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BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 per year or \$8.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

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

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

CATTLE.

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

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Buccaneer at head. Registered bulls, heifers and cows at bed-rock prices. D. P. Norton, Council Grove, Kas.

ENGLISH RED POLLED CATTLE AND COTS.—A world shipped. Young stock for sale, pure-bloods and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.

SWINE.

FOR SALE.—Duroc-Jersey pigs; also Poland-China. Bronze turkeys, Toulouse geese, Pekin ducks, Barred Plymouth Rock and Brown Leghorn chickens. Ready to ship out. J. M. Young, Liberty, Kas.

OHIO IMPROVED CHESTER SWINE.—Pure-bred and registered. Twenty-five sows, mostly aged, bred for spring farrow. Orders solicited. H. S. DAY, Dwight, Morris Co., Kas.

V. B. HOWEY, Box 103, Topeka, Kas., breeder and shipper of thoroughbred Poland-China and English Berkshire swine and Silver-Laced Wyandotte chickens.

DIETRICH & GENTRY, RICHMOND, KAS., (formerly Ottawa) have several fine, growthy young boars at very reasonable prices. Young sows can be bred to High Ideal 12115 S. A fine crop of fall pigs very cheap. Write. Mention KANSAS FARMER.

MAPLE GROVE HERD OF FANCY BRED POLAND-CHINA SWINE. Also Light Brahma fowls. Owned by Wm. Plummer & Co., Ossage City, Kas. Stock of all ages for sale at reasonable rates.

SWINE.

TOPEKA HERD OF BERKSHIRES.—Strong-framed, mellow and prolific. State fair prize-winners and their produce for sale. Also, Pekin ducks of enormous size. H. B. COWLES, Topeka, Kas.

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

FOR SALE CHEAP.—Choice Poland-China boars, pigs, Cotswold and Merino bucks, fifteen varieties of pure-bred poultry. Prize-winners. No catalogue. Address with stamp, H. H. Hague & Son, Walton, Kas.

A. W. THEMANNSON, WATHENA, KAS.—Poland-China boars. Glits bred to Graceful F. Sanders; he is by J. H. Sanders 27219 and out of Graceful F. 33408, by A. A. by Black U. S. Sire and dam both first-prize winners at World's Fair and descendants of Black U. S.

BLACK U. S. AND WILKES HERD OF POLAND-CHINAS. Nemo U. S. heads the herd, out of Lizer's Nemo 24471, the 275 son sired by A. A. 2d 18851, and assisted by Regulator Wilkes 11591. Have sows in herd bred to Woodburn Medium, the \$1,000 boar, and Ideal U. S., the son of Ideal Black U. S., that sold for \$1,000 last September at Iowa State fair. Booking orders for pigs sired by these boars. Write what you want. Letters promptly answered. C. C. Keyt, Verdon, Richardson Co., Neb.

CATTLE AND SWINE.

PEDIGREED Poland-Chinas. J. H. TAYLOR, Pearl, Kas. Short-horns.

ASHLAND STOCK FARM HERD OF THOROUGHBRED POLAND-CHINA HOGS. Short-horn cattle and Plymouth Rock chickens. Boars in service, Admiral Chip No. 7919 and Abbottsford No. 23351, full brother to second-prize yearling at World's Fair. Individual merit and gilt-edged pedigree my motto. Inspection of herd and correspondence solicited. M. C. Vansell, Muscotah, Atchison Co., Kas.

POULTRY.

ZACHARY TAYLOR, MARION, KAS.—For Sale: Combination best strains Barred P. Rocks, S. Wyandottes, Buff and Brown Leghorns, Black Langshans. Cockerels, 50 cents to \$1; hens and pullets, 50 cents each. Eggs, 75 cents for fifteen.

A. B. DILLE & SONS, EDGERTON, KAS., breeders of choice B. P. Rocks, S. L. Wyandottes, Light Brahmas and M. B. Turkeys. Chicken eggs \$1 to \$2 per 15; turkey eggs \$3 per 11. Satisfaction guaranteed.

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. Chickens at all times. Eggs in season.

20 BRONZE TOMS, '94 hatch, scored by Emery. Weight 25 to 34 pounds, score 15 1/4 to 17 1/4. Price \$3 to \$5. Won fifteen premiums in 1894. Eggs in season, \$3 for thirteen. MRS. FRED IVES, KNOXSTON, MO.

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

SWINE.

S. McCULLOUGH, Ottawa, Kansas. Breeder of Pure-bred BERKSHIRE SWINE. Stock for sale at all times. Satisfaction guaranteed. Write for what you want.

SELECT HERD OF BERKSHIRES Have for sale pigs from State fair winners. Can fill classes for show. Boars for fall service. A few choice sows bred. Address **G. W. BERRY, Berryton, Shawnee Co., Kas.**

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.

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.

JAMES QUORLO, MOSCOW, MO. Breeder and shipper of prize-winning Large Berkshire Swine. S. C. Brown Leghorns and Bronze Turkeys. Headed by King Lee II. 29601, Mephistopheles 32412.

SWINE.

BOURBON COUNTY HERD, English o Berkshire o Swine. J. S. MAGERS, Prop., Arcadia, Kas. Imported and prize-winning American sows headed by Imp. Western Prince 32202. All selected and bred to head herds and to supply those wanting none but the best. Fall litters now can't be beat. Write or come visit me and see the herd.

J. W. BABBITT, HIAWATHA, KAS. BREEDER OF Regist'd Berkshire Swine 45 in herd, headed by Lord Majestic 34768, a son of Imp. Lord Windsor 30461; dam Imp. Majestic 30460. 6 boars, 12 glits, by Model Duke II. 22487, and 9 fall of 1894 farrows, both sexes, for sale. Write or come.

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.**

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

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

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

D. W. EVANS' HERD REGISTERED POLAND-CHINAS. FAIRVIEW, BROWN CO., KAS. 250 head headed by Swi. Tecumseh 11929 S., by L's Tecumseh 11413 S., and Billy Wilkes 9319 S., by George Wilkes 5950 S. A public clearance sale on Thursday, February 14, 1895, of 75 sows bred to these and other noted boars. Inspection invited.

BERKSHIRE, Chester White, Jersey Red and Poland China PIGS. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep. Fancy Poultry. Hunting and House Dogs. Catalogue. **S. W. SMITH, Cochranville, Chester Co., Penna.**

JOHN A. DOWELL'S HERD REGISTERED POLAND-CHINA SWINE. Robinson, Brown Co., Kas. 130 head, all ages, headed by Onward 6981 S., sired by George Wilkes. He is assisted by Tecumseh Wilkes, sired by General Wilkes 12927. The females belong to the best strains. Come or write.

A. E. STALEY, Ottawa, Kansas. CHESTER WHITES and POLAND-CHINAS. Light Brahma cockerels, \$1.50.

PLEASANT VIEW STOCK FARM. J. A. WORLEY, Sabetha, Kansas. Poland-China Swine, Short-horn Cattle, Light Brahmas and G. L. Wyandottes. Herd headed by Anxiety 20251 A., assisted by Combination U. S. 13458 and America's Equal 12279. Have some choice fall pigs, both sexes, for sale, and a few Light Brahma cockerels. Eggs \$1 and \$1.50 per setting. Write. [Mention KANSAS FARMER.]

PRAIRIE COTTAGE FARM Home of the Chester White Hogs. **C. J. HUGGINS, Louisville and Wamego, Kansas.** Have for sale brood sows, two boars, also a nice lot of spring pigs of both sexes, the get of my herd boars, Ben Buster 6189 and Jerry Simpson 6161. Correspondence and inspect'n invited. Prices reasonable.

BROWN COUNTY HERD, PEDIGREED POLAND-CHINAS. ELI ZIMMERMAN, Hiawatha, Kas. 46 brood sows in herd, headed by Black U. S. Nemo (Vol. 9), Model Wilkes (Vol. 9), Sunset Chip (Vol. 9) and Billy Bundy (Vol. 9). Female lines: All Right, Short Stop, King I. X. L. Wilkes, Free Trade, Wamaker. Aged sows, bred glits and fall pigs for sale.

CATTLE.

SUNNY SLOPE FARM, C. S. CROSS, Proprietor, Emporia, Kas. Breeder of PURE-BRED HEREFORD CATTLE. Herd headed by Wild Tom 5152, a son of Bean Real 11055 and assisted by sons of Cherry Boy 26475, Archibald 1st 39258 and Washington 22615. 200 head, all ages, in herd. Strong in the blood of Lord Wilton, Anxiety and Horace. A choice lot of young heifers, fit for any company. Bulls all sold. Correspondence solicited, or, better still, a personal inspection invited.

SHANNON HILL STOCK FARM. G. W. GLICK, ATCHISON, KAS. Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Waterloo Duke of Shannon Hill No. 39879 and Winsome Duke 11th 115,137 at head of herd. Choice young bulls for sale now. Visitors welcome. Address **W. L. CHAFFEE, Manager.**

SWINE.

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

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

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

Evergreen Herd Poland-Chinas. J. F. & P. C. Winterscheidt, Horton, Brown Co., Kas. 150 in herd. Boars in service: Admiral Chip 7919 S., George Wilkes Jr. 11838 S., Corbett 11859 S. and Winterscheidt's Victor (Vol. 9). 45 sows bred for coming pig crop. 10 young boars and 40 glits ready to go. Write or come.

TOWER HILL HERD PEDIGREED POLAND-CHINAS. B. R. ADAMSON, Prop., Ft. Scott, Kas. 25 highly-bred brood sows of best strains, headed by Black Dandy 5809 S., Black Stop 10550 S. and Joker Wilkes 12882 S. About 100 selected individuals sold this season. 25 youngsters coming on now for choice. Write or come and visit my herd.

J. R. KILLOUGH & SONS, Richmond, Kansas, Breeders of **POLAND-CHINA SWINE** The very best strains. Nothing but first-class stock will be shipped to any. Come and see us or write.

STANDARD POLAND-CHINA HERD. CHAS. A. CANNON, Proprietor, HARRISONVILLE, CASS COUNTY, MISSOURI. Breeder and shipper of registered Poland-China swine of the best strains. Herd headed by Chow Chow 9903 S., assisted by a Black U. S. son of Imitation 27185 O., also a son of Tecumseh Jr. 10207 O. 220 head in herd. Young boars and glits yet on farm. Write or come and visit me.

P. A. PEARSON, Kinsley, Kansas, Breeder of **Poland-China Swine** All ages for sale. Herd headed by Dandy Jim Jr. and Royalty Medium, a son of Free Trade.

(Breeders' Directory continued on page 16.)

FARMERS!
Prevent Your Hogs From Rooting
By Using the Genuine

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

The Stock Interest.

FEEDING FOR THE SHOW RING.

By R. S. Cook, and read before the Kansas Swine Breeders' Association, January 8, 1895.

Is it advisable to feed the best animals for the show ring?

To begin, will say yes. We frequently hear breeders say, on being asked: "Where is that fine show animal you had out last year?" "Why, I ruined her by feeding her too heavy," or, "Got her too fat for breeding purposes and had to sell her on the market." That is all the evidence that we have that she was really ruined, which may be the case, but we have doubts on the subject. I may be mistaken, but am of the opinion that she was not a breeder in the first place; hence, she was sold after the fair. I have thought a good many times that there were animals in the show ring that were barren and were kept merely for show purposes and ought to be ruled out. As a rule, that kind make fine show animals. I believe if we feed the proper kind of food and give a variety and not too much corn or other heating food, we can successfully feed our best animals for show purposes without injury. In order to accomplish this object, we must feed more bone and muscle-forming food, such as wheat, oats and mill feed. I am able to say, with my short experience, that I am not aware that I spoiled any more than one animal by feeding for the show ring, and that was in my early experience, before I knew as much as I do now, and I still have a great deal to learn about feeding hogs. Some of the very best breeders I have in my herd have been my best show animals, not only raising me from one to two litters per year, but successful in the show ring also. With your permission I will make one or two illustrations: Lone Lawrence 56834 O. has been shown each fall in the show ring ever since she was 5 months old, and winning each year, and has raised me eight litters. She was 5 years old last April. Beauty's Prospect, another brood sow, has been very successful in show ring, as well as having the honor of raising eight pigs that carried off seven ribbons at the World's Fair, and has never failed to raise me at least one and sometimes two litters per year. Gem, one of her pigs that won first in class and herd, while in high flesh, notwithstanding that the breeders did not believe she would ever produce, was mated only once to produce one of the best litters I ever raised. She was also reasonably successful this fall, having carried off four firsts at our State fair and is now suckling a nice litter. To produce these two litters, she was only mated twice, once for each litter, which I think is strong evidence that it is not altogether the amount of flesh we have on our stock, but the manner and way we put it on and the kind of food we use. I could give other illustrations, but will not, for fear you may think I have taken this opportunity to advertise my herd.

Where is there a breeder that desires to go into the show ring with his second or third-class animals, if he expects to win? That is what he goes for, as well as to make a few sales, advertise and to show the public what can be produced from judicious mating and careful feeding. In order to win, we must have the best animal. Let it be horses, sheep, cattle or the much-abused hog, and he must have them in good flesh or he will surely get left.

One great object is for the breeder to learn what to feed and in what proportion, so as not to spoil the breeding qualities of his choice animals. As breeders desire to improve and climb higher and higher each year, each must take an interest in his profession and make it a study in order to succeed and show to the public what enterprise and push will do. He must use his best animals for that purpose. He cannot stand still, but must improve or go back. He must go up, climb higher and higher or some of his brother breeders will pass him on the road to success. Which will we do—climb higher, or let some other breeder succeed in the race and we take a second place? We ought to raise something

better each year than in the past and show to the world that the fine stock breeders of the West are not asleep, but that we are up and doing. I will ask the question: "Can fairs be run successfully without the aid of the fine stock breeders?" If not, then we are benefactors and we ought to lend our aid in making our best fairs a success and encourage a better class of stock-raising and a better class of farming. We cannot encourage these pursuits unless we bring out our best animals, our best farm products and our best fruits for inspection and show to the community what an enterprising people can do.

While I do not claim that all our fair managers are honest in their management, yet I think breeders are partly to blame, because, as a rule, they do not take the interest they might and see that they have a representation upon the board to look after their interests and put in a claim for recognition. Our enterprising standard-breeding horsemen will be there to see that they get their share of the profits while we are not put to the front, but are apt to stand back and find fault while we have no one to blame but ourselves.

Anti-Toxine for Hog Cholera.

EDITOR KANSAS FARMER:—As my former letter concerning anti-toxine as a remedy for hog cholera and swine plague does not seem to have attracted any considerable attention, will you kindly permit me to try once more to start an idea—one which, if correct, means more dollars to Kansas farmers than many others less known? I desire

tion, differing only as the disease differs and as efficient for the needs as is the former.

Now suppose our Chancellor Snow give the bugs a rest and devote some of the funds used in chinch bug experiments to hog cholera experiments. After all he has done to spread knowledge concerning the best way to fight bugs the work should be able to stand alone, and ignorance is inexcusable. In the hands of a private corporation it would have yielded millions of profits to the corporation ere this, so let us have the benefit of this also.

Piqua, Kas. A. T. ELLISON.

Wanted, Information.

EDITOR KANSAS FARMER:—Where can I get the best paper on sheep husbandry, especially mutton sheep? [Try *American Sheep Breeder*, Chicago.—EDITOR.]

What is an economical feed for ewes nursing January lambs?

How should lambs be fed and when marketed?

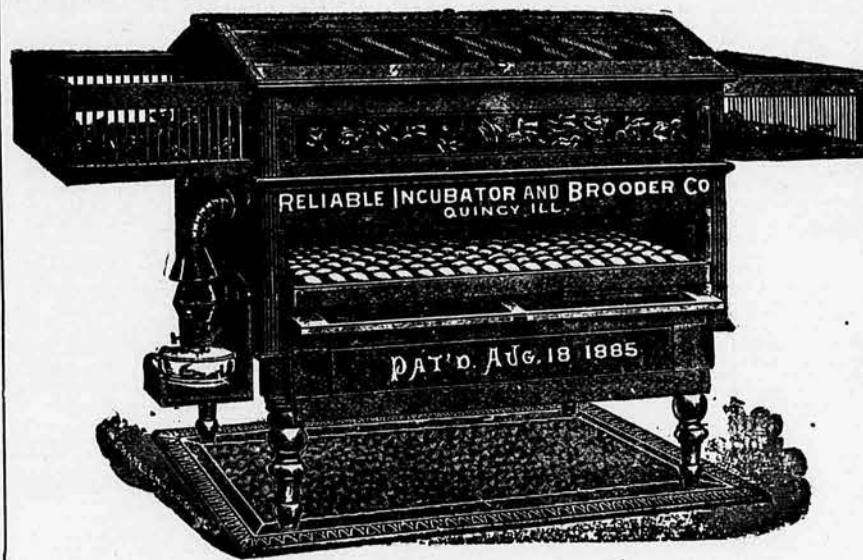
Am feeding ewes whole wheat at rate of three bushels per 100 head per day. For roughness, mixed hay and corn fodder. The lambs are fed ground wheat and oil meal.

Why is there so little in the KANSAS FARMER concerning the sheep industry?

I am greatly interested in the subject of subsoiling.

The only way I see to meet the low prices is to increase the product for the money and labor expended.

I think I can grow a pound of mutton for less than a pound of beef or pork,



RELIABLE INCUBATOR AND BROODER.

to call attention to the similarity of diphtheria and these two diseases. Diphtheria is a germ disease; so is swine plague. Each is most active in summer months.

Hog cholera, as shown by the government reports, usually begins with the pigs, old boars, etc., enjoying a comparative immunity from its attacks if healthy. In this respect it also resembles diphtheria, which is most fatal to children.

Finally, and on this I base my opinion: Persons having had diphtheria ever so slightly and persons who are exposed to it without contracting it are thoroughly immuned to the disease. Dr. Roux, of Paris, has shown this. It is true also of animals exposed or subject to diphtheria germs. Here again, the two, or more properly three diseases, resemble each other, the immunity to hog cholera and swine plague being enjoyed by all animals once having slightly contracted the disease, though slightly, and animals thoroughly exposed without contracting it.

In the case of diphtheria, Dr. Roux has shown that this immunity is due to an anti-toxine manufactured in the blood which resists the action of the disease germ. It is also true of animals as well as mankind.

Now, as to the immunity from hog cholera and swine plague, tell me, won't you, somebody? Perhaps it is due to a germ-proof and invisible coat of varnish covering the hog's body, or to a strainer which sad experience teaches him to wear in his throat, but I believe that it is due to an anti-toxine manufactured in the blood, just as there is when his swineplague has diphtheria germs injected into his circula-

and have the wool besides, which is worth considering, notwithstanding the free trade tariff.

Linwood, Kas. A. P. ASHBROOK.

Feeding Frozen Cabbage.

