghorns, 3 S. C. Buff Leghorns, 1 Golden Polish, 2 Partridge Cochins, 4 Buff Cochins, 3 S. L. Wyandottes, 1 White Cochins, 2 Black Minorcas. All yearling cocks or cockerels, at \$1 to \$3. Some hens and pullets of the same kinds, at Valley Falls Poultry Yards. W. B. McCoy, Prop'r, Valley Falls, Kas.

YELLOW MILK MAIZE, RED AND WHITE KAFFIR, Amber sorghum, Golden millet, each 35 cents per bushel, sacked. Black rice corn, 75 cents per bushel, sacked. Golden Beauty seed corn 40 cents. Willis K. Folks, Wellington, Kas.

ORDER NOW!—Barred Plymouth Rocks exclusively. Eggs in season, \$1 for fifteen. Mrs. F. A. Hargrave, Richmond, Kas.

MILLET SEED, CANE SEED, RED AND WHITE Kaffir corn, bought and sold in any quantity. If for sale send samples; state quantity. Kansas City Grain & Seed Co., Station A, Kansas City, Mo.

PASTURE.—For 200 horses and cattle. Good feed, plenty pure water and shade. Frank Dickinson, Valencien, Shawnee Co., Kas.

SCHOLARSHIP.—In business course or shorthand in a Kansas City business college for sale cheap. Address A. B. Frazer, 404½ East Twelfth St., Kansas City, Mo.

HONEY LOCUST AND BLACK LOCUST PLANTS.—Ten to fifteen inches, \$1.50 per 1,000; eighteen to thirty inches, \$2.50 per 1,000. Jos. E. Mellecker, Bellefont, Kas.

A BARGAIN FOR RETIRING FARMER IN EASTERN Kansas to trade his farm for the best residence property in Liberty, Kas. For full particulars address C. Kaiser, Liberty, Kas.

FOR SALE.—Cane, millet, Kaffir and Jerusalem corn in large or small lots. Hubbard & Hackney, Medford, Okla.

WANTED.—Buyers for Large English Berkshire gilts, bred or ready to breed to son of imported boar. Bargain! O. P. Updegraff, North Topeka, Kas.

FOR SALE.—Red Kaffir corn and cane seed in large or small quantities. Write for prices. A. D. Arnold, Longford, Clay Co., Kas.

THE SENECA NURSERY.—Will still accept orders at one-half of wholesale rate price during March. Order quick while stock is on hand. Send name on postal for catalogue. S. J. Baldwin, Seneca, Kas.

FARMERS!—Improve your poultry. The Black Langshan is the best winter egg-producing large fowl. Eggs for sale at \$1.50 for thirteen or \$2.50 for twenty-six. T. V. Codrington, 1701 Huntoon street, Topeka, Kas.

NURSERY STOCK SURPLUS.—Send for prices. Small fruit, apples, peaches, pears, cherries, dirt cheap. Frank Holsinger, Rosedale, Kas.

PLANTS BY MAIL.—Fuchsias, Coleus, Geraniums, Roses, Begonias, Carnations, etc., assorted, strong, well-rooted. Will send as samples, fifteen for 50 cents (2-cent stamps); for clubs of five, these (separate) for \$2. Satisfaction and safe arrival guaranteed. Try them. Tyra Montgomery, Box 186, Larned, Pawnee Co., Kas.

\$279 WILL BUY MY QUARTER SECTION OF grazing land in east Butler county, Kansas. Address Henry Boynton, Augusta, Maine.

ALFALFA.—Crop of 1895. Pure seed for sale. Address W. P. Haywood & Co., Lakin, Kas.

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### Swarming.

Since exploring the interior of a beehive, we are no more at a loss to know when to expect swarms. The weather being favorable, we can tell to a certainty the day and almost the hour they are likely to issue. Preparations for swarming may readily be discovered a week previous to their issuing. The construction of queen cells will commence eight days, as a rule, before swarming. Any time during this period we make discovery of these cells, we can ascertain their time of maturity by the advancement of construction. The queen cells will be sealed over about the eighth day, and at this time the swarm is due. First swarms most generally issue in the fore part of the day, when the sun is well up, about 9 o'clock, although there are exceptions, but as a general rule first swarms have quite a system of regularity in transacting business. Second swarms are more irregular as to the time of day in issuing, but the eighth or ninth day from the time of first swarms coming we can expect them if the day is fair. It will be observed that from the time queen cells are first started until the second swarms come, is about sixteen days, as this is the length of time allotted to the hatching of queens. The first queen hatched or liberated from the cell is ready to accompany the swarm, and as these young queens continue to hatch two or three days, daily swarms may be expected. Strange as it may seem, yet it is true, that the queen matures in sixteen days and the drone in twenty-four days. It will be clearly understood, then, that the old queen accompanies the first swarm, and the proper time of the issuing of this swarm is eight days from the time queen cells are started. And at this period the queen cells are sealed over, which is evidence that the swarm is due. The parent stock, then, is without a queen eight days thereafter, and until the first young queen issues from the cell, when the second swarm may be expected.

### Robbing.

There is no time during the whole year that will compare with the early spring months in heavy losses, if bees are allowed the privilege of robbing, and at no other time is it more likely to occur. Many stocks will be found queenless at the winding up of winter, and all such are a bait for robbers, if allowed to remain long in this condition. Very weak colonies are also in danger of being robbed. On account of their discouraged condition, being but few in numbers, they do not care to protect their stores. All such deficiencies should be looked after in time and prevented if possible. When robbing once gets a start in the apiary it is very troublesome, and is hard to check. Robbing is not always confined at home, but perhaps often neighboring apiaries are visited, and I have known bees to execute their theft several miles away. There is nothing gained on either side in robbing, as it is a damage not only to the colony being robbed, but also to the one doing the robbing. Hence, to prevent this greatest of evils in the apiary we should see that all colonies are in proper condition during the first warm days of spring.

