

KANSAS FARMER

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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.

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

CATTLE.

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

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.

ENGLISH RED POLLED CATTLE AND COTSWOLD SHEEP.—Young stock for sale, pure-breds and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Buccaneer 106658 at head of herd. Registered bulls, heifers and cows at bed-rock prices. Address D. P. Norton, Council Grove, Kas.

FOR SALE—Three Red Polled bulls; two 2 years old past and one aged. Imported. Price of latter \$75; the young ones \$50 per head. Can spare some heifers. D. Stainbrook, LaCygne, Linn Co., Kas.

SWINE.

FANCY Poland-China J. H. TAYLOR, Pearl, Boars and Glits, Kas.

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

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

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

D. TROTT ABILENE, KAS., headquarters for POLAND-CHINAS and the famous Duroc-Jerseys. Mated to produce the best in all particulars. Choice breeders cheap. Write.

SWINE.

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

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

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

CATTLE AND SWINE.

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. 23851, 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.

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

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.

TOPEKA BERKSHIRE HERD.

Let me send you some sample pedigrees and a list of premiums taken at the Kansas State fair in 1894. H. B. COWLES, Topeka, 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 QUOROLLO, MOSCOW, MO.

Breeder and shipper of prize-winning Large Berkshire Swine. S. C. Brown Leghorns and Bronze Turkeys. Headed by King Leo II. 29801, Mephistopheles 32412.

SELECT HERD OF BERKSHIRES

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

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 30459. 6 boars, 12 glits, by Model Duke II. 22467, and 9 fall of 1894 farrows, both sexes, for sale. Write or come.

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.

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.

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.

SWINE.

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

D. W. EVANS' HERD REGISTERED POLAND-CHINA SWINE

FAIRVIEW, BROWN CO., KAS. 250 head headed by Swi Tecumseh 11929 S., by L's Tecumseh 11418 S., and Billy Wilkes 9309 S., by George Wilkes 6950 S. Inspection invited.

J. T. LAWTON, North Topeka, Kas.

Breeder of Improved Chester White swine. Stock for sale. Pairs or trios not akin shipped. Correspondence invited.

DONIPHAN COUNTY HERD Recorded Poland-China Swine.

A. W. Themanson, Wathena, Kas. Herd boars Graceful F. Sanders 13095 S., sire and dam prize-winners World's Fair, and Early Sisson 11993 S., that has one thousand descendants in a radius of fifteen miles. Fall and winter glits bred for sale. Booking orders now. Write or come.

OHIO IMPROVED CHESTER Whites and Poland-China swine, Light Brahma chickens and English Black and Tan ratters.

A. E. STALEY, Ottawa, Kas.

Poland-China Hogs, Holstein Cattle

and B. P. Rock chickens of the 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. Write your wants. Satisfaction guaranteed. Sixth Annual Clearance Sale, Sept. 17, 1895. BERT WISE, Reserve, Brown Co., Kas.

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 8981 S., sired by George Wilkes. He is assisted by Tecumseh Wilkes, sired by General Wilkes 21927. The females belong to the best strains. Come or write.

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.

MARTIN MEISENHEIMER, Hiawatha, Brown Co., Kas.

20 brood sows, headed by Tecumseh Free Trade 10789 S., assisted by a son of Benton's Last 8527 S. Some of best females bred to Butler's Darkness, Black U. S. Nemo (Vol. 9) and Victor M. Jr. (Vol. 9). Annual Clearance Sale, September 18, 1895.

ROYAL HERD POLAND-CHINAS and Plymouth Rocks.

Herd headed by Cunningham's Choice 13731, from the herd awarded grand sweepstakes at World's Fair on boar and sow; Royal King 11874. My sows are royal-bred. Ward A. Bailey, Callista, Kingman Co., Kas.

PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

Westphalia, Anderson Co., Kas. Breeder of high-class pedigreed Poland-China swine. Herd headed by Tecumseh Grand 9178 S., assisted by Guy Wilkes 3d 12101 S. Fifty choice April pigs ready to go. Write, or better, visit the farm. E. A. BRICKER.

"WILDWOOD" POLAND-CHINAS.