EDITOR KANSAS FARMER:—On January 23 I gave my experience with frozen cabbage as being fatal to hogs. Since then I have noticed several replies in regard to it, stating they believe I was deceived and that they believe it is not injurious to hogs. I wish to explain more definitely in regard to the condition of my hogs at the time the cabbage was fed to them. They had been fed on corn mixed with ground wheat, and water and milk, no green feed having been fed to them for five or six weeks previous to feeding the cabbage. It is my opinion that if they had been accustomed to green feed it would not have sickened them.

I have a neighbor who tells me that six years ago he had sixty-five large, fat hogs, strong and healthy. No cholera in the neighborhood. He also had a patch of frozen cabbage, and wishing to get rid of it, he turned his hogs on the cabbage, and to his sorrow they took sick, resulting in cholera. Every one died from the fatal disease.

It does not matter to me how much frozen vegetables other stock-raisers feed to their hogs, only so mine are deprived of it henceforth. My neighbors do not doubt what I have claimed—to have started cholera among my hogs—and it was at their request that I wrote my first article for the FARMER. Otherwise I would have been slow to expose my ignorance in feeding such unwholesome food to hogs. This was the first time we have had hog cholera

on our farm in more than forty years experience. We think we have learned something which will be valuable to us in the future, and are willing others shall benefit by it if they wish. Our hogs are dead and we have nothing more to say in regard to the cause of it.

We have bought one of Perine's subsoil plows, and will turn our attention to subsoiling and irrigating this coming season, and perhaps in the future we will tell the readers of the FARMER of our experience in that line.

Newton, Kas. J. E. STAUFFER.

The Champion All-Steel Frame Power Baling Press.

Truly we are living in an "age of steel." The metal construction rises supreme, and in no one line is the field so broad for development in this direction as in the manufacture of agricultural machinery of all kinds. The use of steel in the construction of baling press bodies is not new, and has been used successfully in the manufacture of horse-power presses for a number of years, but its application to steam-power presses has been heretofore proven almost a failure.

In a belt power baling press, the number of strokes in any given time being greater than on a horse press, the machine is subject to a proportionately greater strain. The largest percentage of the strain is lengthwise of the bale-chamber, and it can therefore be readily seen that if the steel frame is made of sections, riveted or fastened together near the retainer hook line, just back of the feed hole, the end strain will soon loosen the joint so that the rear or discharge end of the chamber will sag down, and it is only a matter of time when the entire body goes to pieces. This is the experience of those who have used steel-frame power presses constructed in the manner described. The Champion is a belt power press with an all-steel frame constructed without a joint in its entire length. This construction is accomplished by the use of steel angles running the entire length of the machine for the corners. To these angles are solidly riveted the bottom, top and sides, and a wrought truss encircles the body, holding it firmly and making it absolutely impossible to spring the body in the least. No cast-iron is used in the construction of the Champion all-steel frames, nothing but steel and wrought iron. This insures the minimum lightness and the greatest strength and durability attainable.

Another serious weakness in the steel power presses that have failed to stand up to the work, is the fact that all of the bearings are separate from each other, the boxes being bolted separately to the machine frame. It is a well-known fact in mechanics that it is impossible to bolt two metal faces together, where there is a reciprocating strain, as in a hay press, that will prevent their working loose. In a power baling press, driving the plunger backward and forward at the high rate of speed and under the great strain necessary, the gearing labors first one way and then another, so there is a continual pulling and pushing on the bearings, and where the boxes are bolted separately to the frame as described, they are bound to work loose, causing continual annoyance. All the shafting and gearing in a Champion belt power press are hung in a solid steel frame, independent of the body of the machine, like the works of a clock, so that it is utterly impossible for the shafting or gearing to work loose or get out of line. The main gudgeons, on which the inside driving gears revolve, firmly and immovably hold the power and bale-chamber together.

The power in the Champion All-Steel Belt Power Press is unlike any power ever before used in a baling press except the Champion wood-frame machine, which is well known.

The machine is equipped with friction clutches, so that it is always under the control of the operator and can be stopped and started at any time, irrespective of the driving power. The automatic feeder, the bell-ringing device which notifies when to put in the block, the Champion quick relief perpetual bale-chamber, all enter into the construction of this most excellent machine. The block-dropping attachment is especially desirable, as it increases the capacity of the press from two to three tons per day.

In addition to the above-described machine, the same company manufacture a complete line of two and four horse-power presses, as well as presses for a great many other purposes, and we would earnestly advise those of our readers who are needing a press for any purpose whatever to write to the Famous Manufacturing Co., Chicago, Ill., for their illustrated catalogue.

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

Agricultural Matters.

HOW HE PLANTS AND TENDS POTATOES.

EDITOR KANSAS FARMER:—I am in receipt of the following letter:

"I am a reader of the 'old reliable' KANSAS FARMER and could not do without it. Among the many good things it contains, there are none that interest me more than your articles on potatoes. I am an old grower and can fully substantiate all you have said.

"I am patiently waiting for you to tell what you have been doing this winter towards getting ready to work your patch. Can't you tell us about your tools? Mr. Edwin Taylor speaks of a 'Breed weeder,' also a 'Hallock weeder.' Can you tell us about one? I never heard of one before. Please describe the Planet Jr. cultivator with twelve teeth, and who are our State agents. I recognize in you a brother laborer who will readily answer our inquiries. Please do not cast this aside, but answer through the grand old FARMER, that I may file it away for future use."

The above letter explains itself. I have received others like this one, but this one covers more ground than the rest, and pays a just compliment to the farmers' great friend, the grand old KANSAS FARMER. It gives me pleasure to answer the above questions, as I had already promised to do so.

I have finished the spreading on of manure on the patch, all but a narrow strip. On each side of this narrow strip is a strip of the same width (twenty-one feet) that has the very best horse manure on one side and the very best cow barn manure on the other side, and I will use Armour

shall drive to stakes, using a steel jockey-stick to keep the horses steady and their heads always just so far apart. A sermon could be written with profit on the many uses of this stick in planting and all careful driving. I regard this clod-crusher and marker combined as an indispensable implement.

I have never seen a weeder in my life, and cannot describe them, but I have a tool of my own make that I call a weeder, that I shall use to cross the potatoes with, after the cultivator has done its work. I took the shafts of my sulky rake, and bolted a 2x6 that was seven and one-half feet long, that had two rows of three-eighths-inch holes, one inch from either edge. In these holes I put thirty-five steel teeth, thirty inches long, that I made out of old rake teeth, putting them two and one-half inches apart from center to center. The heads of these teeth were simply the ends turned over for an inch. I bolted a 1x6 board on the top of the 2x6, which kept the teeth in place, the ends being sunk in places that I burned for them. About six or eight inches from the lower ends of these teeth, I found it necessary to suspend, by chains, a board 1x6 that had thirty-five holes bored in it with a half-inch bit, for the teeth to pass through. This board prevents any one tooth from springing out of place and at the same time allows the teeth a certain amount of spring that will prevent any one being broken or bent. This implement is pulled by one horse and is simply a huge garden rake and

do not wonder that the practical readers of the KANSAS FARMER desire to learn through their own paper all about such improved tools.

CLARENCE J. NORTON.

Morantown, Kas.

Immediate and After Effects of Subsoiling.

EDITOR KANSAS FARMER:—As your correspondent has requested me to write up my experience with subsoiling the government station, which was located on my farm, I will try to give it. But with my fingers as well as my ears and feet frozen while pitching over feed to cattle this cold weather, it is hard work. If I could write this with a pitchfork and have one of my old steers sign my name with his horns, I could get up a pretty good "feed" of experience in subsoiling. But to take this little, insignificant bit of a pen to illustrate tearing the bowels of the earth up, as "Uncle Sam" gave me orders to do, on that forty acres, in the shape I now am in, I must be excused if I give it to you in my own plain way. But here goes.

For three successive years I was appointed director of the farming, with orders from Washington, D. C. My first order was to plow this forty acres twenty inches deep. It made my eyes bung out. Never heard of tickling Mother Earth that deep. On studying it over, I sent to the Deere people for a subsoiler, without ever seeing one. But here it came, a queer-looking cat, strong, like a spade with a colter in the center. I hitched four big mules

big-head on subsoiling, I went just across the creek, not thirty rods from station forty, in another field, and smashed some of that up. This was two years ago, and to my surprise I could see to the very furrow where I stopped. The crop was dried and withered up where I subsoiled. The top soil seemed to be the same as in the station forty, and I took my spade and dug down twenty inches and found a sand and gravel subsoil, and the water leached away and left my crop to perish. My advice is to you, my brother farmer, to dig holes all over your fields, and if you find sand and gravel down in the subsoil, gently hang your subsoil plow in a fence corner; but if you have a black clay or gumbo or hard-pan, providing Clarence Norton will loan you his big stallion, "burst it up." But never, under any circumstances, plow over six inches deep, but poke the subsoiler down deep as you can. The next year let your plow run ten or twelve inches deep, plow the opposite way plowed and subsoiled the year before, and you will be blessed with a crop. I will say right here, if we Western farmers who have the right kind of soil will devote the work and expense to subsoiling that we would do necessary for irrigation, it will be far more profitable in the long run. And if nature will not buck against us too much, we will retain all the rain and snow that falls, instead of having it run off down our creeks.

But here is another pointer which I find works splendidly: In the fall or winter list your ground east and west. It holds the snow and rain. In the spring, after the weeds start nicely, burst the ridges and plant. It does up the weeds and fills the trenches with loose dirt and acts like a mulch for the corn roots, and it is a winner.

ELI BENEDICT.

Medicine Lodge (during the storm).

Mulching Potatoes.

EDITOR KANSAS FARMER:—I see in the last FARMER that H. M. Stutsman would like to hear about mulching potatoes. I will give my experience for twenty years in this (McPherson) county. I haul the straw in the winter and make a big and straight windrow as long as my potato patch. A big load of straw will cover about two rods of ground each side of the windrow. About the middle of May I used to start my twelve-inch plow, run it deep and have two or three boys stick the cut seed in the side of every third furrow, about fifteen inches apart and about half way down, so the next furrow will cover the seed good. Stick the seed in the mellow soil, so the horses will not step on them. When I am done plowing I am done planting. Next, when I see my potatoes coming up, I spread my straw—cover deep enough so I can not see the ground. I used to raise 200 bushels per acre, when it used to rain some. But the last two years I would not get more than fifty bushels. Early potatoes I do not mulch on account of frost.

Elyria, Kas.

B. REICHERT.

They Show Their Goods.

The Reliable Incubator & Brooder Co., of Quincy, Ill., reports the following favors at the hands of Western fairs and poultry shows during the past season:

Special written commendation at the Illinois State fair, Springfield (the State capital), September 24-29, 1894. (No premium offered.)

First premium (silver medal) at the thirty-fifth annual St. Louis fair, October 1-14, 1894.

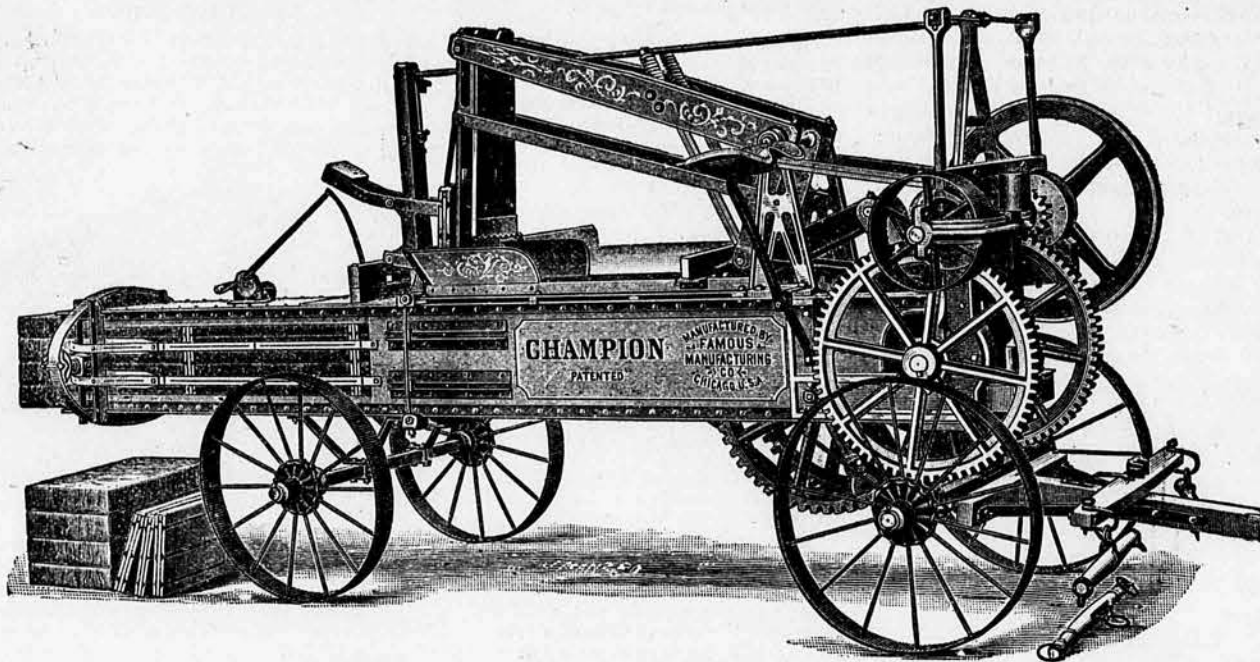
First premium at the Missouri State Poultry show, Macon, Mo., December 11-14, 1894.

First premium at the great Mid-Continental Poultry exhibition, Kansas City, Mo., December 18-26, 1894.

First premium at the Illinois State Poultry show, Bloomington, Ill., January 12-18, 1895.

First premium at the Northwestern Pennsylvania Poultry show, held at Erie, Pa., January 29 to February 2, 1895.

For 112-page Illustrated Incubator Catalogue and Poultry Guide, and 48-page Illustrated Poultry Catalogue, send 6 cents in stamps to Reliable Incubator & Brooder Co., Quincy, Ill.



CHAMPION ALL-STEEL FRAME POWER BALING PRESS.

Packing Co.'s "blood and bone fertilizer" on this strip to test its merits as compared with our very best home manures. I shall apply the "blood and bone" after the crop is planted, and harrow it in, also harrow the rest, that there may be no extra tilling of the one above the other. Shall also make a complete test of the Early Kansas potato on each of these three strips, beside two other of the very best varieties. If the season permits, shall try to plant between March 15 and April 1. I shall plow the ground with a seventeen-inch Cassady sulky plow and hope to follow with Perine's new subsoil plow, harrow thoroughly with an all-steel Eagle slanting-tooth harrow, cross-plank and cross-mark, furrow out with cultivator and drop by hand opposite the cross-marks, and expect to get in nearly ten bushels of seed on an acre. My planker, or float, called clod-crusher by some, is made of 4x4x8 strips, six of them, that are bolted together by two bolts that have an eye on one end, and an inch space is left between the pieces, which are held with the edge down and not the flat surface. The spaces between the strips enable one to punch down any moist soil that is inclined to load up underneath. The implement will be drawn by means of a chain and three horses and I shall stand and drive. On the back of this clod-crusher are bolted 2x4 runners that are fourteen inches from center to center, and when these runners are down it will be drawn by means of a tongue that hooks into the bolts that have eyes, by two horses. I

the work done is very similar.

Space forbids me describing the Planet Jr. twelve-tooth cultivator and pulverizer as I would like to, but I shall have more to say about this implement later on. I am not acquainted with any other similar implement, but I am of the opinion this tool will make enough more crop on one-fourth acre to pay for itself, and then it is such a pleasure to run one. It is all steel but the handles, has a gauge-wheel with a regulating lever, can be spread out to thirty-two inches, or narrowed up to twelve in an instant by a lever; has a pulverizer twenty-five inches wide that will do the work of a slanting-tooth harrow of that width. This pulverizer is instantly worked by the foot and gauges the depth of the rear end of the machine, which is a very important point. The cultivator teeth are shaped like an inverted letter V, and can be run close to a plant without covering it up. I shall run this with one horse and lead the other with the weeder, thus weeding twice and going as fast as I cultivate once. The State agents for this tool are the Trumbull Seed Co., of Kansas City, Mo., and the factory price is \$12, their price \$8.25. Any inquiry addressed to the Planet Jr. Co., of Philadelphia, Pa., will bring you their catalogue and a card referring you to their State agents in Kansas City, as above mentioned. It seems like advertising to praise the Planet Jr. tools so, but when such men as Terry, Henderson, Greiner, Thomas and Mr. Taylor publicly recommend them as a money-making investment, I

to it, poked its nose into the ground and it set the moles a bad example. Worked five mules on a riding plow set ten inches deep, then let the subsoiler follow ten inches deep in furrow. Such a popping and breaking up as those plows did give that ground, I had never witnessed, and at once saw that "Uncle Sam" knew how to farm.

Now, for results, and pointers, or mistakes, as Eastern men would call them. On harrowing it down I at once saw we had let the riding plow run three or four inches too deep, as that three or four inches of subsoil dried out and would not pulverize, and, as that was on top, we had hard work getting a stand of cane. But in spite of all we raised a grand crop. The next year I plowed the ground ten inches deep, and such a seed-bed! The cane shot out, and, with the best of farming, although a dry year, we made a record-breaker that has never been approached since. But, boys, "Uncle Sam" paid for the music, and I would have got fired if I had left a weed in that forty acres. The next year it was so dry that cane was a failure, but this forty shoved it out and made a splendid crop.

Last year, as the forty was not used by "Uncle Sam," I felt I had a good field to farm. Plowed it twelve inches deep with riding plow. On the 10th day of May I sowed it to alfalfa, and in sixty-five days it went seventeen inches in the ground and seventeen inches above ground. Cut a grand crop of hay.

Now for pointers. As it gave me the

Irrigation.

How Use a Wet-Weather Creek?

EDITOR KANSAS FARMER:—I am much interested in irrigation. I have a wet-weather creek on my land. The banks are about ten feet high, and in the spring, sometimes, the water runs bank full. How should I make a dam so it would not wash out? I have no stone, but I have plenty of big Osage hedge on my land. How big a windmill and how big a pump would I need to pump the water direct on my land?

Can some one of your many readers tell me where I can get the Mammoth Pearl potato for seed? It used to do the best with me. It is a strong grower and a late keeper. I would like to get hold of a good late potato.
B. REICHERT.
Ellyria, Kas.

Our correspondent can scarcely get more valuable instruction as to the details of storing storm waters than by studying carefully the paper of Geo. M. Munger, on "Irrigating a Five Hundred-Acre Orchard," in the KANSAS FARMER of January 16, 1895. Mr. Munger's enterprise is on a large scale and he has thoroughly mastered the details. His plans are equally applicable to smaller works. In studying Mr. Munger's plans, special attention should be given to the provision he makes for the passage of excessive floods without endangering his dam. Where no water is allowed to pass over it an earthen embankment is the cheapest dam and is safe and effective.