To the inexperienced it is sometimes very difficult to know just exactly when robbing is being carried on. I have often been called to examine bees for robbing when there was nothing of the kind going on. Near the middle of the day bees often take a "play fly," principally the young bees. This is often mistaken for robbing, when it is nothing but innocent exercise. The experienced eye can detect the action of a robber bee at a glance. A cowardly, thieving action, darting down to the entrance and withdrawing a number of times, and if danger is not apparent he will shoot into the hive, and if allowed to pass unmolested and fill him-

self with honey and bring out his load unharmed, he is sure to come back a second time and bring a number of his comrades with him. Then it will be but a short time until there is a general consternation and thousands of bees will be noticed issuing from the hive loaded with honey.

I have never had a case of robbing that I did not stop in a few minutes by the following simple plan: Take a quilt or heavy piece of canvas and place it over the hive being robbed. It should be large enough to cover the hive and extend out over the ground a foot or two. Allow it to remain a few minutes, then pick up the corner of the same and allow the robbers to escape and the bees belonging to the hive to pass in. Repeat this several times and the trouble is over.

A colony of bees working during the day may be all brought home by using this same device. The heavy garment covering the hive darkens the surroundings and the bees stop passing out, and by occasionally lifting up the quilt and letting in those that are out, you will have the whole colony at home in a half hour, perfectly contented.

### Are Artificial Queens as Good as Natural Ones?

There has been quite a diversity of opinion as to whether or not the artificial queen is in every respect as good as the natural one. And I believe the decision is, generally, in the affirmative, providing the proper care and management is given. In my own experience, of some fifteen years in breeding queens, there is no perceptible difference if managed properly, but by improper management the system of raising artificial queens has been abused and a large per cent. of inferior queens is the result. The greatest trouble arises from producing them in weak colonies, or merely weak nuclei. Good cells can only be produced in good, strong, healthy stocks that are in good condition every way. Much damage is also done by handling unripe cells. A queen cell just sealed over is not ready to cut out or transfer, but should remain unmolested until nearing maturity—some twelve or fourteen days old. Some may say that many queens will hatch when twelve or fourteen days old. This may be true, and if so, let them hatch and destroy one another, for these are the kind of queens we wish to shun. Such queens were reared from brood that was partially developed into worker bees, as no fully developed queen will hatch under sixteen days. A quantity of valuable queens may be obtained during swarming time, about the time of the issuing of the second swarm. The cells are at this time fully ripe and the queens are ready to issue.

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is a positive cure for the worst cases of headache, dyspepsia, constipation, liver and kidney diseases and all nervous and blood diseases, biliousness, despondency, female diseases, etc. **AT THIS TIME OF YEAR** it is invaluable, as it renovates and invigorates the whole system and purifies and enriches the blood, giving new life and vigor to the whole body. The very best nerve tonic known. Very pleasant and easy to take. **IT HAS TWO TO FOUR TIMES AS MANY DOSES AS LIQUID MEDICINES SELLING FOR SAME PRICE.** Sold by druggists or sent by mail on receipt of price, 25 cents and \$1. Send for the booklet; it treats all diseases and many say it is worth \$5, if they could not get another. Sent free from our Western office. **DR. B. J. KAY MEDICAL CO., 620 S. 16th St., Omaha, Neb.**

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	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts for 1895.....	1,689,652	2,457,697	864,713	52,607	103,368
Slaughtered in Kansas City.....	922,167	2,170,827	567,015		
Sold to feeders.....	392,262	1,376	111,445		
Sold to shippers.....	218,505	273,999	69,754		
Total Sold in Kansas City, 1895.....	1,533,234	2,346,202	748,244	41,588	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head; HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel. NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.  
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**H. C. Orr, A. C. P. A., KANSAS CITY, MO.**



## BREEDERS' DIRECTORY.

(Continued from page 1.)

## SWINE.

**BREKSHIRE**, Chester White, Jersey Red & Poland China Pigs. Jersey, Guernsey & Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hatching and House Dogs. Catalogue. **S. W. SMITH**, Cochransville, Chester Co., Pa.

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I have for sale five Short-horn bulls, including my herd bull, **MONITOR**. He was 3 years old last September. One 1 year old last September, and three coming 1 year this spring. All red in color.

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From Northern-grown seed. Comparatively free from scab, and solid. 45 cents a bushel. Write for prices on large amounts.

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Choice Standard and New Varieties grown and stored in the Cold Northwest. Send for handsome Illustrated Catalogue, containing article describing method of raising and handling. Small shipments at car-load freight rates. Samples free. **E. W. Allen**, Wolverton, Wilkin Co., Minn.

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Kill the Germs in the pen and under the Hogs' feet with Baunerman's Phenyle, a Disinfectant and Germicide, and feed your hog Anglo-American Food as a conditioner.

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I would as soon be without feed as without Phenyle Disinfectant. Have used it three years and never lost a hog. **O. B. WEST**, Paulina, Iowa.

Ship us two 100-pound kegs by express at once. Heard of your wonderful Remedy through James Hammond, of Scheller, Iowa. I am the largest farmer in the State of Iowa, having 3,000 acres, and carry from 3,000 to 5,000 hogs. **C. J. COOK**, Odebolt, Iowa.

Since I have been using your goods I have had no sickness in my herd of any kind. I am fully convinced by a proper use of them, there is no use to have cholera or any other sickness in a herd of hogs. Thousands more such testimonials on hand. Write for particulars. **JNO. M. STONEBRAKER**, Panola, Ill.

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Fruit trees, Berry plants, Evergreens and Ornamental shrubbery at wholesale to the planter. Write for free price list.

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