WILKES, FREE TRADE and U. S. BLOOD. Everything reserved for Public Sale, October 30, 1895. Catalogues ready in September. L. N. KENNEDY, Nevada, Mo.

R. S. COOK Wichita, Kas., Breeder of Poland-Chinas.

Won seven prizes at World's Fair—more than any single breeder west of Ohio.

CATTLE.

SUNNY SLOPE FARM, C. S. CROSS, Proprietor, Emporia, Kas.

Breeder of PURE-BRED HEREFORD CATTLE. Herd headed by Wild Tom 51592, a son of Beau Real 11056 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 Winsome Duke 11th 115137 and Grand Duke of North Oaks 11th 115735 at head of the herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

SWINE.

CLOVER HILL HERD Registered Poland-China Swine

Eighty head, headed by Royal Perfection 13159 S., a son of King Perfection 11315 S., that won sweepstakes St. Louis fair, 1894. Twenty-one April pigs, thirteen May farrow and twenty-five later, all by Royal Perfection. Write or come. T. E. Martin & Bro., Fort Scott, Kansas.

Quality Herd Poland-Chinas.

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

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. 13408 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.]

Evergreen Herd Poland-Chinas.

Winterscheidt Bros., Prop'r's, Horton, Kas. Headquarters for Admiral Chip pigs. The great \$250 boar, Admiral Chip 7919, heads the herd, assisted by Kansas Chief 13076, Winterscheidt Victor 18294, Geo. Wilkes Jr. 11883. Also pigs from Orient's Success 27259 and Banner Chief 12714. Sows of following strains: Tecumseh, None Such, Wilkes Admiral Chip, etc. Prices reasonable. Write or come.

J. R. KILLOUGH & SONS, Richmond, Franklin Co., Kansas, POLAND-CHINA SWINE.

Headed by Upright Wilkes 13246 and assisted by J. H. Sanders Jr. 13739. Our brood sows are all richly bred and high-class individuals. A fine lot of fall pigs, both sexes, ready to go at reasonable prices.

HILLHURST STOCK FARM GARNETT, KAS., (Anderson Co.)

Walter Latimer, Prop'r. POLAND-CHINA SWINE of the Tom Corwin and I. X. L. strain. None better. Public sale, Friday, Sept. 6, 10 a. m. Send and have your name recorded for a catalogue at once. Stock grown by Latimer are sure winners. Col. Sawyer, auc.

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 9003 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.

SUNNY SLOPE FARM, EMPORIA, KANSAS.

200 head of Poland-China hogs, headed by Long-fellow 29985 O. (who has the best Columbian record west of the Mississippi), J. H. Sanders Jr., Hadley Jr. 27505, Sir Charles Corwin. We also combine the blood of Black U. S., Ideal U. S. and Wilkes. 100 head of brood sows. Also 100 head of Berkshires, headed by the well-known boar, Major Lee 31139. We have 25 glits bred by him to General Lee of Gentry breeding and Royal Peerless of the Great. We have one of the largest herds of hogs in the United States. Why not come to the fountain head for brood sows? 200 head of fashionably bred Herefords. H. L. LEIBFRIED, Manager. (Breeders' Directory continued on page 18.)

The Stock Interest.

THOROUGHbred STOCK SALES.

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

SEPTEMBER 6—Walter Latimer, Garnett, Kas., Poland-China swine.
 SEPTEMBER 18—Martin Melsenheimer, Hiawatha, Kas., Poland-China swine.
 OCTOBER 4—Winterscheidt Bros., Horton, Kas., Poland-China swine.
 OCTOBER 9—Geo. W. Null, Odessa, Mo., Poland-China swine.
 OCTOBER 10—J. R. Killough & Sons, Richmond, Kas., Poland-China swine.
 OCTOBER 22—F. M. Lall, Marshall, Mo., Poland-China swine.
 OCTOBER 23—C. G. Sparks, Mt. Leonard, Mo., and G. L. Davis, Elmwood, Mo., Poland-China swine.
 OCTOBER 29—Chas. Cannon, Harrisonville, Mo., Poland-China swine.
 OCTOBER 30—L. N. Kennedy, Nevada, Mo., Poland-China swine.