The question of pump and power to be used depends upon the height to which the water is to be raised and the amount of land to be irrigated. The plan of raising the water in sufficient volume to apply it directly to the land has the advantage of saving great waste from seepage and evaporation. For field irrigation it will not be wise to provide less than a cubic foot of water per second—about 450 gallons per minute—and if the amount to be irrigated is large and the land is even and comparatively level four times this amount may be used more economically both in labor and water.

If your lift is, say, twenty-five feet, windmill manufacturers will probably recommend that for one cubic foot per second you use a twenty-five or thirty-foot windmill; that the pump used have a cylinder twenty inches in diameter by eighteen-inch stroke and connected with a fifteen-inch suction pipe. The discharge pipe may be smaller—an eight-inch discharge pipe will answer.

Many irrigators are unwilling to depend on the wind for power. Gasoline and steam engines are more certain to handle the water when it is needed.

For the seed potatoes wanted write to some of the large seed houses advertised in the KANSAS FARMER.

His Irrigation Plant.

William Baird, of Vesper, Lincoln county, contributes an interesting paper to the Lincoln Beacon, from which the following is taken:

"In the spring of 1883 I prepared a bed, or rather a mound, about six feet in diameter and about four inches high. In the center of this I dug a hole one foot deep and large enough to admit a barrel. Before putting the barrel in the hole I first bored some small holes in the bottom and sides. After placing the barrel in the ground I filled it full of barnyard manure, then filled the barrel with water. Around the barrel I set three strawberry plants which I had procured by mail. The three plants cost me \$1. I gave them all the care possible and kept the barrel well filled with water. I soon had to enlarge the bed—the young plants had completely covered the ground for four feet all around the barrel. In the fall I took up and set out in another place 1,700 plants and left enough for a nice bed eight feet square, which yielded an abundant crop the next year—1884. I also prepared other plats of ground in 1883 and treated them in different ways. Some I watered with a watering-pot, over the surface; others I dug small ditches around and filled with water. In every instance where I got water enough on the yield was large and satisfactory.

"In the spring of 1884 I began a system of sub-irrigation by putting small dams in the creek and backing the

water up and holding it as near the top as was necessary to get the required amount of moisture.

"That year I planted one-fourth of an acre to Wethersfield onion seed, and in the fall I harvested 125 bushels of onions, or at the rate of 500 bushels per acre. These onions I sold for \$1.75 per bushel, which would be \$875 per acre.

"I also planted one-fourth of an acre to Cuban Queen watermelons, from which I sold \$300 worth, and when frost came in the fall there were 1,000 melons on the ground that would weigh from ten to forty pounds. Many of the melons weighed from sixty to seventy-five pounds. The largest weighed eighty-seven and three-fourths pounds.

"I also raised carrots that would yield ten tons per acre, and stock beets or mangels that would yield twenty-five tons per acre.

"So well was I pleased with my success so far that I determined to put in a larger and more extensive plant on a different system.

"But before I conclude this letter I wish to give a few pointers, and my opinion about irrigation in central and western Kansas.

"I don't wish any one should come to the conclusion from what I have said that irrigation all profit and pleasure, with no expense or labor, for such was not the case. Even raising the smallest plant is attended with some expense and considerable hard labor. But we must bear in mind that 'There is no excellence without great labor.' Neither do I wish to discourage any one, for 'All that other folks can do, why with patience should not you?' I sincerely believe that all who attempt to irrigate and will go at it in a systematic and intelligent manner will succeed; that is, they will be well paid for their specialized labor and expense.

"But there are several things to be considered along with irrigation. A few of them I will mention here:

"First—The first thing to be considered is the water supply.

"Second—The soil and its adaptability to irrigation.

"Third—The proper construction of dams and ditches.

"Fourth—Pumping apparatus and reservoirs for storing water.

"Fifth—When and how to apply the water.

"Sixth—The most remunerative crops to raise."

Irrigation in Pennsylvania.

It is a question if limited irrigation would not pay in all parts of the country. Suppose that during the severe drought of last summer, each farmer could have released a refreshing flood on his parched fields. Just imagine the crops that could have been grown! With irrigation the crop would have completed its entire growth during the hot summer days.

There are many farms where a pond of water could be dammed up in some nook where it would serve for watering stock and be ready for an emergency of drought.

It is not necessary to irrigate the whole farm, but special fields of convenient location.

Where no stream can be controlled, a well and a windmill can do the work. A windmill is needed on every farm, and if a well cannot be dug to the proper depth, then have a well drilled down to living water in the rock. This will not cost so much as the loss by drought in one season.

The fact is, nine out of ten of the old wells are unreliable for stock and unfit for human use. The necessities of the case make limited irrigation practicable, even in this section. A clear, sparkling pool in summer is a luxury, and in winter it may be made to furnish ice for the use of the dairy in summer.

We believe that limited irrigation will not only add to the profits of farming, but to its comforts and attractiveness.—*Pennsylvania Farmer.*

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

Flow Tables.

CUBIC FOOT AND ITS EQUIVALENTS.
One cubic foot of water per second equals:
7½ (7.48052) U. S. gallons per second.
62½ pounds per second.
60 cubic feet per minute.
449 (448.881) U. S. gallons per minute.
3,750 pounds per minute.
1.875 tons per minute.
8,000 cubic feet per hour.
26,980 U. S. gallons per hour.
112½ tons per hour.
86,400 cubic feet per day.
646,817 U. S. gallons per day.
2,700 tons per day.
1 acre inch per hour.
24 acre inches per day.
2 acre feet per day.
59½ acre feet in 30 days.
181 acre feet in 3 months.
724 acre feet in 1 year.
50 California miner's inches.
38.4 Colorado miner's inches.

One cubic foot per second will flood:
100 acres in 100 days 24 inches deep.
150 acres in 100 days 18 inches deep.
200 acres in 100 days 12 inches deep.
362 acres in 1 year 24 inches deep.
724 acres in 1 year 12 inches deep.

CALIFORNIA MINER'S INCH AND ITS EQUIVALENTS.

One California miner's inch equals:
34.56 cubic inches per second.
.02 or 1-50 cubic foot per second.
.15 U. S. gallons per second.
1½ pounds per second.
1.2 cubic feet per minute.
9 U. S. gallons per minute.
75 pounds per minute.
72 cubic feet per hour.
538½ U. S. gallons per hour.
2½ tons per hour.
1,728 cubic feet per day.
12,926 U. S. gallons per day.
54 tons per day.
48 acre inches in 1 day.
.04 acre feet in 1 day.
1.19 acre feet in 30 days.
3.62 acre feet in 3 months.
14.48 acre feet in 1 year.
.768 Colorado miner's inch.

One California miner's inch will flood:
2 acres in 100 days 24 inches deep.
4 acres in 100 days 12 inches deep.
7½ acres in 1 year 24 inches deep.
11 acres in 1 year 18 inches deep.
14½ acres in 1 year 12 inches deep.

COLORADO MINER'S INCH AND ITS EQUIVALENTS.

One Colorado miner's inch equals:
45 cubic inches per second.
.026 cubic feet per second.
.195 U. S. gallons per second.
1.63 pounds per second.
1.56 cubic feet per minute.
11.688 U. S. gallons per minute.
97½ pounds per minute.
93½ cubic feet per hour.
701.3 U. S. gallons per hour.
2.93 tons per hour.
2,250 cubic feet per day.
16,831 U. S. gallons per day.
70.31 tons per day.
.025 acre inches in 1 day.
.051658 acre feet in 1 day.
1.55 acre feet in 30 days.
4.713 acre feet in 3 months.
18,853 acre feet in 1 year.
1.3 California miner's inches.

One Colorado miner's inch will flood:
2.6 acres in 100 days 24 inches deep.
5.2 acres in 100 days 12 inches deep.
9.5 acres in 1 year 24 inches deep.
14.25 acres in 1 year 18 inches deep.
19 acres in 1 year 12 inches deep.

Tile Irrigation.

The following letter from Andrew Linn, of Osborne, Kas., to the Dickey Clay Manufacturing Co., of Kansas City, contains interesting and valuable information:

"Yours of the 2d at hand, and will say in reply that I am more than satisfied with my sub-irrigation plant. I have been running my pump all winter, and have my three acres all soaked up and in fine shape for gardening in the spring. Last spring I put in 300 feet of tiling, and I found I could raise anything I planted. Some say it is too expensive. My garden is in town, and if I had to build a reservoir on it, the land that I would have to use for that purpose would almost buy the tiling. As I pump direct into the tiling this does away with the reservoirs.

"I have my tiling so arranged that I can wet any part of my garden whenever I choose. My tiling (three-inch) is laid sixteen inches deep, and the water comes up to the top when thoroughly soaked. I have a well forty-three feet deep. I use a five-inch pump and a twelve-foot Gem mill. I can lift 800 barrels per day, and there is no evaporation, as it pumps direct into the tiling.

"I will want a car of tiling in the spring for my neighbors. What can

you lay me down three and four-inch tiling f. o. b. Osborne for? Any inquiries directed to me concerning sub-irrigation will be answered."

Legal Tender Seed Corn.

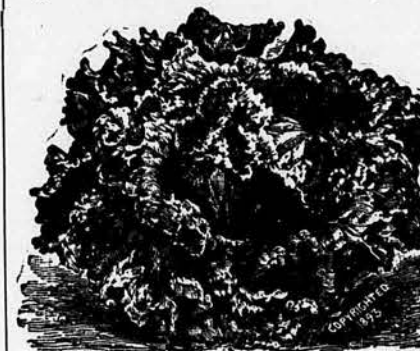
The Legal Tender corn is an exceedingly fine thoroughbred yellow dent variety of large size and even color. There is hardly a variation in the shade of a large crib containing several hundred bushels, as seen at



Livingston's Seed Store, Des Moines, Iowa. The grain is very deep and glossy, not inclined to be flinty and is firmly set on a soft red cob. Ears have very straight rows, numbering as high as twenty-two in a great many specimens. The corn is right in size, being as large as it is safe to grow in central Iowa; it is right in color, being an even, rich, glossy yellow; it is right in depth of grain, being from one-half to three-quarters of an inch. It's worth a liberal trial. Sample grains and a catalogue will be cheerfully sent to any one interested, by Livingston's Seed Store, Des Moines, Iowa.

New Iceberg Lettuce.

There is no handsomer or more solid cabbage lettuce in cultivation—in fact, it is strikingly beautiful. The large, curly leaves which cover the outside of the solid heads are of a bright light green, with a very slight reddish tinge at the edges; they



have small indents, which are constantly filled with dew-drops. They are thus kept fresh, and show a remarkably crystalline appearance, which well warrants the name of Iceberg. The unusual solidity of the heads is insured by the large, white main ribs of the leaves, making it impossible for the leaves to open outward and expose the center, which is constantly thoroughly blanched. It matters not whether in the early spring or the hottest days of summer, the quality is simply perfect. So long-standing and hard are the heads that they seldom shoot up to seed unless cut open with a knife. We have seldom seen such superb heads of lettuce, and we confidently recommend the New Iceberg Lettuce as surpassingly fine for the home garden and equally valuable for market; its beautiful appearance insures quick sales. Readers who are interested in gardening, should send for a handsome free "Garden Annual" describing the above and many other good things for the garden. Address Cole's Seed Store, Pella, Iowa.

A COUGH, COLD OR SORE THROAT requires immediate attention. Brown's Bronchial Troches will invariably give relief.

WITTE GASOLINE ENGINE

Nothing Succeeds Like

SUCCESS.

WITTE IRON WORKS,

Kansas City, Mo. 1 CENT 1 HORSE 1 HOUR.

DRAIN TILE

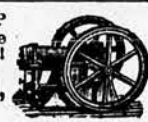
W. S. DICKEY CLAY MFG. CO.,
20th and Main Sts., Kansas City, Mo.

IRRIGATION.

DO YOU USE POWER?

WEBER Gasoline Engines run anything. For catalogue and testimonials address Weber Gas and Gasoline Engine Co.,

ALL RIGHT; you need CHEAP POWER. ONE CENT per horse power per HOUR is CHEAP! "Economy in power," our motto. 459 Southwest Boulevard, KANSAS CITY, MO.



Field Notes.

Our readers interested in jack stock will find elsewhere in this issue an announcement of the closing-out combination sale of fifty head of jacks and jennets that will go to the highest bidder, on Wednesday, March 20, 1895, at Liberty, Clay county, Missouri. The offerings will consist of a strong, well-bred, toppy lot of jacks ready for service, and among them some good jennet jacks, ranging from fifteen to sixteen hands high. The jennets are a large and likely lot that were selected as foundation stock for a permanent jack stud farm, and in common with the jacks will go to the highest bidder without reserve. No better lot was ever offered at public auction on Missouri soil. As the sale will be under cover, no postponement will occur on account of inclement weather. For further particulars write Messrs. Bevins & Davis, Liberty, Clay county, Missouri. Col. S. A. Sawyer, the well-known live stock auctioneer of Manhattan, Kas., will officiate from the block.

L. N. Kennedy's sale of Poland-China swine came off last week (Wednesday), on his farm near Nevada, Mo. Buyers were on hand from Kansas, Texas and Missouri. Col. J. W. Sparks, of Marshall, Mo., did the honors of the block, and after a bounteous lunch at noon, sold thirty-eight, making an average of \$20. E. W. McElhany, of Sedalia, Mo., topped the sale on the sow, Kinky Wilkes (28796), at \$45. B. R. Adamson, of Fort Scott, Kas., ranked second on Quality Wilkes (28800) with a litter of seven one-day-old pigs, for \$40. J. T. Jennings, of Lewis, Mo., paid \$38 for Jimima W. (28790). W. T. Young, of Fort Scott, Kas., got a bargain in a sow at \$30. J. W. Lillard, of Vernon, Mo., bought twelve head, ranging in price from \$10 to \$30. The offerings were in fairly good sales-ring condition and were well-bred Wilkes and Free Trade blood. The aged boar, George Free Trade, was not sold and yet awaits the coming of some new master. About half the herd are yet on the farm and among them are ten April, May and June, 1894, farrows, and a nice strong lot of fall pigs, of both sexes, which will go to buyers at private sale.

Mr. John A. Dowell's first annual reduction sale of pedigreed Poland-China swine took place last Thursday, the 28th ult., on his farm, four miles north of Robinson, Brown county. Buyers and visitors were present from Missouri, Nebraska and Kansas. The offerings were in good sales-ring condition and consisted of brood sows and bred gilts, the major portion being the latter. They brought fairly good prices, considering the downward tendency of porkers, the price of corn and the season of the year. Dr. T. H. Grennell, of Onaga, Pottawatomie county, topped the sale on both boar and sow, paying \$60 for the aged boar, Onward 8981, a son of George Wilkes, that sold for \$750. For the sow he paid \$41, closely followed by R. T. Scott, of Pawnee City, Neb., who bid the sow No. 8 of catalogue off at \$40. Twelve of the thirty-one head sold went to Nebraska. Thirty sows and gilts made an average of \$20.03, and, with the boar Onward, the thirty-one head averaged \$21.32. The buyers were Dr. T. H. Grennell, Onaga, Kas.; Joseph Hayton, Troy; James Breeding, R. King, Lum Brown; J. F. Trapp, Robinson; C. R. Jones, Elwood; J. T. Sherman, Robinson; A. Robinson, Robinson; Walter Brandt, Robinson; W. Wood, Highland; J. F. Strickler, Highland; and from Nebraska, E. F. Fassett, Firth; R. T. Scott, Pawnee City; W. H. Dochorn, Verdon, and E. E. Day, Weeping Water.

The writer, last week, made a day's visit with Mr. W. S. Attebury and family, whose farm lies two miles south of Rossville, on the Union Pacific railway, and sixteen miles west of the State capital, Topeka. Mr. Attebury has resided here eight years, and five years since he founded his herd of Chester White swine by the best to be had from Silver, of Ohio, Dorsey, of Illinois, Todd, of Iowa, and Canaday, of Missouri, and since has added recruits from time to time that were the best in the United States. The herd now consists of seventy head, all ages, headed by two harem kings—the two-year-old Kaw Valley Pride 6601, that was bred by the well-known Kansas breeder, C. J. Huggins. He was sired by Romeo 59371, dam Juliette 6520. He is a large, smooth, broad-backed, deep-hammed fellow and a strong sire, as his sons and daughters are generally the toppy kind selected by the well-up Chester breeder. He is assisted by the sixteen-months chap, Free Silver 6851, bred by Silvers and sired by Gov. Campbell 1199 and out of Blanche 10173 A. Every Chester breeder that sees him pronounces him a good one. In the brooder division are fourteen females over 1 year, and among them is one of the best individuals known to the writer in all Kansas, with name and record number, Pride of Kansas 6914 (Vol. 4), by Ohio Eclipse 8713 and out of Zoe 5846. Close up in her company comes the two-year-old May 6912, that was bred by the Dorseys and sired by Mt. Grove 50411, dam Miss D. (Vol. 8). By her, in the short list, is the two-year-old Snowball 7648, by Jerry Simp-

son 6161 and out of the harem queen, Pride of Kansas 6914. She was bred on the farm and one of the best in the herd. Ranking well up is the yearling Bess, bred here, too, whose record number is 7650, sired by Jerry Simpson 6161 and out of Attebury Maid 6682. Her dam is by Bismarck 5805 and out of Lula 8223, that was bred by Canaday. Another one that came from Canaday is the two-year-old Daisy, a daughter of Beauty 5897 and out of Maud S. 8208. The visitor finds the entire fourteen that are coming on in expectancy for the prospective spring pig crop, of the large, smooth, growthy, early-maturing and prolific kind. Space forbids further notes except to state that they are bred to farrow in March and April. On inspecting the herd, one finds seven choice gilts that were retained for usefulness and bred to farrow along about June 1. There are about thirty youngsters of 1894 farrow, sired by the aforementioned boars, that are coming on in good form and among them several choice ones that could be sent out now. There are also four young boars, three of June, 1894, farrow that were sired by Pride of Kaw Valley and one by Pride of Kansas. The latter boar was farrowed in August, 1894, out of Daisy by Free Silver. All four are worthy the choice of a new master, with perhaps a little preference for the August born fellow. Some few gilts yet that might go. Every animal in the herd is registered or eligible and worthy the inspection of the swine breeder. W. P. BRUSH.

Chicago Market Review.

Our Chicago correspondent writes under date March 2 as follows:

"Saturday's markets showed some weakening all around from the late Friday trade. May wheat sold 54½¢, early and eased to 54¼¢, to 54½¢, with little rally. Corn sold 45½¢, and 44½¢, to 44¼¢. Oats sold off ¼¢. Pork lost 7½¢, from last night at \$10.30 before the call.