PROFITABLE PORK PRODUCTION.

A friend in Arkansas writes me as follows:

Please give us your method of raising hogs from start to finish. Tell the breed you prefer, and your methods of feeding. I have read many articles of yours on the subject, but would like to get them in connected form, so as to give a regular system of feeding.

N. H.
 I am glad to furnish such an article, or possibly series of articles, for the subject is probably too large for a single article. I believe that for the farmer who has good corn land, and who will learn to manage hogs successfully, there are few specialties in farming that offer as good opportunities for profit as the growing of hogs, and notwithstanding the ravages of cholera, I believe that under intelligent management the risk is less with hogs than with a wheat or potato crop. My experience with hogs dates back a half century, as I was old enough to help grow the corn and feed the hogs early in the 40's, and in 1846, when my father fattened 400 hogs, I had my first experience as a hog drover, helping to take a drove of 350 hogs to Cincinnati, sixty miles distant. I have seen as mean and as well-bred hogs as the world can show, having lived for fifty-seven years in the Miami valley, famous for the number and excellence of its hogs, and which has the honor of originating one of the standard breeds, equal to the best—the Poland-China.

Going back to my earliest recollection, our hogs were mongrels, a mixture of many breeds, but even at that early day the blood of the Berkshire and Essex hogs showed distinctly, and the best qualities of our hogs, in my judgment came from these breeds, and contributed largely to the make-up of our Poland-China hog. When I moved to Ohio in 1848, the Poland-China breed was not fully established, but was in the process of evolution. These hogs were then comparatively coarse and heavy-boned, with neither form nor color fixed, but were a great improvement on the razor-back, wind-splitter hog of the woods, which was the prevailing type of hog at that day, and I have seen the objectionable qualities bred out and the desirable qualities established, until for health and vigor, beauty of form, uniformity of shape and color, and early maturity, they are excelled by none. While the Poland-China is my choice, I have only words of praise for a number of other breeds, with which I am familiar, and I have learned that we have no domestic animal that is more susceptible of improvement under intelligent management than the hog, and to-day there is not much to choose between the best type of Chester White, Berkshire, Essex, Red Victoria and Poland-China, and where a man has valuable brood sows of mongrel breed, with large frames and good qualities as mothers, and wants to raise pork hogs, I would advise the crossing with Berkshire or Essex males, but as this cross-bred progeny would not make good breeding stock, I would advise the young farmer to begin with thoroughbred stock.

Begin with stock of good constitution, and then let your care of the animals be such as to insure health and vigor. It has been a serious fault of our breeders who have grown stock for shipment, that they have considered it necessary to overfeed with corn to get their stock into what they call shipping order, and much of the stock has been made fat enough for the butcher, and permanently injured. While the food of the young breeding

stock should be liberal and nutritious, it should not be heating and fat-producing, and should consist largely of such food as builds up bone and muscle, rather than fat; and if I was sending to these professional breeders for pigs, I would get them at eight to ten weeks old, and then I would know that they had not been injured by stuffing with corn, and I could raise them on food that would give them right development. I think it of great importance that the pair of animals you start with, and from which the herd is to be reared, should be of healthy stock, and rightly reared. Let the feed of your breeding stock, during the growing period, consist largely of bran, oil meal and house slops, with as much green food as they will eat, and while they do not need to range over the farm, they ought not to be confined to a pen or house, but should have a small grass lot to run in. I would never breed a sow to farrow before she was a year old, and think that she should rear but one litter during her second year; but after that, with good care, she will raise two litters a year, until from 5 to 8 years old. I consider mature sows much superior to young ones for mothers, as they produce larger pigs, and, I believe, those with better constitutions, and give more milk and so develop them better; and I see little difference in the profit of a spring and fall litter, and as five sows will produce with two litters a year as many pigs as ten sows will produce with one, the cost is materially reduced.