"It was evident at the opening this morning that there was a flood of 'long' wheat for sale. There were several reasons for this. The cold wave did not prove at all what the bulls expected. There was no terror in the weather conditions. The English cables were less favorable than expected, coming about steady. The first sign of weakness checked all buying by shorts, if indeed they have been much of a feature at any time on the advance. At the same time the indication of a reaction and evening up for Saturday caused many to sell quickly. May price opened ¼¢ off at 54½¢, and dropped to 54¼¢, to 54½¢, on early sales, rallied twice but finally dropped to 54¢, flat, with sellers excited. But the trade was not without supporting influences. Northwest receipts were lighter at 802 cars against 852 a year ago. Primary markets showed very light receipts outside of Minneapolis and Duluth. Four shipments alone from Western markets again exceeded total wheat receipts at all points.

"There was little speculative market in corn at any time. When wheat weakened corn lost about the same. When wheat firmed at the close corn followed.

"Oats ruled a shade lower in sympathy with corn, trade being unusually light. Rye evinced some easiness of feeling to-day, but light offerings. Barley remained quiet but steady in value. Flaxseed was dull and low on cash account. The opening and closing as follows:

"Wheat—March, opened 52½¢, closed 52½¢; May, opened 54½¢, closed 54½¢; July, opened 55½¢, closed 55½¢.

"Corn—May, opened 44½¢, closed 45¢; July, opened 44½¢, closed 44½¢.

"Oats—May, opened 29½¢, closed 29½¢; June, opened 28½¢, closed 28½¢.

"Pork—May, opened \$10.35, closed \$10.35.

"Lard—May, opened \$8.52½, closed \$8.50; July, opened \$8.60, closed \$8.60.

"Ribs—May, opened \$5.30, closed \$5.30; July, opened \$5.45, closed \$5.45."

"Receipts of stock this week as follows: 41,991 cattle, 2,187 calves, 184,708 hogs, 50,349 sheep.

"The market on cattle has felt the shortage in supply and values have been gaining strength right along. Steers of useful quality have advanced about 25 cents and all cow stock, except canners, has been gaining some strength, although not as much as on steers, for the reason that it was selling high before the advance in steers began. Feeders of any kind of quality have to compete with killers and are high, while common, thin stockers do not get much advance. We quote: Extra heaves, \$5.40 to \$6.00; good to choice 1,350 to 1,600-pound steers, \$4.75 to \$5.40; fair to good, 1,350 to 1,600 pounds, \$4 to \$4.60; choice fat light steers, 1,050 to 1,200 pounds, \$4.60 to \$5.25; ordinary to good, same weights, \$3.60 to \$4.50; fair to good feeding steers, \$3.50 to \$4.25; thin to fair stockers, \$3.25 to \$3.25; good to fancy cows and heifers, \$3.50 to \$4.25; fair to good cows, \$2.75 to \$3.40; canners, \$1.25 to \$2.35.

"There has been out little change in market conditions on hogs this week. The demand from packers and shippers has been about equal to the supply and demand each day has moved off at a fairly lively pace as long as sellers were contented to

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Agents wanted to sell direct to Farmers. Big commissions and lowest prices on Manila and Sisal Twine.

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Arched Hedge-Trimmer!

In working up this invention our leading thought was to produce a horse Hedge-Trimmer which would be so cheap and efficient that any one who has a mile of hedge to trim can afford to buy one. By means of this device a grass mow can be transformed into a perfect hedge-trimmer in ten minutes, which will cut any desired height or width, and as even as grass stubble in a meadow, and will trim from six to eight miles of hedge in a day. Sold direct to the farmer for \$25, on easy terms. No agents. E. C. GORDON & SONS, Chetopa, Kas.



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Drought-Proof Field Corn.

Here is something new. Despite 110 days without a drop of rain, Salzer's new Yellow Dent corn yielded on a large acreage over sixty-eight bushels per acre, while the Department of Agriculture reports the average yield of corn but a trifle over twenty bushels per acre in the United States. Now think of the possibilities of this corn in a good corn season! It will go double this yield then, or 136 bushels.

If You Will Cut This Out and Send It with 14 cents postage, to the John A. Salzer Seed Co., La Crosse, Wis., you will get free a package of this drought-proof corn and their mammoth catalogue.

Cured Pain in the Back.

The Dr. J. H. McLean Med. Co., St. Louis, Mo.: GENTLEMEN:—About three years ago my son, then 5 years old, suffered severely from weakness and pain in the back; he could not get up without help. I was told Dr. J. H. McLean's Liver and Kidney Balm was good for kidney diseases and pain in the back, so I bought a bottle. He began to improve at once, was soon well and strong and has had no such trouble since. I think your Liver and Kidney Balm is a great medicine. W. A. SNYDER. Baldwin, Gilmer Co., W. Va., January 14, 1895.

Florida, Cheap.

Special one-way excursions via the Memphis Route (Kansas City, Fort Scott & Memphis railroad), on Tuesday, March 5, and April 2, to all points in Florida, at greatly reduced rates, 1½ cents per mile. The "Memphis" is the daily through car line from the West to Florida—and the only one.

For maps and full particulars, ask a Memphis Route agent, or J. E. LOCKWOOD, G. P. A., Kansas City, Mo.

The Home Circle.

To Correspondents.

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

THE "NEW WOMAN."

She does not "languish in her bower,"
Or squander all the golden day
In fashioning a gaudy flower
Upon a wretched spray;
Nor is she quite content to wait
Behind her "rose-wreathed lattice pane"
Until beside her father's gate
The gallant Prince draws rein."

The brave "new woman" scorns to sigh,
And count it "such a grievous thing"
That year on year should hurry by
And no gay suitor bring.
In labor's ranks she takes her place,
With skillful hands and cultured mind,
Not always foremost in the race,
But never far behind.

And not less lightly fall her feet
Because they tread the busy ways;
She is no whit less fair and sweet
Than maids of olden days,
Who, gowned in samite or brocade,
Looked charming in their dainty guise,
But dwelt like violets in the shade,
With shy, half-opened eyes.

Of life she takes a clearer view,
And through the press serenely moves,
Unfettered, free, with judgment true
Avoiding narrow grooves.
She reasons and she understands,
And sometimes 'tis her joy and crown
To lift with strong yet tender hands
The burdens men lay down.
—E. Matheson, in Chambers' Journal.

THE BUILDERS.

All are architects of Fate,
Working in these walls of Time;
Some with massive deeds and great,
Some with ornaments of rhyme.

Nothing useless is, or low;
Each thing in its place is best;
And what seems but idle show
Strengthens and supports the rest.

For the structure that we raise,
Time is with materials filled;
Our to-days and yesterdays
Are the blocks with which we build.
—Longfellow.

BIRTH MONTH BROOCH.

The Latest Kink in Jewelry Is Really a
Pleasing Novelty.

Have you a birth month brooch? Of course you have a natal stone ring, but the birth-month jewelry is different. There are no stones in it at all, it is of beautifully wrought gold. The brooches are made in twelve designs, introducing the signs of the zodiac, hieroglyphs and flowers allotted to each month, so that each tells the story of the birth month.

January is represented by Aquarius, the water-man, sprinkling with his urn a wreath of snowdrops, the symbol of purity. February's wreath of primroses surrounds the fishes. The head of Arias the Ram is framed by a circle of March violets, denoting love. April is announced by Taurus, the Bull, looking out from a wreath of daisies, symbolic of innocence. A bower of hawthorn arches above May's twins, Gemini. June's honeysuckle surrounds Cancer the Crab. Leo, the rampant Lion of July, is wrought upon a shield bordered with water lilies. August is represented by a shell clasped in poppies upon which reposes Virgo, the Virgin. September's balance of justice, Libra, is crowned with morning glories. October hops surround Scorpio the Scorpion.

The archer Sagittarius bands his bow in a bed of November chrysanthemums. Capricornus the Goat, signifying truth, vainly tries to reach his December wreath of holly.

The colors of the flowers introduced are simulated in enamel, with the richly finished gold in the back ground, making each piece a novelty which will probably be one of the gifts most highly prized.

A WELL-KEPT HAND.

It May Be Acquired by Anyone Following These Directions.

A beautiful hand is not always possible to acquire, but a thoroughly well-kept one may be had without the art of manicure, and by even simpler measures than these recommended in Vogue: To begin with, the hands should always be washed in very hot water, or, better yet, in warm oatmeal water. Following this, a few drops of tincture of benzoin in the water add greatly to the whiteness and softness of the skin, and also conduce to the beautifying of the nails. When the hands are thoroughly clean, rinse them in clean, warm water, into which a teaspoonful of almond meal has been thrown. Dry the hands on a

soft towel and immediately rub them with the following mixture: One part pure glycerine, one part lemon juice, one part rosewater. This can be prepared either for immediate use or kept in a bottle for three or four days at a time.

Twice a week the nails may be rubbed with this varnish: Half an ounce pistachio oil, 32 grains table salt, 33 grains powdered rosin, 33 grains ground alum, 80 grains melted white wax, 2 grains fine carmine. These ingredients should be thoroughly mixed over a spirit lamp, made into a kind of pomatum and preserved in a small glass or porcelain jar. It should be applied to the nail by a tiny wad of medicated cotton and allowed to remain for half an hour. The thin membrane at the root of the nail should then be carefully pushed back with the rounded end of an ivory nail file, and the little "idle skins" that often grow at the root of the nail cut away with a pair of very sharp scissors. When this is done the nail should be polished with the so-called "diamond powder," a small quantity of which is put on a chamois-skin nail polisher. The hands are then washed in hot oatmeal water, well dried on a very fine towel, and finally the nails are polished once more with a soft chamois.

CUSHION FOR PINS.

Suitable for the Toilet Table of Any Woman or Girl.

Though this looks like a big, bright blossom, it is only a rosette made of a strip of soft bias satin folded over a roll of soft cotton. The satin strip is a yard long and three inches wide; it is



CUSHION FOR PINS.

folded double (over the cotton), gathered and sewed round and round, to a padded and covered circle of crinoline or thin canvas. The center is filled with knots and stitches in coarse yellow silk floss, to resemble the center of a flower, and a narrow ribbon loop is sewed to the back to hang it up by. It is pretty in any shade of pink, yellow, wine, terra cotta or old rose, and resembles a rose, a little double hollyhock or a zinnia blossom, according to color. It is a pretty ornament when stuck full of little fancy pins. Any woman or girl would like one for her toilet table.—American Agriculturist.

A Bandit on a Bicycle.

A highwayman on a bicycle came upon a young lady who was watching the sunset on the Cornice road, near Mentone, lately, took her purse and demanded the watch and chain. While she was removing the chain from her neck he walked off from the bicycle to light a cigarette, whereupon the young woman jumped upon the machine and tore down hill to Mentone. From there a telegram was sent to Vintimiglia, and the robber was caught in a trap, for the perpendicular cliff on the one side and the precipice on the other make it impossible to get out of the Cornice road.

The Origin of Oxtail Soup.

During the reign of terror in Paris in 1793 many of the nobility were reduced to starvation and beggary. The abattoirs sent their hides fresh to the tanneries without removing the tails, and in cleaning them the tails were thrown away. One of these noble beggars asked for a tail, and it was willingly given to him. He took it to his lodging and made (what is now famous) the first dish of oxtail soup; he told others of his good luck, and they annoyed the cannors so much that a price was put upon them.

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

Royal Baking Powder

ABSOLUTELY PURE

APPLE MERINGUE PIE.

One of the Best and Most Palatable of French Desserts.

A well-made apple meringue pie is one of the best of French desserts, even better than the favored lemon meringue pie.

Stew tart, well-flavored apples until they are thoroughly tender, adding only water enough to prevent its burning. Sweeten them when done and press them through a fine strainer. To every pint of apple sauce add a tablespoonful of cornstarch, mixed to a thin paste, the grated rind and juice of one lemon, and a little grated nutmeg. Let the whole cook over a fire for three minutes, stirring it constantly. Then fill pie plates that have been lined with paste, and let them bake in a hot oven for half an hour. At the end of this time remove the pies, and when they are cooled a little make a meringue of two eggs and two heaping tablespoons of powdered sugar for each pie, and spread them roughly over the pies. Dredge the meringue thickly with sugar and set the pies again in the oven to cook for ten minutes. The oven should be so slow that at the end of that time they are delicately brown.—N. Y. Tribune.

Deafness Cannot be Cured.

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the eustachian tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

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By a special arrangement with the publishers, we are able to offer to subscribers any of the following named books at 10 per cent. less than the list price. These are new, fresh books, right up to the time, as is sufficiently guaranteed when it is known that they are put out by W. Atlee Burpee & Co., the famous Philadelphia seedsmen. Here is the list:

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"The Beautiful Flower Garden." A delightful book by an artist.....	.50
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How to Keep Silver Bright.

Silverware grows dark and tarnishes in a very short time when exposed to the air, and even when put away in a dark place. This is especially the case where coal is used in the house, as the sulphur in the coal, liberated by the heat, is sure to stain all the silverware within reach. This tarnishing can be prevented by painting the silverware with a soft brush, dipped in alcohol, in which some collodion has been dissolved. The liquid dries immediately and forms a thin, transparent and absolutely invisible coating upon the silver, which completely protects it from the atmosphere. It can be removed at any time by dipping the article in hot water.

Mr. Chas. Bennett, Optician, 713 Kansas Ave., Topeka:

DEAR SIR:—I thank you for returning my glasses so promptly, as I missed them very much and was anxiously awaiting their return. They are a great help to me and have achieved all that you claimed they would when you fitted my eyes.

Very respectfully,
Lawrence, Kas. Mrs. O. P. BARBER.

Home-Seekers' Excursion.

April 2 the Missouri, Kansas & Texas railway will sell tickets to all points in Texas at greatly reduced rates. For further information apply to your local ticket agent, or address G. A. McNutt, D. P. A., Kansas City, Mo., 1044 Union avenue, station "A."

When the Kicks Come In

Is not the title of a new song, nor does it refer to the backward action of that much-maligned animal, the mule.

It is a phrase used by the inhabitants of Oklahoma to designate the approaching opening of the fruitful acres of the Kickapoo Indian reservation.

If you wish to find out all about the Kickapoo lands, as well as those belonging to the Wichita and Comanche tribes—where cotton, wheat and fruits will pay handsomely—ask G. T. Nicholson, G. P. A., Santa Fe Route, Topeka, Kas., for a free copy of Oklahoma folder.

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

Address REV. LYDIA A. NEWBERRY, WICHITA, KAS.

The Young Folks.

THE RULING PASSION OF JONES.

Jones was a bold inventor of extraordinary things. No problem seemed to baffle him. He'd make a pair of wings on which a man or woman could soar gracefully on high. Just as a little swallow does when waltzing through the sky.

He'd make a bomb of dynamite for use in countries flat. With pointed nose suggestive of the mouth-piece of a rat. Which, when it was exploded, without any fuss or row, would furrow up the hardest field as neatly as a plow.

He'd make a wondrous inkstand that turned claret into ink; A pair of skates that would have made the fortune of a rink. If roller-skating rinks had not gone out long years ago. They went by steam and could be made to travel fast or slow.

But, poor old Jones! hard luck pursued his plans, whatever he did. The man who tried his pair of wings, as off the roof he slid. Let go his nerve completely, and, instead of to the sky, Sped toward the earth as rapidly as any bird could fly.

The farmer that used Jones' bomb forgot to aim it right. And so it plowed his farm-house and his stables out of sight. The man who tried the roller skates, in spite of all reproof, Got loaded up with too much steam and went up through the roof.

And Jones' ink, 'twas quite as bad. It worked, but some one said One thing there was he could not seem to get right in his head. With ink so cheap and claret dear, he couldn't understand The value of the method that poor Mr. Jones had planned.

And so it went with poor old Jones until the day he died. He sighed for fame and fortune, but they never sought his side. And yet he died explaining—'twas his passion still in death— A patent respirator to prolong one's store of breath!

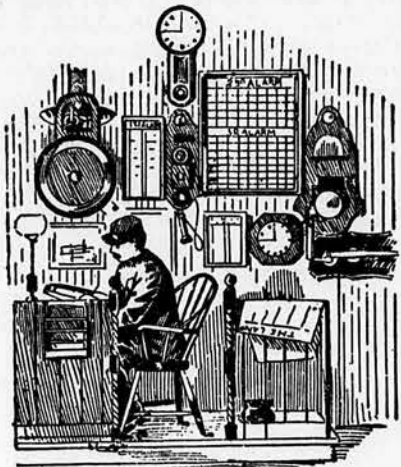
—Harper's Bazar.

RINGING AN ALARM.

The Apparatus in Use in the New York Fire Department.

Let us look at the various instruments for receiving the alarm. They are not many, and are very interesting. I shall describe them without using any technicalities, for the very good reason that I don't know anything about them technically, but can explain them only as they were explained to me by a fireman.

First, at the lower right-hand side, on a black walnut base-board, is placed the instrument officially called the "combination," and by the fireman termed the "joker." Why "joker" I do not know; but it is probably called the "combination" because it combines



GONGS AND HOUSE WATCHMAN.

both the bell for receiving the alarm, and the "trip" or device for mechanically releasing the horses, which I shall describe further on.

This is the first bell to ring the alarm, or number of the station whence the alarm is sent; but before it rings there is a slight "click" heard in the Morse instrument placed above it. This might be called a "warning bell," and by the ordinary listener would not be noticed at all; but to the quick ear of the man on watch and the equally well-trained ear of the horses, there needs no second stroke to tell them that an alarm will follow. This "click" is caused by the opening of the electric circuit in which the station is situated.

Beside the combination-bell, or "joker," there is a small weight that slides up and down a brass rod. It is held in place at the top by a catch connected with the hammer of the bell; and, as this hammer draws back to

make the first stroke of the alarm, it releases this weight, and the weight slides down the rod. Being attached by a little chain to a lever projecting from the side of a clock hanging beside it, the weight, as it falls, pulls this lever down and stops the clock, thus showing at what instant the alarm was received.

At the bottom of the rod there is a very large lever set with a trigger-like catch, and connected by certain mechanism underneath the floor with the stalls of the horses. The same falling weight strikes the trigger also, and releases the lever, and the lever in turn releases the horses.

Above the combination is placed a Morse instrument, sounder and key, and beside it a telephone to communicate with headquarters or with other companies, and also a few frames containing a list of stations that particular company goes to on receiving the first, second or third alarm.

At the other side, nearly over the desk, is placed the big gong, twelve or fifteen inches in diameter, and very loud-sounding. This begins to strike about when the smaller one gets through, and should the man on watch have failed to count the number of the station on the "joker" he will have no difficulty in getting the number from the big gong, for it strikes slowly, that is, slowly in comparison with the "joker," which rings the number out very fast. The large gong is very loud, and can be heard a block away. The company receives four rounds on the small bell and two on the big bell; or, more correctly speaking, the number of the station is rung four times on the "joker" and twice on the big gong. But it is rarely that the firemen have to wait to get the signal from the latter, for before the small bell has rattled off its four rounds the engine has rolled out of the house and they are on the way to the fire.—From "Fighting a Fire," by C. T. Hill, in St. Nicholas.

A Squirrel That Loves Music.

A pleasing story is told by a boy who lives at West Troy, in New York: "I recently caught a squirrel," he says, "but the animal was shy and seemed decidedly averse to being tamed. In the cage was a wheel such as one may see in most cages for squirrels, but my squirrel would not go near it while anyone was looking. The other day a friend came to see me and began to play on his flute near the cage. The squirrel at once lost his shyness and appeared in the wheel. After listening a moment the little animal began to jump around in the liveliest manner. It made the wheel fairly spin, and was delighted. As soon as the music ceased the squirrel rested. When my friend began to play again the squirrel repeated its antics. Since that incident it has become quite tame."

Told by a Maine Hunter.

A Maine hunter, who is a crack shot, tells a curious story about himself. While hunting one day he came upon a fine large deer, not more than two rods away. He attempted to raise his rifle to his shoulder, but his arm became suddenly paralyzed. All he could do was to stand there and watch the deer disappear in the distance. Then his arm resumed its normal condition, and he started on the trail once more. After awhile he came upon the deer a second time, and again the hunter tried to raise his rifle, and again his arm refused to serve him. Then he gave it up and went home, impressed with a sense of awe, and a conviction that he had better leave that particular deer alone.

Jack Was Very Conscientious.

Jack's master was a painter, and Jack, being a lively and spirited little fellow, on two or three occasions tipped over a pail of paint in the course of his gambols. Whenever this happened his master called him up, gave him a lecture, and by way of impressing the matter on his mind, rubbed his nose in the paint—much to Jack's discomfort. One day, however, Jack was playing about the paint-shop all alone. Suddenly he ran against a paint pail, and over it went. He looked sadly around for a moment, and when he perceived that his master was not there to inflict the usual punishment, he walked slowly up to the paint, plunged his nose into the hateful mess, and ran whimpering away.

DIED FOR HIS DOG.

A Western Man's Touching Devotion to His Canine Pet.

Stories are not uncommon in which faithful dogs have died for human beings; but those are certainly rare in which human beings have died to save the lives of dogs. Such a case recently occurred, however, at Omaha.

As the passenger trains on the Chicago, St. Paul, Minneapolis & Omaha railroad approach the station at North Omaha, they are accustomed to slow up, in order that the engineer may see that the tracks are clear and the signals all right. One forenoon lately the fast train from St. Paul slackened its speed as usual. The track was clear, and the train pushed on.

When within a hundred yards of the station, the engineer saw a little yellow dog run out upon the track. Immediately an old man rushed after the dog in frantic haste, intent upon dragging him off the track. The engineer blew his whistle, put on the air-brake and reversed the engine.

But it was too late. The pilot struck the old man and killed him instantly. The little dog, which had crossed the track in safety, and was untouched, rushed about frantically after the accident.

The old man's name was Patrick Rohan. No one knows—for his death followed instantly—whether he saw the approaching train or not. It is known that he was partially deaf; but he could see perfectly well, and in all probability he believed that his pet dog was in danger of being run over by the approaching train, and that he could seize him and drag him off in time.

At any rate, he lost his own life in endeavoring to save that of the animal.

POSITIONS GUARANTEED

Under reasonable conditions. Do not say it cannot be done. Will you send for 120 page catalogue of DRAUGHON'S PRACTICAL BUSINESS COLLEGE, Nashville, Tenn. This college is strongly endorsed by bankers and merchants all over the United States, as well as foreign countries. FOUR weeks by Draughon's method of teaching book-keeping is equal to TWELVE weeks by the old plan. Special advantages in Shorthand, Penmanship and Telegraphy. Cheap board. Open to both sexes. Thirty-six States and Territories now represented. Write for 120 page catalogue, which will explain "all." Address J. E. Draughon, President, Nashville, Tenn. (Mention this paper.) N.B.—This college has prepared books for "Home Study," book-keeping, penmanship and shorthand.

SECURE A POSITION.

Wanted, for office work, on salary, in most every county in the South and West, a young lady or gentleman. Those from the country also accepted. Experience not necessary; in fact, prefer beginners at a small salary at first, say to begin, from \$30 to \$50 a month. Chances for rapid promotion good. Must deposit in bank cash, about \$100. No loan asked; no investment required. It is a salaried and permanent position. (Strictly office work.) The enterprise is strongly endorsed by bankers. Address P.O. Box 433, Nashville, Tenn. (Mention this paper.)

DIRECTIONS for using CREAM BALM:

Apply a particle of the Balm well up into the nostrils. After a moment draw strong breath through the nose. Use three times a day, after meals preferred, and before retiring.

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, 56 Warren Street, New York.



believes at once pain and inflammation, and cures quickly. Full directions with each bottle. For sale everywhere. Price, 25c., 50c. and \$1.00 per bottle.

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Consumption

is amenable to treatment. Hope, courage, proper exercise, and from the inception of the disease the continual use of Scott's Emulsion of Cod-liver Oil and Hypophosphites, are absolutely necessary.

Keep up good courage, and with the use of this most nourishing and fattening preparation recovery is certain in the first stages, and may be accomplished even when the lungs are seriously involved. Stop the excessive waste (and nothing will do it like Scott's Emulsion), and you are almost safe.

Don't be persuaded to accept a substitute! Scott & Bowne, N. Y. All Druggists. 50c. and \$1.

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Publication Notice.

[Case No. 17031.]

TO Clara G. Whitney, defendant: You are hereby notified that you have been sued by the plaintiff, William W. Whitney, who has filed his petition against you in the District Court of Shawnee county, Kansas, and that you must answer said petition on or before the 10th day of April, 1895, or said petition will be taken as true and judgment will be rendered granting said plaintiff an absolute divorce from the bonds of matrimony from said defendant.

WILLIAM W. WHITNEY, Plaintiff.
Attest: R. M. COCKRELL, Clerk.
By F. R. WATERS, Deputy.

(First published February 27, 1895.)

PROPOSALS.

Notice to Contractors.

SEALED PROPOSALS will be received at the Office of the Board of Public Works of the State of Kansas, at Topeka, Kansas, until 2 o'clock p. m., on Monday, March 18, 1895, and opened immediately thereafter, for all labor and material required to complete the detached cottage for the State Industrial School for Girls at Beloit, Kansas, under the provisions of Senate Bill No. 35, approved February 21, 1895, in accordance with the plans and specifications prepared by Seymour Davis, State Architect, copies of which may be seen at the office of the Board, State capitol grounds, after March 4, 1895.

Each bid must be accompanied by a certified check for a sum not less than 3 per cent. of the amount of the proposal, made payable to S. M. Scott, President of the Board of Public Works, State of Kansas, and to be forfeited to the State of Kansas as liquidated and assessed damages by the successful bidder if they fail to enter into contract and give the required bond on or before March 25, 1895.

The right is reserved by the Board to reject any or all bids, and to waive any defect or informality in any bid if it be in the interest of the State so to do. No proposal will be received after the time above designated.

Each proposal will be enclosed in a sealed envelope, marked "Proposals for work and material required in the completion of a detached cottage for the State Industrial School for Girls, Beloit, Kansas," and addressed to Wm. Wykes, Secretary of the Board of Public Works, Topeka, Kansas.

Companies or firms bidding will give their individual names as well as the firm name with their addresses.

The attention of all bidders is called to chapter 114 of the session laws of 1891, which they are expected to comply with in all State contracts.

All bidders are invited to be present at the opening of bids, either in person or by attorney. S. M. SCOTT President.
WM. WYKES, Secretary.

HUMAN OR ANIMAL

Pain from sprains, bruises, cramps, diseased or torn flesh, aches, wounds, Neuralgia, etc., can be promptly relieved and cured by using

Dr. J. H. McLean's Volcanic Oil Liniment.

The FARMER'S REMEDY for the various diseases of domestic animals. It is easy to apply, relieves at once pain and inflammation, and cures quickly. Full directions with each bottle. For sale everywhere.

KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Wednesday 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.

Address KANSAS FARMER CO.,
Topeka, Kansas.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate, (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of KANSAS FARMER free.

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

To insure prompt publication of an advertisement, send 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.

In answer to a request for garden seeds the KANSAS FARMER is compelled to say that it has none.

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

The Kansas Legislature has completed its work and adjourned. Much that was hoped for has not been enacted but it is believed that most of the measures passed are beneficial.

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

The excellent paper published in last week's KANSAS FARMER on "Feeding and Handling Berkshire Pigs," was read before the National Berkshire Record Association, at Bloomington, Ill., and not before the American Berkshire Record Association.

A letter just received from Dr. E. P. Miller, of New York, urges upon the Kansas Legislature and upon Congress the importance of encouraging the sugar industry. This letter would have been timely a month ago but can have no effect now, since both bodies have adjourned.

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

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

Congress adjourned at noon on Monday, March 4. It is usual to say harsh things about a departing legislative body. But as to the Fifty-third Congress, in which one party had a tremendous majority in the House, a fair working majority in the Senate and had also the President, the country is almost silent in speechless amazement at the record made. Some good measures have, indeed, been enacted. It is doubtful whether any party which would have hesitated to enact the most radical measures could have stayed the depression or averted the panic. But the people have with a universality never before exhibited expressed their recognition of the fact that in a land of bounteous resources, peopled by law-abiding and industrious citizens, general prosperity or adversity are largely matters of legislative making.

IN THE GREAT ARKANSAS VALLEY.

The writer went, last Friday, out over the A., T. & S. F. railroad to Barton county. The change in the appearance of the crops and in the feelings of the farmers since last fall is marvelous. Then it required a stout nerve to commit good seed to the dry earth. Now the farmer rejoices in one of the best prospects for wheat he ever had. In company with W. M. Morris, who has 200 acres of wheat on the Arkansas bottom between Ellinwood and Great Bend, we examined the soil and found that the recent rain had wet the ground to depths varying from fourteen to sixteen inches. The conditions were such during the great February storm that most of the wheat in the vicinity escaped uninjured. Mr. Morris was re-babbitting the boxes of his header and rejoicing in the belief that even if the season from this on should be no more favorable than the last, he will make a part crop of wheat, and with an ordinarily good season will make an enormous crop.

Farmers of the vicinity are preparing to experiment with irrigation. The usual plant is a windmill and reservoir. A model of this kind is just completed on the fine farm of Amos Johnson. Some, however, are engaging in more extensive irrigation enterprises. Wm. Hosack has made a large open basin into the underflow, on his farm, just north of Great Bend, from which, with an elevator made of a discarded threshing belt and some pine boards, he raises immense quantities of water by horse-power. He expects, eventually, to use a gasoline engine instead of the horses. Both Mr. Johnson and Mr. Hosack are alfalfa farmers, and each is increasing his acreage. Mr. Hosack is sowing 300 acres this spring and expects to have 500 acres before he ceases increasing his area. His experience with this crop has not all been sunshine, for he last year failed to secure a stand on large sowings. On the other hand, he finds that when once a stand is secured he can depend upon an average yield of six tons of hay per acre, which is always worth at least \$3 per ton to feed to stock and thus turn into money. He finds also that \$3 per acre pays all the expense, leaving at the lowest a net income of \$15 per acre. It is easy to see that, with his ultimate area fixed at 500 acres, he is providing a princely income from this source alone.

A NEW EXPERIMENT STATION.

Congressman Harris, last Saturday, telegraphed Governor Morrill the information that the bill had passed ceding to the State of Kansas the old Fort Hays military reservation.

The bill provides that the land shall be ceded to the State for use in conducting an experimental station which shall be a branch of the State Agricultural college station, that the buildings shall be devoted to use as a normal school and that a portion of the remaining unoccupied ground shall be maintained as a park. Both houses of the Legislature promptly passed a concurrent resolution giving the Governor authority to immediately take such steps as are necessary to properly protect the buildings and trees on the reservation.

It was, of course, too late in the session to formulate the necessary legislation to provide for the development of the school and experiment station as contemplated by the act of Congress. This will be taken up at another time.

The reservation comprises 7,640 acres of excellent land, situated along the valley of Big creek, one of the never-failing water courses of Ellis county. The body of timber along the stream is the largest between Salina and Denver and the government has had two or three custodians at the reservation to preserve the timber since the abandonment of the fort in 1889. The most valuable stone quarries in Ellis county are located upon one corner of the reservation.

The combination of a normal school and a branch of the Agricultural experiment station is a peculiar one, but no doubt the wisdom of the people of Kansas will be equal to the task of properly handling it.

The cession of this valuable property

to the State has followed closely upon the inception of the project. About three weeks ago Hon. John Schlyer, of Ellis county, introduced in the Kansas House a concurrent resolution, which was passed by the Senate, calling upon Congress to pass the bill. The bill was introduced in the national House by Congressman Hudson and in the Senate by Senator Martin. The Senate passed the bill, and in the House the Senate bill was substituted for the House bill, advanced and passed.

LATER.—News received just as the FARMER is going to press says that Kansas does not get the reservation because the President did not sign the bill.

OUR ANNUAL DEBT TO EUROPE.

A writer in the February *Forum* makes the following estimates of Europe's annual charge against this country:

1. For money spent by American travelers abroad, about.....	\$100,000,000
2. For freights carried in foreign ships, about.....	100,000,000
3. For dividends and interest upon American securities still held abroad, minimum.....	75,000,000
4. For profits of foreign corporations doing business here, and of non-residents, derived from real estate investments, partnership profits, etc., about.....	75,000,000
Total.....	\$350,000,000

This writer considers the above a very low estimate, and thinks the total should be larger rather than smaller. The balance of trade with all countries in favor of this country, including silver and gold exported, was in round numbers, according to the Treasury report, \$219,000,000, leaving a balance unpaid and to be added to principal, amounting to \$131,000,000. To pay this annual charge in wheat, at even 50 cents per bushel, would require 700,000,000 bushels of wheat—a larger crop than the farmers of the United States ever produced in a single year, our largest crop, that of 1891, amounting to 612,000,000 bushels.

Is it any wonder that, when falling behind in its payments \$131,000,000 per year, this country is called upon to settle? What will the final result be?

The Legislature has enacted an irrigation law which provides for three active Commissioners and two—the President of the Agricultural college and the Geologist of the State University—advisory Commissioners. This commission is provided with an appropriation of \$30,000, to be expended in determining the irrigation resources of the State and the best methods of developing them. The law will be published in the "Irrigation" department next week.

We are in receipt of a letter dated at Casanova, Va., inclosing a printed communication on the money question. The writer is unknown to the editor of the KANSAS FARMER, but both letter and communication smack of a purpose to forward a scheme somewhat resembling that recently proposed by the President and rejected by Congress. There is withal a tendency to confusion of ideas and plans which is very suggestive of an interested purpose on the part of somebody to deal in a way that is not quite candid. So many schemes have been exploited in the press for the purpose of preventing a clear understanding of proposed financial legislation that the man with a new patent medicine for the monetary ills of the country needs a certificate of character.

The KANSAS FARMER has a good many inquiries about the sewing machine which is furnished with a year's subscription for the paper for the low price of \$20. In order to answer many of these at once, we will say that the machine is just as advertised. Numbers of them are being sold and in every case they are giving satisfaction. The following from James Bingham, of Jewell, Kas., under date of March 1, 1895, is a fair sample of the reports: "The sewing machine that I purchased of the KANSAS FARMER CO. for my daughter, in April, 1893, does good work and is satisfactory all around." None need be afraid to purchase this machine because it is sold at a reasonable price. Of the many subscribers who have secured a machine through the KANSAS FARMER, not one has ever reported dissatisfaction.

Fine Prospects in Northwest Kansas.

EDITOR KANSAS FARMER:—The western end of the State is just now rejoicing over a most satisfactory rainfall, which has placed the ground in splendid shape. The farmers are all busy putting in their spring wheat as rapidly as possible. Wheat that had been sown before the recent heavy rainfall is nicely sprouted, and altogether the prospects for a fine crop are better than they ever were at this season of the year in the history of this section. Many farmers are hampered because of lack of seed wheat. While there is no destitution in this county that could not have been cared for by local means, there is a very great and pressing need for seed wheat, and it is to be hoped that this necessity may be met and at once.

Irrigation is an all-absorbing topic in this section, as it is, indeed, in the entire western half of the State, and very many irrigation plants are being put in this spring. The water supply seems to be very abundant and windmills and reservoirs are being established everywhere.

A farmers' institute is in session here to-day, with the following topics announced for discussion by local talent: "Raising Broomcorn," "Irrigation from the Underflow," "Raising Corn," "Preparing Ground and Sowing Small Grain," "The Irrigation Plant," "Diversified Farming," "The Truck Garden," "Can Poultry-Raising be Made Profitable?" "What Varieties of Fruit are Best Adapted to this Altitude and Soil?" "Disposition of Surplus Products," "The Cow as a Remedy for Hard Times," "Benefits to be derived from Irrigation." The State Agricultural college is represented by Secretary I. D. Graham.

Hon. A. B. Montgomery has established a large reservoir and windmill within the city limits here and soon hopes to have a most excellent object lesson for interested irrigators. His plan, when perfected, will add greatly to the beauty and value of this portion of the city.

Plans are being perfected here by which it is hoped to supply all farmers who need it with seed wheat. Definite information concerning this plan will be had in a day or two, and it is confidently expected that a period of great prosperity is in store for this section in the near future.

D.
Goodland, Kas., February 28.

Information Wanted on Subsoiling.

EDITOR KANSAS FARMER:—I would like to ask, through the columns of your paper, for our information in western Kansas, that those brother farmers east of us who write about their subsoiling would also tell us what kind of subsoil they have. Is it not a fact that on the kind of subsoil we have depends largely the question whether we should use the subsoiler or not?

Bucklin, Ford Co.

J. R.

Answers to Inquiries.

EDITOR KANSAS FARMER:—I think that I can answer two of the inquiries made by Mr. Truesdell.

1. Bisulphide of carbon is an effectual remedy for gopher burrowing. Dig with a post auger where a freshly-made mound appears, and you will find two passageways leading at a moderate slope downward. Wrap cotton rags about small stones, saturate with the stuff and roll down, one in each passage. Then pack the hole full of dirt and stamp it down tight. Few gophers will escape this treatment and a second dose will clean them all out.

2. Oil cake is an excellent food for calves that are old enough to eat hay, but it is too loosening for those that are not yet weaned. Soak it in four times its bulk of water about one day, and begin with one quart a day, increasing to—I don't know what limit. I have fed four quarts with success.

Jamestown, Kas. JAMES BURTON.

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

More About Tanning.

EDITOR KANSAS FARMER:—Please publish in next issue a method for tanning flint-dry sheep skins with the wool on. Also some simple method of tanning hides so as to make rawhide—I mean to just take the hair off and limber up the hide so it will answer for halters, straps, etc. Seventy-five cents for a hide and \$1 for a halter is too much difference to suit me.

ISAAC DETHERIDGE, JR.

Fame, Greenwood Co., Kas.