There is less risk of loss of our fall litters than of those dropped in the spring, for in March and April we are liable to severe storms and sudden changes of temperature, and it is more difficult to keep the sows in a healthy condition through the winter than in summer, when succulent food is abundant. Our fall litters are dropped in September or early October, and so get a thrifty start before winter sets in. One ought to have a lot, of an acre or so, fenced thoroughly for his mature sows, for many a valuable sow has been sent to the butcher because she became breachy, and poor fences have much to do with spoiling stock. There is no stock harder to control than an old sow in heat, and both hog lots and houses should be made strong and tight. I consider a sow, that at 3 years old has proven a kind mother, a good suckler, and that produces uniform litters of eight or ten pigs, as worth three times her market price for pork. I believe also in breeding these mature sows to young boars, as it is a settled fact that the use of a young sire has a tendency to early maturity in the progeny, and with an animal as voracious as a hog, early maturity is a prime consideration, for it makes a good deal of difference whether the pig can be made to weigh 250 pounds at 7 or 8 months, or must be fed to 10 months or more to attain that weight.

—Waldo F. Brown.

Shoeing Horses.

The United States army regulations give the following directions for shoeing horses:

"In preparing the horse's foot for the shoe do not touch with the knife, the frog, sole, or bars. In removing surplus growth of that part of the foot which is the seat of the shoe, use the cutting pincers and rasp, and not the knife. The shoeing knife may be used, if necessary, in using the top clip. Opening the heels or making a cut in the angle of the wall at the heel must not be allowed. The rasp may be used upon the part of the foot when necessary, and the same applies to the pegs. No cutting with the knife is permitted; the rasp alone is necessary. Flat-footed horses should be treated as the necessity of each case may require. In forging the shoe to fit the foot, be careful that the shoe is fitted to and follows the circumference of the foot clear round to the heels; the heels of the shoe should not be extended back straight and outside of the walls at the heels of the horse's foot, as is frequently done. Care must be used that the shoe is not fitted too small, the outside surface of the wall being then rasped down to make the foot short to

suit the shoe, as often happens. The hot shoe must not be applied to the horse's foot under any circumstances. Make the upper or foot surface of the shoe perfectly flat, so as to give a level bearing. A shoe with a concave ground surface should be used."

Gold Medal for Southdown Sheep Exhibits.

EDITOR KANSAS FARMER:—The American Southdown Breeders' Association offers a gold medal for show records of Southdown sheep at fairs in 1895, in accordance with the following:

WHEREAS, The exhibition of Southdown sheep at the county, district and State fairs, as a means of advertising and selling stock, has been demonstrated by our most successful breeders to be only second to the live stock and agricultural papers as an effective agency for disposing of surplus stock at a profit; therefore be it

Resolved, That the American Southdown Breeders' Association, for the purpose of encouraging breeders generally to exhibit their stock at the county, district, State and provincial fairs of 1895, offer a gold medal to the owner of the flock of Southdown sheep that makes the best show record during the current year on the following conditions, viz.:

1. That the rams and ewes competing for the grand gold medal of the American Southdown Association be registered in the record of this association.
2. That each of the premiums received in 1895 shall be certified to the American Southdown Breeders' Association by the exhibitor and countersigned by the Secretary of the fair at which said award was made.
3. That early notice of intention to compete for the grand gold medal herein offered must be filed with the Secretary of the American Southdown Breeders' Association, John G. Springer, Springfield, Ill.
4. Reports of awards, on the form prescribed by the American Southdown Breeders' Association must be filed for the above premium, with the Secretary of the association at Springfield, prior to December 31, 1895.

5. The grand gold medal will be awarded the exhibitor whose prize record scores the highest number of points on the following basis, in the Southdown class, viz.:

At County Fairs.—Each third premium to count 2½ points; each second premium to count 5 points; each first premium to count 10 points; each sweepstakes premium to count 20 points.

At District Fairs.—Each third premium to count 5 points; each second premium to count 10 points; each first premium to count 20 points; each sweepstakes premium to count 30 points.

At State and Provincial Fairs.—Each third premium to count 7½ points; each second premium to count 15 points; each first premium to count 30 points; each sweepstakes premium to count 60 points.

The grand gold medal will be awarded by three disinterested reputable gentlemen, to be selected by the Directors of the American Southdown Association.