"Dr. Chase's Recipe Book" gives a chapter under the heading, "Tanners, Shoe and Harness-Maker's Department." The following, from pages 452-454 of the book, will answer our correspondent's inquiries:

"Tanning, Blacking and Finishing.—Process for Calf, Kip and Harness, in from Six to Thirty Days.—For a twelve-pound calf skin, take terra-japonica, 3 pounds; common salt, 2 pounds; alum, 1 pound; put these into a copper kettle with sufficient water to dissolve the whole by boiling.

"The skin, or skins, will first be limed, haired and treated in every way as for the old process, then it will be put into a vessel with sufficient water to cover it, at which time you will put in one pint of the composition, stirring it well; adding the same amount each night and morning for three days, when you will add the whole; handling two or three times daily, all the time tanning; you can continue to use the tanning liquid by adding half the quantity each time, of new liquor, and by keeping these proportions for any amount, and if you desire to give the leather the appearance of bark color, you will put in one pound of Sicily sumac.

"Kip skins will require about twenty days, light horse hides for harness, thirty days, to make good leather, while calf skins will only require from six to ten days at most. The japonica is put up in large cakes of about 150 pounds, and sells, in common times, at about 4 cents per pound, in New York.

"Byron Rose, a tanner, of Madison, Ohio, says that one quart of oil of vitriol to fifty sides of leather, with the japonica and alum, as above, leaving out the salt, will very much improve it; the acid opens the pores, quickening the process without injury to the leather.

"Tanning Sheep Skins, Applicable for Mittens, Door-Mats, Robes, etc.—For mats, take two long-wooled skins, make a strong suds, using hot water; when it is cold wash the skins in it, carefully squeezing them between the hands to get the dirt out of the wool; then wash the soap out with clean cold water. Now dissolve alum and salt, of each half a pound, with a little hot water, which put into a tub of cold water sufficient to cover the skins, and let them soak in it over night, or twelve hours, then hang over a pole to drain. When they are well drained, spread or stretch carefully on a board to dry. They need not be tacked if you will draw them out several times with the hand, while drying. When yet a little damp, have one ounce each of saltpetre and alum, pulverized, and sprinkle on the flesh side of each skin, rubbing in well; then lay the flesh sides together and hang in the shade for two or three days, turning the under skin uppermost every day, until perfectly dry. Then scrape the flesh side with a blunt knife, to remove any remaining scraps of flesh, trim off projecting points and rub the flesh side with pumice or rotten stone, and with the hands; they will be very white and beautiful, suitable for a foot-mat, also nice in a sleigh or wagon of a cold day. They also make good robes, in place of the buffalo, if colored, and sewed together. And lambskins (or sheep skins, if the wool is trimmed off evenly to about one-half or three-fourths of an inch in length), make most beautiful and warm mittens for ladies or gentlemen."

Subsoiling Right for Spring Crops.

EDITOR KANSAS FARMER:—I have read with much pleasure the articles on subsoiling which have appeared in KANSAS FARMER. No doubt subsoiling is a good thing if by it the ground can be made to store more water. It certainly is good for all spring crops. But I doubt that it is equally good for our fall crops. Indeed, I think that in

a majority of seasons it will hurt them. I have been farming in this part of Kansas for twenty-five years, and my experience has been that wheat would be a sure crop with us if it did not winter-kill. Also; that what helps it along to killing is plenty of moisture in the ground and excessive pasturing in the fall. My theory is that ground, when filled with moisture, heaves, or in other words, the frost lifts it. The more moist the ground is the more it is lifted by the frost. By this lifting the wheat roots are torn off and the wheat is dying for want of roots to sustain it. Generally, when wheat is killed by frost, it is standing quite loose in the ground, which can be ascertained by lifting at it.

What is called the wheat belt has universally dry winters. For this reason fall wheat can be grown in this part of Kansas. If it had wet winters fall wheat could not be grown here most years. We have but little snow and what comes on the wheat fields is blown off and drifted along hedges and other sheltered places. If the snow would stay on the wheat field it would be all right as long as it staid there, but should there be a thaw and the melted snow soak into the ground and after that a hard freeze, then the wheat would be killed in proportion to the moisture in excess of just what wheat needs to keep it alive. We all remember the winter of 1892-93, when we had a thaw, melting all the snow drifts, and after that a hard freeze. The results were that the wheat was totally killed only where the snow drifts had melted and the ground, on that account, was soaked with water.

If ground being subsoiled will hold more water it will not be so dry in winter time, and consequently wheat will be more apt to be winter-killed. In fact, with us, as far as I can remember, when wheat has entered winter with plenty of moisture in the ground and hard winters or just a few days of hard freeze during the winter has followed, those are the years when wheat was partially or all of it killed. On the other hand, when wheat has entered winter with plenty of moisture in the ground and a mild winter has followed or the freezing has not been severe, and spring weather has been favorable—those are the years when we raised our heaviest wheat crops, as we did in 1882 and also in 1884. We raised a heavy crop of wheat in 1889, yet during all winter there was hardly enough moisture to keep it alive—and wheat needs but little in winter time. Spring weather turned out favorable.

A great many of the soils in central Kansas are especially well adapted to wheat culture, and I doubt not that by subsoiling, after the ground has thoroughly settled again, we could raise better crops, provided we could make it live through winter. I am going to subsoil some of my ground for spring crops but think best to go slow about it for fall crops. S. O. THOMPSON.

McPherson, Kas.

Pecan and Other Trees—Reservoirs.

EDITOR KANSAS FARMER:—I would like information concerning the culture of the pecan tree. What distance apart should trees stand? What culture should young trees receive? Should I get wild pecan nuts to plant? If cultivated seed is best, what kind should I get and where can I get them? My purpose is to plant a grove of these trees for profit from the nuts.

Also, does any one know whether the English walnut, butternut or chestnut will grow in Kansas?

Can I force water through pipes up over a bluff 200 feet high from a well, and if so, by what means?

What is the best species of cedar, spruce and pine for the lawn? Does any one know whether the cut-leaved birch will do well on the lawn in Kansas?

What will it cost to cement the bottom and sides of a small fish pond, covering about one-fourth of an acre and ten feet deep in center?

Is Kaw river bottom good for the culture of the strawberry, blackberry, black-cap and red raspberry? Will these berries do well on upland? Which of these soils is the better for the pecan? J. D. HITCHCOCK.

ANSWERS BY PROF. MASON.

1. The pecan (*Carya oliviformis*) is a native of the rich black bottom lands of southeastern Kansas, from Cowley county northeastward through Coffey, Franklin and Miami counties, a few trees also being known on Wakarusa creek, in Douglas county. I should re-

gard their planting in Shawnee county "for profit from the nuts" as being a very doubtful venture. If one wishes to try it I should recommend procuring wild seed from the northern limits of the natural growth of the tree. I should advise low, black bottom land soil, clean and well prepared. Plant a foot apart in rows eight feet apart, with a row of box elders or black cherry between for shade, to be cut out when the young pecan trees are well under way. Give clean cultivation until there is shade enough to kill the weeds. As the young trees grow they will need thinning to four and then eight feet apart in the rows, letting them alternate as nearly as possible.

2. English walnut and butternut cannot be depended upon in Kansas for more than a few years, though the butternut may do fairly well in very sheltered situations. Chestnuts have been grown successfully in but few locations in Kansas. A few trees are in successful bearing on the red clay upland soil of Leavenworth county.

3. To force water through pipes over a bluff of 200 feet in height would probably require the power of a small engine, varying with the amount of water required.

4. The cut-leaved variety of the white birch is doing quite well upon our college lawns, but must have a sheltered situation and plenty of water during the summer drought.

5. Red cedar, white spruce, Colorado blue spruce, Austrian, Scotch and dwarf pines, have stood years of testing as lawn trees and will succeed with good care.

6. To properly build and cement a pond of one-fourth acre, ten feet deep, would cost not less than \$1,000, and then would be a source of trouble from cracking and settling. Such a pond could be built with earth bottom and embankments, made tight by puddling the bottom and thoroughly tramping the embankments with horses, which would hold water just about as well and not cost more than a tenth as much as a cemented pond. The banks could be sodded with blue grass and sedges and other water plants set along the water line to prevent the washing of the waves, making on the whole a very attractive pond. Scores of such ponds may be found in the irrigation districts of southwestern Kansas.

7. All the small fruits mentioned except the red raspberry are readily grown upon Kansas river bottom lands. Soil a trifle sandy is the best. The same fruits may be made a success on good upland soil if an abundant supply of water can be insured.

Publishers' Paragraphs.

Every planter should send their address at once for the new illustrated seed catalogue of good seeds, cheap, to R. H. Shumway, Rockford, Ill. It is a pretty and valuable book.

Ten cents sent to John Bauscher, Jr., Freeport, Ill., will secure a copy of the annual catalogue and "Guide of Sunflower Poultry and Seed Farm." The "Guide" illustrates the different varieties of poultry and gives full descriptions of each, also the best known methods of making a garden pay.

Our readers should not fail to read the "Free Spray Pump" advertisement of A. Speirs, North Windham, Me. This concern has manufactured spray pumps since 1881 and has agents all over the world, but they want more. They offer a big chance these hard times to make money. They give a double-action pumps to their agents.

For a convenient price catalogue of trees, plants, vines, shrubs, etc., containing what the average farmer will want to select from, but not encumbered with long lists which interest the specialist but are chiefly a source of confusion to the millions, the 1895 pamphlet of J. F. Cecil, of North Topeka, exactly fills the bill. Mr. Cecil has built up a reputation for reasonable prices and fair dealing, and it is not only safe but pleasant to deal with him.

A POULTRY BOOK.—It is more than probable that those who fail at poultry-raising do not know how to properly breed or take care of the fowls. Chickens, like everything else, must be understood, and besides a knowledge of feeds, and diseases, one should have those breeds that are known from the experience of successful poultry-raisers to be the very best for the purpose. Shoemaker's Poultry Almanac is a valuable aid to poultry-raising, either for profit or exhibition, and ought to be in the hands of every one interested in chickens. C. C.

Shoemaker, of Freeport, Ill., the publisher, will mail it to any address on receipt of 15 cents.

John Kendrick Bangs conducts the reader of the *Monthly Illustrator* for March upon a tour of "Oriental Travel Under Protest," which takes him to Japan and other points in the far East especially before the eyes of the world just now, and takes him there in the humorist's own inimitable fashion. Marc Lucas goes along as artist, and his pictured memoranda prove the truth of Mr. Bangs' amusing observations.

Women and flowers. The two best things that the Creator allowed to escape from Heaven to gladden earth! How natural to think of the two together, and how in accordance with the eternal fitness of things that the most successful grower of flower seeds in America should be a woman? Have you seen her catalogue? Her? Why, of course; we mean Miss C. H. Lippincott, of 819 Sixth street South, Minneapolis, Minn.

"The Simple Story of How to Build an Electric Motor at Home," is the title of a serial now running in the *Detroit Electrical Student*. The story of how to build motor No. 2, and the battery to run it, told in language a child can understand, begins with the issue of March 2. Give the boys a chance. Electricity will be the biggest bread-winner of the twentieth century. Perhaps your boy, if he gets a start, will make it his life-work. The *Student* is a crisp little weekly for amateur students of electricity. One dollar a year. Five subscriptions will bring the sender castings and material for one motor ready to be built, freight prepaid. Student Publishing Co., 83 Lafayette avenue, Detroit, Mich.

FLORAL TREASURES.—We are in receipt of a beautifully illustrated catalogue, containing a wonderful collection of roses from the Good & Reese Company, of Springfield, O. This enterprising firm have made a specialty of rose-growing, and to-day are the largest rose-growers in the world. Their catalogue is very handsome, filled with illustrations and beautifully colored plates. The elegantly colored plates of the wonderful new rose, Gen. Robt. E. Lee, is especially fine. All interested in flower culture will be delighted with this catalogue, which is a "Floral Treasure," and Good & Reese Company will mail it to any address on receipt of 10 cents in stamps. See their large advertisement making a special offer of "A Rainbow Collection" in another column. Mention KANSAS FARMER.

There comes to our table the first issue of the *Herd Register and Breeders' Journal*, a sixty-page quarterly issue from the office of the American Guernsey Cattle Club, Wm. H. Caldwell, Secretary and Treasurer, Peterborough, N. H. It is a magazine carefully edited in the interests of the Guernsey breed. It gives in easily accessible form such records, news, tests and illustrations as are of interest to Guernsey breeders, and at same time the entries and transfers as recorded in the office of the club. Such a publication of its nature and make-up will not only be a credit to the breed but of great value to breeders in their endeavors to give the breed the recognition due. It will be a valuable means of preserving the history of the breed. It deserves the support of all interested in Guernseys and is published at a subscription price of \$2 a year.

"Decorations for a Dining Room," by Miss Elizabeth B. Sheldon, is the leading article in the March number of *Table Talk*, the American authority upon culinary and household topics. Her suggestions are both bright and practical. Mr. Chas. W. Garfield, Secretary of the Michigan State Board of Agriculture, also gives a very interesting account of the progress of domestic science in the farmers' institutes of his own State and elsewhere. The regular departments and the dietetic lesson are as usual, full to overflowing with bright and new ideas on all subjects of interest to the house-keeper and home-maker. There are the menus and recipes by Miss Helen Louise Johnson, also mention of the newest things in table service, novelties, etiquette, fashions, literature and so on. This magazine is published in Philadelphia, at \$1 per year, and a sample copy is offered to any of our readers free.

The Arched Hedge-Trimmed, manufactured by E. C. Gordon & Sons, of Chetopa, and tested in Labette county, Kas., the last three years, is growing in favor with the farmers wherever it has been introduced. The oft-repeated wish of the Western farmers, that they could trim hedges with their grass mowers, can now be realized by attaching this device to the bridge of the mower. If the hedge and driveway are properly prepared there seems to be no more difficulty in trimming hedge brush of half a year's growth than there is in mowing grass in a meadow. The main feature is a compound shears which cuts the brush even and square and very near the same point every year, so if started at four feet high or less it will not need cutting back in ten years. The hedge grows very dense from the ground up, because the limbs are not slashed off by a downward stroke as with a hedge-knife.

Horticulture.

"Resolved, That There is More Profit in Raising Apples Than Wheat in This County."

Read before the Cherryvale Farmers' Institute, February 21, 1895, by Mrs. A. B. Clark, of Independence, Kas.

Facts are stubborn things, and figures backed by actual yields and measurements are indisputable. What has been done once can be done again under like or similar conditions. Therefore, in presenting my arguments in favor of apple orchards against wheat fields, I shall make no guesses, but confine myself to statements from reliable persons and will give my authority in every instance. I have taken pains to write to several orchardists, asking for estimates to be used as data at this time and place, and will also quote from horticultural society notes in Kansas, Missouri, Illinois and Colorado.

I will first give figures received from Judge Wellhouse, of Leavenworth county. His statements are concise and are for each year, beginning with his first crop of 1,594 bushels in 1880, down to the crop of 1894. I will not take the time to give anything but a summing up of all the years up to date. From about 400 acres, the total yield is 351,235 bushels. Gross receipts for the same, \$160,327. Entire cost of labor, gathering, marketing, etc., \$59,890, leaving a net of \$100,437. The crops of 1892 and 1893 were scarcely enough to pay expenses. That of 1891 was the largest crop, when he shipped a trainload of twenty-two cars to a firm in Baltimore, that netted him \$1.75 per barrel. His second-grade, or culls, he sold to a New York company to be evaporated. (They ought to have been reduced to that state in Kansas.) Figuring the net yield for the fourteen years, taking good years and bad years, we have an average yearly income of \$7,267 above all expense, an average of over \$20 per acre yearly for the whole fourteen years. And the orchard is now worth at least four times the value of the land without the trees, or if it had been kept in wheat the entire time. This shows that his orchard has given him a clear yearly profit of 45 per cent. on his original investment, beside the quadruple value of his land because of his investment in trees. I have given the Wellhouse estimates first, because they were the lowest of any noted. His first orchards planted were largely experimental, some varieties being entirely replaced by others better suited to our soil and climate.

J. H. Hillis writes from Gentry county, Missouri: "I have sold off my twenty-acre apple orchard, in ten straight years, \$20,000 worth of winter apples." Now, as this is gross receipts, let us figure out his net income. One-third is a large allowance for expenses, but it leaves a net income of \$13,333, or a yearly income of \$1,333 for twenty acres, or \$66.66 per acre yearly.

Now, let us consider a report made before the Horticultural Society of Illinois. Two years ago an apple dealer from Chicago made the following offer for a twelve-acre orchard of Ben Davis trees, averaging fifteen years old. He would take the land at what it cost before the orchard was planted, pay the cost of the trees and all the expense ever put on the orchard, then figure the total expense at 6 per cent. up to date, the whole amount to be given for the crop then on the trees. But his offer was refused, the owner finally realizing at the rate of \$10 per tree, clear of all expenses, or about \$1,000 per acre.

But we will now quote from Colorado, where we have always supposed fruit-raising was very uncertain, to say the least. President W. B. Felton, of the State Horticultural Society, reports: Five acres in winter apples (mostly Ben Davis), \$1,155 per acre. Some varieties that made equally as good growth, have not yielded 50 cents per tree.

Thus it would seem that success or failure is largely determined by the varieties we plant. The apple that is handsome, bears shipping well, if it yields well, is the apple to plant most largely of, as it will sell at good figures even when there is a glut of less at-

tractive sorts. We know there are many apples superior to Ben Davis for home use, still from the market reports at all great fruit centers, it is the market favorite. The lesson to be learned from these reports is that the horticulturist to succeed must not neglect the business end of his planting. Everything depends upon starting right.

We cannot afford to waste time by planting a few of a hundred or more sorts, to test for ourselves which we like best. Rather make diligent inquiry of those successful in the business, and profit by their experience.

Let me cite one more instance, where, in 1893, when there was a scarcity of apples all over the country, an orchardist at Centralia, Ill., by thorough spraying and intense cultivation reaped the reward of good prices. Messrs. Parkhurst & McFarlane, wholesale fruit dealers of Chicago, bought the entire yield of his eight acres of Ben Davis orchard, paying at the rate of \$2.25 per barrel, which footed up the handsome sum of \$1,493 per acre, or a fraction less than \$15 per tree.

But I will not multiply yields. Taking those I have given you, from 20 cents a tree to \$15, strike an average, and we have \$7.37 per tree as a basis to figure out the advantages of apples over wheat.

While we think that with good soil and trees, by intense cultivation and good care, it is possible to obtain similar yields here year after year, still, to agree with the most conservative, we will, in our estimates, take \$1 per tree in the orchard as an average, and assume that we get no yield till the orchard is five years old.

Now, let me take 100 acres good wheat land, valued at \$30 per acre, plant it in good winter apples at \$10 per hundred, and I will plant them twelve feet apart in the row north and south, and the rows thirty-two feet apart east and west, giving me 108 trees to the acre; but for even figures, let us put it 100 to the acre, or 10,000 trees on my 100 acres. Beginning on the fifth year I have an income of \$100 per acre, or \$10,000 a year for the five years, and it will foot up \$50,000 that I have received from my 100 acre apple orchard in ten years. Beside, I raised nearly average crops of corn and potatoes between the rows for the first five years.

Now, at the same time I planted trees you thought there was more money to be made in growing wheat. You took equally as good land, sowed 100 acres to wheat, got a yield of twenty-five bushels to the acre that you sold at the elevator at 80 cents per bushel, receiving therefor \$2,000, and we will allow you \$4 per acre for your straw, and we will let you keep this average for ten years, when we will compare notes. Your \$2,000 per year for wheat will give \$20,000 in ten years. Your straw at \$4 per acre will have amounted to \$4,000 for the ten years—\$20,000+\$4,000 gives the snug sum of \$24,000 for ten years. "Not so bad," you say.

But remember that I had land of the same valuation only. I expended \$1,000 for trees, but that I made back over and over again in the crops I raised between rows, and we now stand on this basis: You, with your income of \$24,000, I with mine of \$50,000 for the ten years just past. But how will the next ten years balance? I have a ten-year-old orchard on my 100 acres; your land not worth so much as when you first began. I can average my \$10,000 a year with less labor and worry than you can make \$2,000 with the old yields of twenty-five bushels per acre at 80 cents. Besides, if we wished to sell our land, I could sell every day in the week at \$100 per acre, or \$10,000, while you might possibly sell for nearly the original sum you paid for it, or \$3,000. Is not this true?

But I fancy I hear some one say: "Fruit-raising shows up all right on paper, but all the same, you can't make any money at it." Let me ask: "How else can a farmer, merchant or any business man make investments except by careful calculations on paper? Why won't the same methods hold good in planting orchards?" "O," you say, "there are so many drawbacks,

so many bugs, worms and fungi to kill the trees; the apples are small and wormy and won't sell for much; the trees die out in a few years and spoil all your calculations." That may be true. What would you say of a man who figured out that by an investment of \$1,000 in groceries he could make a good income, and renting a room, he began business in the proper way. Now, having gotten a good start he is tired of confinement, thinks his goods are choice and bound to sell, so he leaves them with his clerks and perhaps engages in something that he makes a little money at. When he comes back to his store the bugs, worms and mildew have spoiled many of his best goods so they are unsalable; his best customers have gone elsewhere; his rent, interest and taxes have gone on; he sells out for what he can get, declaring that the grocery business shows up all right on paper, but there are so many drawbacks it don't pay. He has tried it and knows what he is talking about, as does the farmer who, for similar reasons, knows that fruit-raising don't pay. But the facts are the same in both cases—that any business in this world to be a success must receive careful and constant attention or it will run its owner into debt.

To make a success of fruit-raising, one must first select good, suitable ground; plow it deep and make it fine; plant thrifty—and shall I say whole-root—trees of varieties suited to the soil, climate and market; then keep the cultivators running all summer. Don't accept the theory of letting the weeds grow to shade the young trees, till the ground is like a brickyard. Wash frequently to prevent borers and dig out any that may have stolen a march upon you. Spray at least twice a season after the trees begin to bear. Do all this and more. It will pay you in dollars and cents, as well as in the satisfaction of owning and caring for a thrifty, profitable orchard, that is a thing of beauty and a joy for years.

In conclusion, I will give you a short horticultural sermon once preached before the Kansas Horticultural Society, from the text: "A sower went out to sow." "The seed that fell by the wayside, when the fowls of the air came and devoured it," represents the class of those who plant carelessly and neither cultivate nor keep up fences. Of course the cattle break in, destroying both trees and crop. "That which fell on stony places, for lack of soil withered away as soon as the sun came up, because it had no root." This represents that class of horticulturists who plant extensively, talk largely and work well for a few months, but along in July and August, when the sun is real hot, they wilt down, dry up and wither away. "The seed which fell among thorns," represents a few of our first members who advocated planting grapes and allowing the weeds to grow to shade them. They now realize the truth, that men do not gather grapes from thorns nor figs from thistles. "The seed that fell on good ground and brought forth thirty, sixty and an hundred-fold," represents that class who work diligently and industriously. They select suitable locations and good varieties, and if, by heat or cold, drought or flood, or any other cause, they lose a tree or vine, they replace it as quickly as possible. These men make a success of the fruit business, and it is gratifying to know that we have many of this class among us, but it is unnecessary to name or locate them, because, as the Bible says, "by their fruits ye shall know them."

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

Lack of Organized Force.

Congressman Hainer, of Nebraska, in a very pertinent speech before the National Dairy Union, at Washington, said that he had learned one thing in Congress, and that was that there was almost a total lack of organization among the dairymen of the United States in favor of laws against adulteration of dairy products. What a comment that is upon the citizenship of dairymen. Ask any man among them if he is in favor of such laws and he will answer yes. Ask him if he has done anything practical to impress his opinion on the law makers, whether in Congress or his own State, and not one in a thousand will answer yes.

No wonder that Bynum, of Indiana, and a host of other Congressmen will fight the Groat bill, or any other bill, that interferes with their friends, the oleo combine. It is because the oleo combine is organized and the dairymen are not. It is because the oleo men will spend thousands upon thousands of dollars to destroy the dairy interest, while the dairymen stand indifferent. The oleo men are practical; the dairymen are impractical. The oleo men hire lobbyists by the score to block the progress of all legislation against them. Will the dairymen pay the small sum of \$1 to help the National Dairy Union? It seems to us that not to do this is unwise and unpatriotic.

There are three simple ways for every dairyman to make himself effective:

1. He should write a postal card to his member of Congress and to each of the Senators of his State, asking them to support the Groat bill. Ask them to defend you against a fraud and counterfeit.
2. Also write a postal card to your member of the State Assembly and Senate, calling for State laws against this fraud. It is the number of atoms in this postal card snow storm that will tell. Every farmer can add to its weight. Don't fail to do it.
3. Send the small sum of \$1 to the National Dairy Union to help make up the sinews of war in this fight. Do this all over the land and the butter counterfeiters will hear something drop inside the next ninety days. If you wish, send your contribution to *Hoard's Dairyman*, Fort Atkinson, Wis., and we will acknowledge receipt of same and forward it to the Treasurer. Do all three of these things and thus organize.—*Hoard's Dairyman*.

Ripening Cream.

Ripening cream is the most important, and at the same time the most difficult step in the art of making good butter. Both the flavor of the butter and the thoroughness of churning depends upon the manner in which the cream is ripened.

Ripening is caused by the bacteria acting in many ways. They act upon the milk sugar, producing lactic acid, which in time curdles the casein. Bacteria act to generate and form volatile substance, which imparts odor and flavor to butter and buttermilk. Just what these flavor and odor-imparting substances are we do not know definitely.

The number of bacteria in ripened cream is beyond comprehension; in specimens of cream which has ripened for two or three days, as many as 100,000 bacteria have been found in a single drop, even under conditions most unfavorable for their growth.

In cream the work of bacteria is slower than in milk, because there is only a small amount of sugar, casein and albumen left, and consequently the germs have less material to live on, and they cannot live on fat alone.

Three reasons are given for ripening cream. First, to get flavor in butter; second, to secure thorough churning; third, to improve the keeping quality. The first reason is sound. It is impossible to get the fine, nutty flavor except from ripened cream. Second reason is also sound, and third reason is in some doubt. Some experiments

seem to show that sweet cream butter keeps best, while others indicate that ripened cream butter keeps best; there is probably not much difference.

The ripened cream butter seems to keep best at a temperature of 32° or less, but when the butter is kept at 45° or 50° then the sweet cream butter seems to keep better.

The best temperature in which to ripen cream depends upon the season, temperature of the room and the condition of the cream. High temperature causes more rapid ripening than low temperature, consequently is raised or lowered as rapid or slow ripening is desired. In the summer cream is usually ripened at lower temperature than in winter. In general, it may be said that the best temperature at which to ripen cream in creameries is from 56° to 58° in summer and 60° to 65° in winter.

The cream should be stirred often while ripening, for two reasons: First, to keep an even temperature; second, to prevent the surface from thickening. If the temperature is not uniform the warmer parts ripen faster, and the result will be an extra loss of fat in the buttermilk. This loss occurs because the best temperature for churning ripe cream is not the best for cream not ripe, and if cream is unevenly ripened it is impossible to secure temperature that is best for all of it.

If the cream is allowed to stand without stirring, the richer parts rise to the surface, and the upper inch or two becomes thick, being exposed to air and moisture, evaporates, and clots of cream form. If it takes several days to get cream enough to churn, it should be kept sweet. Sometimes cream will not ripen of itself in time for next day's churning. Then it becomes necessary to use a starter. The starter is simply ripened milk of some kind. When it is added to cream, and well stirred in, the ripening germs begin to grow rapidly, and in this way begins to ripen. The starter most often used is buttermilk. This will do if butter of that churning was of good flavor. If the butter was off in flavor, buttermilk should not be used. A better method is to take skim-milk as soon as it is separated, set it in a can in a heating vat and raise the temperature to 150°. Hold at this for ten or fifteen minutes, then cool down and add to it 10 or 15 per cent. of buttermilk; keep in clean can, well covered, at a temperature of 60° to 65°. This is used for next day's cream. The amount of starter depends upon condition of cream, temperature of cream, and length of time cream has to stand. Generally from eighteen to twenty hours is required for cream to ripen. Ripened cream has a very fine, granular appearance and a slightly acid taste.

Dairy Notes.

It is related upon what appears to be pretty good authority that the managers of a blind asylum at Louisville, Ky., substituted oleomargarine for butter. The sightless children, without being told of the change, gradually ate less and less of the substituted stuff and finally gave it up altogether. Steer, hog, dog and cat fat is not cow fat, and never will be, says an exchange.

Every farmer that raises milk for the creamery should note the difference between 5,000 pounds of milk testing 3½ per cent. of fat, and 6,000 pounds testing 4 per cent. Based on the average of 80 cents per hundred pounds, there would be a difference of \$13. Whether selling milk to the creamery or making butter, the standard should be 6,000 pounds from each cow yearly, testing 4 per cent. butter fat.

It has been determined that about 60 per cent. of the ration of a dairy cow, fed to her full capacity, is required to maintain the bodily functions and keep her in normal condition. This is estimated to be from eight to nine pounds of grain per day for a cow weighing 1,000 pounds. If a cow is fed only what is required to maintain her body, or a little more, there will be but little return in milk, and that will be partly at the expense of live weight, which cannot long continue.

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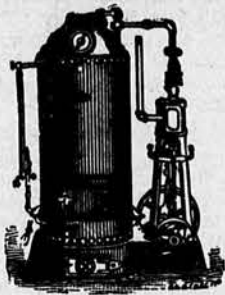
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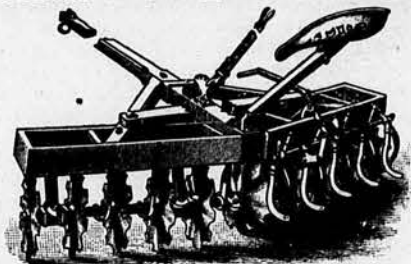
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I have excellent farms in Rooks county, Kansas, for sale, way down below their value. Will sell on contract for one-tenth down and one-tenth yearly, or will give deed if one-fourth or more is paid down. Write for particulars and state how much you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

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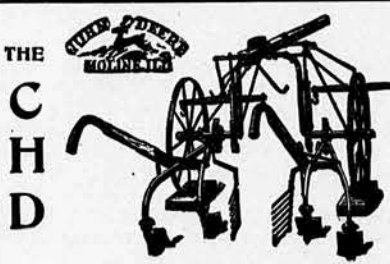
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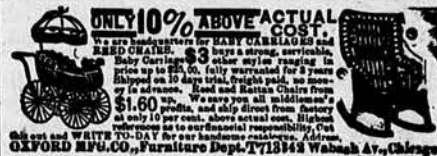
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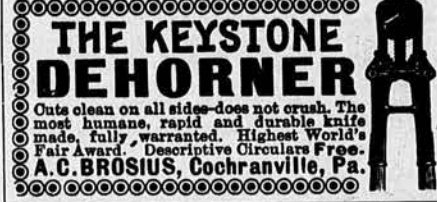


LOOK for our announcement in NEXT issue of this paper. It will show a cut of 1 style of DAVIS CREAM SEPARATORS. It would take several pages to give details about these peerless machines. Handsome Illustrated Pamphlet Mailed Free. AGENTS WANTED. DAVIS & RANKIN BLDG. AND MFG. CO. Sole Manufacturers, Chicago.



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How to Farm WITHOUT RAIN. GOOD CROPS IN SPITE OF DRY WEATHER.



FOR INFORMATION REGARDING USE AND RESULTS ADDRESS THE ROCK ISLAND PLOW CO., Rock Island, Ill.

DEERE & CO. MOLINE ILL.

Weather Report for February, 1895.

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

The coldest February in ten years; in nearly thirty years but three Februaries (1875, 1881, 1885) have been colder. In only one previous February (1885) has the thermometer fallen below the minimum of the past month. The rainfall was insignificant and scarcely an inch of snow fell during the month. On the 6th occurred a remarkable straight wind, which traveled a total of 1,103 miles in the twenty-four hours. Notwithstanding the small precipitation the month was cloudier than usual.

Mean temperature was 25.85°, which is 5.78° below the February average. The highest temperature was 67.0°, on the 28th; the lowest was 13.5° below zero, on the 7th, giving a range of 80.5°. Mean temperature at 7 a. m., 18.70°; at 2 p. m., 32.70°; at 9 p. m., 26°.

Rainfall, including melted snow, was 0.67 inch, which is 0.84 inch below the February average. Rain or snow in measurable quantities fell on seven days. The entire depth of snow was one inch. There were seven days on which rain or snow fell in quantity too small for measurement. There were no thunder showers.

Mean cloudiness was 51.67 per cent. of the sky, the month being 4.62 per cent. cloudier than usual. Number of clear days (less than one-third cloudy), eight; half clear (one to two-thirds cloudy), thirteen; cloudy (more than two-thirds), seven. There was one entirely clear day and two entirely cloudy. Mean cloudiness at 7 a. m., 49.30 per cent.; at 2 p. m., 68.57 per cent.; at 9 p. m., 37.14 per cent.

Wind was southwest twenty-eight times; northwest, twenty-seven times; north, eleven times; south, one time; northeast, three times; east, three times; west, three times; southeast, eight times. The total run of the wind was 10,860 miles, which is 741 miles below the February average. This gives a mean daily velocity of 370 miles, and a mean hourly velocity of 15 miles. The highest velocity was 75 miles an hour, from 5:30 to 5:40 p. m. on the 6th.

Barometer.—Mean for the month, 29.313 inches; at 7 a. m., 29.328 inches; at 2 p. m., 29.287 inches; at 9 p. m., 29.325 inches; maximum, 29.744 inches, on the 15th; minimum, 28.726 inches, on the 28th; monthly range, 0.587 inches.

Relative Humidity.—Mean for the month, 74.7 per cent.; at 7 a. m., 80.5; at 2 p. m., 64.5; at 9 p. m., 79.0; greatest, 100, on several occasions; least, 34, on the 21st. There were no fogs.

"BROWN'S BRONCHIAL TROCHES" are unrivalled for relieving Coughs, Hoarseness and all Throat Troubles. Sold only in boxes.

Gossip About Stock.

Governor Glick has sold, from his Shannon Hill stock farm, a fine Short-horn bull, 11 months old, and weighing 1,000 pounds after walking eleven miles. Also nine-months-old bull calf, weighing 800 pounds, to James W. Arthur, Longmont, Colorado. This fine young animal will be placed at the head of a herd of Short-horns recently purchased by Mr. Arthur.

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

The separate prices of these are:

Dr. Orr's Book.....\$1.50
KANSAS FARMER, one year.....1.00

Total.....\$2.50

Two dollars sent either to the Kansas Farmer Co., Topeka, or to Dr. S. C. Orr, Manhattan, will secure both, making a saving of 50 cents.

D. P. Norton, Council Grove, writes: "I have sold the Short-horn bull calf, Young Buccaneer, to Mr. F. M. Ferguson, a stockman of Anthony, Harper county, Kansas. Will be pleased to have him inspected by any stockman of that region who wishes to see what kind of bulls we are sending out from the Neosho Valley herd. He is sired by our herd bull, Buccaneer 106658. Young Buccaneer's dam was got by Vice Royal 78238, whose maternal grandsire was the great Booth bull, Lord Irwin (29123), that weighed 2,800 pounds, and won a world-wide reputation as a prize-winner in England. Vice Royal was got by the noted sire, 2d Earl of Aberdeen 51413 (a pure Cruickshank), he by the great Imp. Earl of Aberdeen 45092, bred by Amos Cruickshank. Young Buccaneer's pedigree also shows top crosses of the following sires, viz.: Magistrate 27153 (bred by Wm. Warfield), a grandson of the great Muscaton 7057 (bred by R. A. Alexander, of Kentucky), that headed Warfield's herd for several years, and was invincible in the show yards of America; Imp. Robt. Napier 8975, the noted Booth bull that headed Warfield's herd; Fairfax 6780, also bred by Warfield,

and a grandson of his great Renick 908, that sired so many good ones; Young Duke 6323, bred by R. A. Alexander, of Kentucky, and got by the renowned Imp. Duke of Airdrie 9798, called in Kentucky "The Old Duke," and the original progenitor of the famous American Dukes of Airdrie, that sold for such fabulous prices—up among the thousands."

Mr. E. E. Axline, the well-known breeder of Poland-China swine and high-class Barred Plymouth Rock chickens, whose farm lies near Oak Grove, Jackson county, Missouri, in a late letter to our live stock field man, among other things, says: "My swine herd is coming on in fine shape. Several fine litters are already here. One of my best young sows, Lucy's Best (25180), farrowed eleven and is raising seven broad-backed promising little ones. I started two fine gilts to Illinois to-day, which I think will be a credit to old Jackson county. I lately bought of John R. Hill, of Illinois, his fine breeding boar, Roy U. S. 24165 A. Myself, in common with others who have seen him here on Missouri soil, pronounce him one of the best individuals in all Missouri, and much is expected of him in my herd. There are yet some extra good fall pigs of both sexes that I could spare and will at reasonable prices. As the time has arrived for active interest in the poultry business, I wish to say to the readers of the KANSAS FARMER that Mrs. Axline is prepared to send out to her old customers, and new ones as well, Barred Plymouth Rock eggs from as strong a flock as was ever on our farm. The hens were carefully selected for our breeding pens and judiciously mated with strong, vigorous young cockerels. We will ship eggs at \$1 per setting of fifteen and will do our best to please our friends."

A Year's Work at Fordhook Farm.