For further information, address
 JNO. G. SPRINGER,
 Secretary American Southdown Breeders' Association, Springfield, Ill.

The Future Supply of Horses.

We saw the other day for the first time this year as many as five sucking colts with their dams on one farm. Had we not been traveling on the cars we should like to have made the acquaintance of the farmer who had the courage, and sagacity as well, to breed enough mares to secure five colts and to have five good draft horses at their prime in the year 1900. When any kind of live stock is overdone the tendency among farmers is to abandon it altogether. It took farmers twenty years to get over the idea that the horse market could not be overdone. Convinced by the stern logic of facts they have now gone as far to the other extreme as horses have fallen below a paying price. Their lack of faith in the horse now is worse than their credulity ten years ago.

It is argued that a horse may live twenty years and that it will take half a generation to recover from the present prostration, and that when prices do advance the range will furnish them cheaper than the farmer. It is true that the horse is long lived when compared with the usual life of the steer, and is also true that a certain kind can be produced cheaper by the ranchmen than the farmer. Farmers forget, however, that there is an immense destruction of horses going on at present. Thousands were killed on the farm last year because it did not pay to winter them. More of them have gone into cans and sold as beef than the general public are aware of. When canned beef sells at from 4 to 6 cents a pound there is room for a strong suspicion that there is more horse in the can than cow. The amount of horse

Over Thirty Years Without Sickness.

Mr. H. WETTSTEIN, a well-known, enterprising citizen of Byron, Ill., writes: "Before I paid much attention to regulating the bowels, I hardly knew a well day; but since I learned the evil results of constipation and the efficacy of



AYER'S

Pills, I have not had one day's sickness for over thirty years—not one attack that did not readily yield to this remedy. My wife had been, previous to our marriage, an invalid for years. She had a prejudice against cathartics, but as soon as she began to use Ayer's Pills her health was restored."

AYER'S

Cathartic Pills

Medal and Diploma at World's Fair.

To Restore Strength, take Ayer's Sarsaparilla.

leather used in shoes this year suggests an unusual source of supply.

We would not for a moment suggest the increased production of inferior horses. The range will always furnish the plug, the ordinary hack horses, such as are used for banging about in liveries, etc. The high price of grain and pastures in the East will always limit the production of anything but the best driving horses. The Western States can produce these as well as the coach horses, and above all the draft horse, or what the farmers call the agricultural horses, cheaper than they can be produced anywhere in the world. We are beginning to export horses to England and other foreign countries and the American horse is growing in favor there. A horse can not be produced in Great Britain at a cost of less than \$50 a year of age. We can grow them here, sending them there cheaper than they can grow them. The only trouble is that we do not grow them good enough. It is too late to breed for next year now, but not too late to get right on the question.—Henry Wallace, in *Farm and Dairy*.

In England the sheep industry presents a decided contrast with that of this country at present. While sheep are low here and many are abandoning their flocks, we find prices high in England and sheep scarce where mutton is supreme. It is only a question of time until the same state of affairs will exist in this country, and many farmers who are rushing out of sheep and pinning their faith to the dairy will discover their mistake.—*Dorset Quarterly*.

Skinny Sufferers Saved.

Tobacco users as a rule are away below normal weight because tobacco destroys digestion and causes nerve irritation that saps brain power and vitality. You can get a quick, guaranteed relief by the use of No-To-Bac, and then if you don't like your freedom and improved physical condition you can learn the use of tobacco over again, just like the first time. No-To-Bac sold under guarantee to cure by druggists everywhere. Book free. Address Sterling Remedy Co., New York city or Chicago.

Choice of Routes.

To Knights Templar Conclave, Boston, via the Nickel Plate Road, embracing Chautauqua Lake, Niagara Falls, Thousand Islands, Rapids of the St. Lawrence, Saratoga, Palisades of the Hudson, Hoosac Tunnel and ride through the Berkshire Hills by daylight. Tickets on sale August 19 to 25, inclusive; lowest rates; quick time and service unexcelled, including Palace Sleeping and Dining cars. Address: J. Y. Calahan, General Agent, 111 Adams street, Chicago, for further information. 88

To great evils we submit; we resent little provocations.—*Haillitt*

Agricultural Matters.