This is the title of a new book published by W. Atlee Burpee & Co., the well-known seedsmen, of Philadelphia. It is superbly printed on coated paper, and illustrated with fifty beautiful half-tone engravings from photographs. It is intended to present in an attractive manner, by the united efforts of pen and camera, an exact, comprehensive and impartial picture of Fordhook precisely as it appears to the average man or woman visiting the farm. The following extract from the author's introduction gives an idea of the scope of this little volume:

"Mr. Burpee would be only too glad if every one of the thousands upon thousands of the firm's customers from all over the globe could go to Doylestown and see Fordhook with their own eyes; but as this is a manifest impossibility with the larger proportion of them, this little book has been prepared as a sort of humble mirror which will reflect, at least, a feeble likeness of Fordhook and its doings to the uttermost parts of the earth, and make all people acquainted with the system and processes which have made this one of the greatest seed farms in the world, and the source of one of the most flourishing business enterprises in the United States."

Although the price is 10 cents, W. Atlee Burpee & Co., will be pleased to send a copy upon receipt of two 2-cent stamps to the address of any planter who desires to consult it before purchasing this season's supply of seeds. It is a book well worthy of a careful reading.

Lands.

Virginia, West Virginia and Maryland offer superior inducements to persons seeking pleasant and profitable homes. Low-priced farming and grazing lands, timber and mineral lands, manufacturing sites, business locations, etc.

Farms convenient to Eastern markets are offered at prices which can't be duplicated elsewhere. A special list of Shenandoah valley, Maryland and West Virginia properties is now ready for free distribution. Western people can take half-rate excursions to the Shenandoah valley over the Baltimore & Ohio railroad from Chicago, St. Louis, Cincinnati and all B. & O. points in Ohio, Indiana and Illinois.

For full information, given free of charge, write to S. P. Kretzer, Land and Immigration Agent, B. & O. R. R., Philadelphia.

Six Thousand Square Miles of Wealth.

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

THE UNTRIED.—The Topeka Advocate still champions the cause of the 113,000 untried Populists of Kansas and their brothers in other States, yet it talks politics in such an unprejudiced way that it is read by many Republicans, Democrats and Prohibitionists. You can get it for \$1 a year, 25 cents for three months. The Advocate and KANSAS FARMER a year for \$1.50.

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

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

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

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We will pay \$100 for 10 ears of corn—\$10 an ear—and furnish seed free from which to raise it. For full particulars address WESTERN FLOWERS, MOBILE, ILL.

Acres Apples, \$1,493. Write Nurseries Louisiana, Mo. for a FREE sample copy telling about it. A practical Fruit and Farm paper, published by Stark Bros. 40 cents a year. Circulation 450,000 copies. The "Cream of the Cream." Gives the busy Fruit-Grower or Farmer, who hasn't the time or the money to buy and read a great mass of papers, what is best from all, what he wants to know.

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

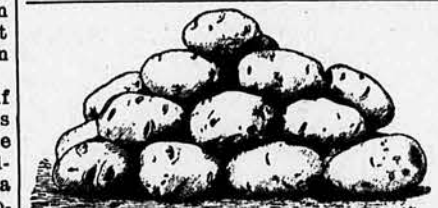
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Send for descriptive list and prices.

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A pamphlet on potato and bean culture, subsoiling, melon growing, seed potatoes, corn, beans and choice garden seeds, kinds of tools to use, valuable information how the money is made, sent free on application; please send stamp for postage. This pamphlet may be worth hundreds of dollars to you if advice is followed. Address (mentioning FARMER) S. A. THOMAS, Bingham, Page Co., Iowa.

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Even in DRY SEASONS, the White French yield 600 bu. per acre. Essay on Artichokes free. Seed \$1 per bu. J. P. Vissering, Melville, Madison Co. Ill.

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\$1.25 per 1,000! 100 Apple Trees, - \$3.50 All the leading sorts. 100 choice Concord Vines, \$2.00 1,000 Russian Mulberry, \$1.15 Shade trees below cost. Complete price list free. Address JANSSEN NURSERY, Jefferson Co. Jansen, Neb.

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600 ACRES. 13 GREENHOUSES.

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Headquarters in the United States for all varieties and sizes of Hardy Nursery grown evergreens and ornamental trees. Prices the lowest. Six \$5.00 and \$10.00 bargains. Over ten million evergreens and a large stock of other trees. Illustrated catalogue free. I want a good Local Agent.

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10 Choice Annuals. (everybody's favorites), all new fresh, seeds, sure to grow and bloom this season. Pansy, 40 colors and markings; Phlox, 20 colors; Verbena, 18 colors; Pinks 10 colors; Petunia, 12 colors; Asters, 12 colors; Balsam, 8 colors; Sweet Peas, 12 colors; Mignonette sweet and Sweet Alyssum.

FOR 12 CENTS and the name and address of flowers, I will send, post paid, the complete collection, one pkgt. each of the ten varieties (enough for any ordinary garden). This is a BONA FIDE offer, made to introduce my home grown flower seeds to new customers and which I guarantee to please you or the amount paid refunded, and the seeds given as a present.

Miss C. H. LIPPINCOTT, 319 and 323 Sixth St. So., MINNEAPOLIS, MINN.

100 DAY CORN!

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Champion W. Pearl. Early Butler. Champion Yel. Dent. Riley's Favorite. Improved Lexington. Dungan's W. "Golden Beauty." Ches. Co. Mam'th. Hickory King.

PRICES 1-C. Yel. Dent, lb. 50c. postpaid; or express or fast freight, peck \$1.75; ½ bu. \$3; bu. \$5. C. W. Pearl, lb. 30c.; peck 55c.; bu. \$1.55; 5 bu. \$7; 10 bu. \$13.50. Other eight kinds, lb. 30c.; peck 50c.; bu. \$1.50; 5 bu. \$8.50; 10 bu. \$13.25.

Shipped quickly and urgently traced to hurry through. Low freight rates. My seed is extra good and grows well. My catalogue and three samples sent free. I refer to editor of this paper, or if you prefer, send money to First National Bank, Bement, Ill., to be paid over to me if they know me to be reliable.

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

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. Sometimes parties write us requesting a reply by mail, and then it ceases to be a public benefit. Such requests must be accompanied by a fee of one dollar. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, DR. S. C. ORR, Manhattan, Kas.

LUMP ON COW.—I have a cow that has a hard lump on her neck just back of, but not attached to, the jaw-bone. It broke a few days ago and discharged a white pus. Is it lumpy-jaw?

Dillon, Kas. T. J. C.

Answer.—It is not possible to give a definite opinion in such a case without a personal examination, but it is probably only an abscess or an ulcerated gland and will heal readily if opened thoroughly and cauterized with blue vitriol.

PIGS DYING—QUESTIONS.—(1) I have lost one pig, 5 months old, and I am about to lose another. They become stupid and will lie for hours without getting up to eat, and when forced to get up they eat and drink very little. They get very gaunt and seem to have difficulty in urinating; they also have a thumping in the sides and difficulty in breathing. (2) What is "thumps"? What causes it? What will cure it?

Erie, Kas. A. Z.

Answer.—The symptoms given are somewhat similar to those of hog cholera, and yet the trouble may be due to worms. Give concentrated lye in their swill, every other day for two weeks, in the proportion of a tablespoonful to each ten hogs to be fed. (2) Thumps is the name commonly applied to a hacking cough accompanied by a jerking motion of the flanks. It may be due to intestinal worms; it may be a symptom of cold, pneumonia or any other lung disease, and is frequently the result of dry dust inhaled in filthy pens. To cure or prevent it, remove the cause, whatever that may be.

MAL-PRESENTATION—INDIGESTION.—(1) I have a cow that, in delivering her third calf, had a mal-presentation, and I took the calf away in pieces; the cow is doing well. If I breed her again will the same trouble be more liable to occur than in any other cow? (2) I also have a horse, coming 4 years old, that scours sometimes; at such times I have noticed him pass worms from one to five inches long.

Antelope, Kas. A. M.

Answer.—(1) If your cow was not injured in delivering the calf her past trouble will not affect her future. It may never occur again. (2) Your horse is troubled with indigestion, due very likely to the presence of intestinal worms. Let him fast over night and in the morning give him a pint of raw linseed oil and one ounce of turpentine, then let him stand for an hour or two before feeding. Repeat this in about five days. In the meantime give him two heaping teaspoonfuls of the following powder twice a day in ground feed: Powdered sulphate of iron, genitan root and nitrate of potash mixed together in equal parts.

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MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, Mo., March 4.—Cattle—Receipts, 7,583; calves, 94; shipped Saturday, 840; calves, 4d. The supply of choice exporters was not so good to-day as on several days last week. The opening of the market was active and strong, and in some cases 10¢ to 15¢ higher. In other cases it was termed steady. The loss of Saturday was regained on best quality and buyers called the market about steady with Friday's prices. Cows and heifers were steady to strong, and in some cases higher. Feeders were steady to strong, but the market was slow on account of the stiff prices asked. There was a large supply in the Texas division. The market there was quoted steady to strong. It closed strong. The bull market was active and strong. The following are representative sales:

SALES:					
SHIPPING AND DRESSED BEEF STEERS.					
40.....	1,378	\$5.25	30.....	1,293	\$5.15
72.....	1,278	5.10	20.....	1,248	4.85
20.....	1,231	4.80	26.....	1,228	4.75
1.....	1,240	4.55	3.....	1,168	4.50
1.....	1,000	4.30	4.....	947	4.10

TEXAS AND INDIAN STEERS.					
64 c. f.....	1,155	\$4.40	21 c. f.....	1,147	\$4.30
47 c. f.....	1,160	4.25	97 c. m. f.....	1,093	4.25
295 c. m. f.....	1,373	4.20	45 c. f.....	1,034	4.10
50 c. f.....	1,055	4.10	13 c. f.....	942	3.65

TEXAS AND INDIAN COWS.					
33 cot.....	814	\$3.35	24 c. f.....	717	\$3.10
6 cot.....	733	3.05	6 cot.....	790	3.05
13 cot.....	976	3.00	1 cot.....	750	3.00
	275	2.05	2 c. f.....	1,036	2.25

13 c. f.....	865	2.85	3 c. f.....	1,036	2.25
COWS AND HEIFERS.					
1.....	1,200	\$4.00	2.....	1,240	\$3.80
2.....	1,130	3.75	2.....	955	3.75
5.....	1,150	3.70	2.....	1,101	3.60

10.....	593	3.60	1.....	1,310	3.50
5.....	946	3.35	1.....	1,091	3.30
3.....	880	3.25	10.....	910	3.20
1.....	1,100	3.20	1.....	1,090	3.15
8.....	742	3.10	1.....	1,000	3.00

Hogs—Receipts, 4,361; shipped Saturday, 2,053. The market opened active and about steady. The supply was quite small and made the packers eager buyers. The close, while active, was little stronger than the opening. Pigs were in good demand, as were the heavy hogs. The top was \$4.20 and the bulk \$3.00 to \$4.05, against \$4.17½ for top and \$3.90 to \$4.00 for bulk Saturday. The following are representative sales:

59.....	234	\$4.20	66.....	280	\$4.12½	13.....	316	\$4.10
53.....	238	4.07½	61.....	230	4.07½	57.....	247	4.05
74.....	253	4.05	79.....	263	4.05	65.....	251	4.05
72.....	261	4.05	7.....	232	4.05	76.....	265	4.05
55.....	238	4.05	58.....	261	4.05	76.....	233	4.00
25.....	245	4.00	75.....	216	4.00	82.....	231	4.00
25.....	325	4.00	63.....	225	4.00	75.....	250	3.97½
30.....	228	3.97½	88.....	203	3.95	26.....	236	3.95
64.....	218	3.95	17.....	221	3.95	74.....	228	3.90
50.....	226	3.90	50.....	230	3.90	47.....	216	3.90
21.....	190	3.87½	79.....	201	3.87½	29.....	230	3.85
55.....	216	3.85	51.....	223	3.80	100.....	183	3.80
38.....	181	3.75	23.....	137	3.70	83.....	94	3.65
8.....	132	3.65	17.....	141	3.65	23.....	120	3.65
20.....	139	3.65	12.....	137	3.65	18.....	136	3.62½
19.....	122	3.60	31.....	130	3.60	53.....	107	3.55

Sheep—Receipts, 3,340; shipped Saturday, none. The market opened rather slow, the buyers attempting to force the prices lower. The trade at the close was somewhat better at barely steady prices. The supply was rather small compared with other Monday's receipts. The following are representative sales:

43 lambs.....	91	\$4.25	210 mut.....	104	\$4.15
6.....	115	3.00			

Horses—Receipts to-day, 127; shipped Saturday, 60. There was very little trading done this morning. The usual Monday quietness prevailed. There were a few private sales at about steady with Saturday's quotations.

Chicago Grain and Provisions.				
March 4.	Opened	High'st	Low'st	Closing
Wh't—March..	52½	52½	52½	52½
May.....	54½	54½	54½	54½
July.....	55½	55	55½	55½
Corn—March..	43	43½	43	43
May.....	44½	45	44½	44½
July.....	44½	44½	44½	44½
Oats—March..	28½	28½	28½	28½
May.....	29½	29½	29½	29½
July.....	27½	27½	27½	27½
Pork—March..	10 3¼	10 3¼	10 3¼	10 3¼
May.....	10 3¼	10 52½	10 35	10 52½
Lard—March..	6 42½	6 42½	6 42½	6 42½
May.....	6 50	6 55	6 50	6 53
July.....	6 65	6 67½	6 65	6 67½
Ribs—March..	5 20	5 20	5 20	5 20
May.....	5 32½	5 37½	5 32½	5 37½
July.....	5 45	5 52½	5 45	5 52½

Kansas City Grain.

KANSAS CITY, March 4.—There are not much demand for the few cars of wheat that were offered on 'change to-day, but they were firmly held, and advanced prices were asked for wheat out of store—53½ to 54c.

Receipts of wheat to-day, 5 cars; a year ago, 111 cars.

The demand for wheat is entirely local now, and quotations on the basis of the Mississippi river cannot be given satisfactorily.

Sales of car lots by sample on track, Kansas City: No. 2 hard wheat, nominally, 52½¢ to 53½¢; No. 3 hard, nominally, 51¢; No. 4 hard, nominally, 50¢; rejected, nominally, 48¢; No. 3 red, 1 car long river billing 52½¢; No. 3 red, nominally, 51¢ to 52¢; No. 4 red, nominally, 10¢ to 50¢; rejected, nominally, 48¢.

Corn sold rather slowly at about Saturday's prices. White corn was a little higher.

Receipts of corn to-day, 25 cars; a year ago, 90 cars.

Sales by sample on track, Kansas City: No. 2 mixed corn, 8 cars 40¢, 1 car 40½¢, 2 cars 40½¢; No. 3 mixed, nominally, 39½¢; No. 4 mixed, nominally, 39¢; No. 2 white, 4 cars 40½¢; No. 3 white, nominally, 40¢.

Bids for oats were generally lower to-day, because of the increased offerings.

Receipts of oats to-day, 18 cars; a year ago, 14 cars.

Sales by sample on track, Kansas City: No. 2 mixed oats, 2 cars 29¢, 2 cars 28½¢, 1 car 28½¢; No. 3, nominally, 28¢; No. 4, nominally, 27¢; No. 2 white oats, nominally, 31¢; No. 3 white oats, nominally, 30¢.

Hay—Receipts, 61 cars; market dull and weak;

Timothy, fancy, \$9.50; choice, \$8.00 to \$8.50; No. 1, \$7.50 to \$8.00; clover, mixed, \$6.00 to \$6.50; low grade, \$5.00 to \$5.50; fancy prairie, \$8.00 to \$8.50; choice, \$7.00 to \$7.50; No. 1, \$6.00 to \$6.50; No. 2, \$4.50 to \$5.50; packing hay, \$3.50 to \$4.50.

Kansas City Produce.

KANSAS CITY, March 4.—Eggs—The receipts to-day were exceedingly heavy; strictly fresh are quoted at 17¢ per doz.

Poultry—Receipts are light and market firm. Hens, 5½¢; mixed springs, 6¢; small, 7¢; roosters, 12½¢ to 15¢; dressed chickens, 8¢ to 7¢. Turkeys, old gobblers, 4½¢; young, 5½¢; hens, 6½¢ to 7¢; dressed turkeys, 8½¢ to 9¢; dry picked, hens, good demand (shippers prefer dry picked and will pay better prices than on scalded stock), 7½¢; young gobblers, 6½¢. Ducks, scarce, firm, 7¢ to 8¢. Geese, market slow on account of warmer weather; alive, 5¢ to 5½¢; dressed, small and medium, 6¢ to 7¢; large, 12 lbs. and over, 7¢ to 8¢. Pigeons, dull, 75¢ per doz.

Butter—Receipts heavy and the market is weaker. The eastern market continues weak. Roll will soon be out of season. There is no local demand for anything but first-class table butter; poor roll can only be sold to packers; extra fancy separator, 19¢; fancy, 17¢; fair, 15½¢; dairy fancy, 15¢; fair, 11¢; fancy roll, 11¢; fair roll, 8¢; packing, weak, 5¢ to 7¢; old, 5¢.

Fruit—Apples, supply good; the market is firm on all good fancy brands; standard packed ranged from \$3.50 to \$4.00 per bbl.; others, \$2.00 to \$3.00; best fancy stand, \$5.00 to \$5.50; Jennettings, \$2.00 to \$2.50; winesaps, \$3.50 to \$5.50; Ben Davis, \$4.00 to \$5.00; common varieties, \$2.25.

Vegetables—Potatoes, market firm on all grades; ordinary kinds, common, 40¢ to 50¢ per bu.; sweet potatoes, red, scarce, 25¢ to 30¢; yellow, 25¢ to 30¢; Utah and Colorado, market stiffer; choice, mammoth pearl, white, best, 6½¢ to 8¢; No. 2, 5¢ to 6¢.

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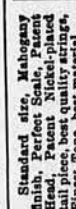


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Official Receipts, 1894.....	1,772,545	2,547,077	589,555	44,237	107,494
Slaughtered in Kansas City.....	569,646	2,050,784	387,570		
Sold to feeders.....	308,181	11,496	69,816		
Sold to shippers.....	409,955	468,616	45,730		
Total sold in Kansas City, 1894.....	1,677,792	2,530,896	503,116	28,903	

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.

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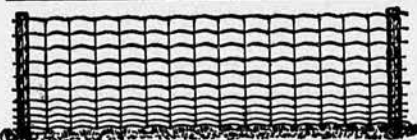


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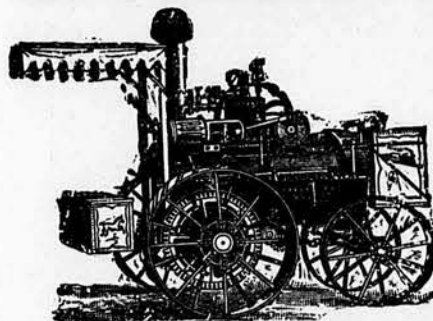
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(Continued from page 1.)

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