THE FAULTS OF THE PLOW.

The primitive Egyptian and Assyrian plow consisted of a forked branch of a tree, one arm of which served as a share, loosening the soil, the other as a beam, drawn by human or by animal power. This was the original double mold-board or lister plow, throwing the soil both ways. An improvement was made by so shaping the wooden mold-board as to form a twisted wedge, which elevated, inverted and carried the soil to one side only of the plow. A further improvement was made by making the point of the share of iron. Simple as it seems, it was not until April, 1831, that center draft was given to the plow by Meares, who inclined the beam inward. In 1797, Newbold patented a cast-iron plow, and commenced its manufacture but abandoned it, for the farmers said the iron plow poisoned the land. The steel and wrought-iron plow was not invented until 1808. In 1788, Thomas Jefferson improved the plow by showing its proper principles of construction, and in 1836 and 1837 Daniel Webster experimented in plow manufacture, and said that none of his success in public life had given him so much pleasure as seeing the improved plow of his own construction drawn by six yoke of oxen of his own raising, cut broad and deep furrows through brush and saplings. In 1845, Governor Holbrook invented a method of shaping plow mold-boards symmetrically, either convex or concave.

All of the improvements which have been made in the plow, from the earliest agriculture until now, are simply modifications of the original idea—a wedge drawn through the soil, pulverizing and displacing it. No better method has been found.

The faults of the plow are serious ones. The bicycle may be credited with having brought ball bearings into general notice and showing the striking decrease of friction when sliding friction is converted into rolling friction. All of the wearing surfaces of the plow are sliding frictional surfaces, and the loss of power occasioned by friction of sticky earth upon the plow of this broad domain of ours is past computation. The plows of the day are rigid and inadjustable in form. In sandy, or in loose or light soils, and in lumpy or clayey soils, in shallow or in deep plowing, in plowing at slow or at fast speed, no adjustment or change of form can be made to suit the special conditions of the work, yet these different conditions are often found in one plantation, and the plow should be capable of being modified to suit these conditions.

If a perpendicular line is drawn from the point of attachment of the harness tug and hame to the ground, and another line from the same point to the center of work in the mold-board of the plow, and a horizontal line connecting the center of work with the perpendicular line, then the hypothenuse of the triangle thus formed represents the total tractive effort, the horizontal line, or base of the triangle, represents the useful tractive effect, and the perpendicular line represents the part of the traction which is expended in pulling the horse down upon the ground. In some cases one-third of the tractive effort of the horse is expended in increasing the pressure of the horse's feet upon the ground instead of advancing the plow.

In a fourteen-inch plow the earth is elevated say fourteen inches, carried sideways fourteen inches and deposited, inverted, in the preceding furrow. It is easy to see that each inch of unnecessary elevation represents a great amount of unnecessary labor during the lifetime of a plow, and that the carrying of all the surface soil sideways to the preceding furrow represents a great aggregate travel of soil; that is, effort in plowing large fields.

The share of the plow, like the fluke of a ship's anchor, is shaped so as to draw down into the soil. The line of traction from the center of the mold-board to the center of the horse collar, tends to draw the plow out of the ground. The plow advances horizon-

tally as a sort of compromise between these divergent lines, and there clearly results a loss of power occasioned by the line of draft being in one plane while the line of traction is in another plane.

When the total weight of all the surface soil which is elevated, and also carried sideways, in plowing all the cultivated area of this country is calculated, it is clearly seen that the agriculturists of the country waste each year in incidental but not in useful work, in excessive sliding friction, in indirect lines of traction, in unnecessary resistance caused by imperfect forms and by inadjustability of form of the plow, a greater amount of labor than was wasted by the builders of the great pyramid in Egypt, or in the building of the Chinese wall. If all the soil thus removed were transported to the aggregate distance which it is transported and elevated to the aggregate height which it is elevated, in one heap, no one would dare to attempt the removal of the heap with no better implement than the plow.

Although 10,122 patents have been granted on the plow, in this country alone, it still offers a promising field for future inventors. The killing strain on the muscles of horses in starting street cars was not fully considered until the electric motor took the place of horses in street car work; then it was found that it required three times as powerful a motor to start a car as to run it after it was started. The loss of power in vehicles by sliding friction was not understood until the bicycle, propelled by human muscle, showed the utility of converting sliding into rolling friction by ball bearings, and the labor wasted in dragging the plow will never, perhaps, be rightly considered unless inventors themselves drag the plow, and inquire into the reasons and causes of the excessive effort required by this ancient and indispensable implement upon which all civilization depends. The horse and the mule cannot complain, and so the plow remains the plow, improved in material and in workmanship, but retaining many of the faults of the plow of our remote ancestors.

It would seem that agriculturists have to observe the working of the implements they use, to notice errors of construction, to study the conditions, and should have ability to suggest means of improvement. Singularly, very few cases are known where agriculturists have invented or improved their implements. More singularly, very few radical inventions or new departures have been made by men in their own lines of work. The machinist instinctively judges a suggested improvement in mechanics by what he has seen. The lawyer naturally tests innovations by past decisions. The physician unavoidably refers to his reading or practice for approval or condemnation of anything new in his line. The agriculturist can but seldom divest himself of preconceived notions. Morse, the inventor of the telegraph, was not an electrician; Watts, the inventor of the steam engine, was not a machinist. The list may be extended indefinitely. To make a new departure, a radical invention, seems to require an ingenious man, untrammelled, open to new ideas and approaching a subject from a new side. Ask an agriculturist how a plow may be improved, and instinctively his mind pictures a crooked thing of steel and wood, which is essentially what he has seen. There are few of us who are not mentally hide-bound, fewer still who do not travel in mental ruts. There are very few who do not inherit religions, or absorb politics from newspapers or from associates, or their ideas from those they admire, or their mechanical opinions from what they have seen, read, or heard of.

The inventor who will furnish a superior substitute for the plow will probably not be a plowman. He will almost surely be poor; for rich men cannot invent. When an inventor becomes rich, which happens but rarely, his attempts at further invention are passing queer. He will meet opposition. Others will develop his invention and reap the reward, and long after he is dead a statue will be raised

to his memory, and his name will appear in the list of benefactors of his race, though but few of the millions benefited by his work will know of him or his work, or will care to know.

If the statesmen of the present time, trained as they are in the acute political methods of the times, should imitate Jefferson and Webster, their illustrious predecessors, their names might go down to distant posterity in the list of those benefactors of the world—the "improvers of the plow."—*Louisiana Planter.*

War on the English Sparrow.

EDITOR KANSAS FARMER:—There is a growing nuisance in this part of the State, in the English sparrow. We thought, a few years ago, that he would not amount to much, but as they find a nesting place in every crevice in the buildings about town, the town has become full of them, and their continual chirp has taken the place largely of the songsters that entertained us in years that are past. They are not content to pick up stray grains from loaded wagons, but fall in full force upon such grain as is exposed in open head and sap the juices in the milky or doughy state, leaving an empty head. Kaffir corn furnishes a special feast for them. For two years we have not been able to secure any seed from this plant. If there could be some concert of action agreed upon, with some one responsible for carrying out a plan, they might be lessened, if not exterminated.

Some time ago an account was published of what some boys did. They procured some whisky, soaked some grain in it and baited them so as to secure a good lot, and as a result they captured about two bushels of sparrows that were intoxicated. This would be as safe a way to secure them as could be resorted to. Other birds might share the medicated bait, but they could be released or allowed their freedom for recovery, from the debauch, while the sparrows could be disposed of. If something is not done soon we shall not have any birds but the sparrows and they will increase their tax levy upon our grains until we shall have but a small variety to cultivate that they will not destroy. One habit, they have of nesting in old straw sheds, would make it possible to destroy them in their nests. Perhaps some one else has a plan better, or perhaps a concerted plan may be agreed upon by which to make war upon them.

The rains we so much needed caught many with their wheat in the field, and the frequent rains caused some wheat to sprout. It has not rained for two weeks and now we begin to need it. The matter of subsowing has attracted the attention of some of our men and in all probability there will be some who will invest. All late crops are doing well. There is one irrigation plant here that is doing well. They pump water from the Verdigris river. Several have sown alfalfa in the last few years and where a good stand has been made it is doing well.

D. W. KINGSLEY.

Independence, Kas., July 26.

How Enrich the Soil?

EDITOR KANSAS FARMER:—I have been taking your paper for fifteen months, and have received a great deal of valuable information from its pages, so I write for information this time. I have some land that has been farmed, to my knowledge, for twenty-five years, and I don't know how much longer. I have been thinking of trying an experiment, but thinking I might get the experience of some one else, I write to the FARMER. I would like to know which is the best plan, whether to take a one-horse drill and drill rye in the corn, and when it is coming in head to plow it under, and then sow to corn, or oats, and then plow that under, or, to let the corn ground go till spring, then sow in oats, plow that under when in the milk, then sow to buckwheat, plow that under when in blossom and then sow to wheat. Of course, I know that a crop of clover is good to plow under, and I do that, but I want to know what effect these other crops would have on the

Epilepsy 20 Years.

Cured by Dr. Miles' Nervine.

A few years ago, Mr. L. W. Gallaher, was an extensive, successful expert manufacturer of lumber products. Attacked with epilepsy, he was obliged to give up his business. The attacks came upon him most inopportunistically. One time falling from a carriage, at another down stairs, and often in the street. Once he fell down a shaft in the mill, his injuries nearly proving fatal. Mr. Gallaher writes from Milwaukee, Feb. 16, '95.



"There are none more miserable than epileptics. For 20 years I suffered with epileptic fits, having as high as five in one night. I tried any number of physicians, paying to one alone, a fee of \$500.00 and have done little for years but search for something to help me, and have taken all the leading remedies, but received no benefit. A year ago my son, Chas. S. Gallaher, druggist at 191 Reed St., Milwaukee, gave me Dr. Miles' Restorative Nervine, and I tried it with gratifying results. Have had but two fits since I began taking it. I am better now in every way than I have been in 20 years."

Dr. Miles' Remedies are sold by druggists on a positive guarantee that the first bottle will benefit or price refunded. Book on the Heart and Nerves, free. Address, Dr. Miles Medical Co., Elkhart, Ind.

Dr. Miles' Remedies Restore Health.

soil. I would be glad to have any information on the subject.

C. E. THUMA.

Robinson, Brown Co., Kas.

The Origin of Our System of Land Measurement.

The "acre" is the amount which a team of oxen were supposed to plow in a day. It corresponds to the German "morgen" and the French "journee." It was fixed by the ordinance of Edward I., as a furlong in length and four poles in breadth. The "furlong" or "furrow long" is the distance which a team of oxen can plow conveniently without stopping to rest. Oxen, as we know, were driven, not with a whip, but with a goad or pole, the most convenient length for which was sixteen and one-half feet; and the ancient plowman also used his pole or perch as a measure by placing it at right angles to his first furrow, thus marking off the amount he had to plow. Hence, our "pole" or "perch" of sixteen and one-half feet, which at first sight seems a very singular unit to have selected. This width is also convenient both for turning the plow and for sowing. Hence the most convenient unit of land for arable purposes was a furlong in length and a perch or pole in width.—*Australian Agriculturist.*

What causes bad dreams is a question that has never been satisfactorily answered; but, in nine cases out of ten, frightful dreams are the result of imperfect digestion, which a few doses of Ayer's Sarsaparilla will effectually remedy. Don't delay—try it to-day.

The Knights Templar Conclave w. l be held at Boston, Mass., during August, and it will be of interest to Sir Knights and their friends to note that arrangements have already been successfully accomplished by the Nickel Plate Road, providing for the sale of excursion tickets over direct lines going and returning or by circuitous routes, viz., going one line and returning by another. By so doing many of the following notable resorts may be visited without additional expense: Chautauqua Lake, Niagara Falls, Thousand Islands, Rapids of the St. Lawrence, Saratoga, Palisades of the Hudson, and the Hoosac Tunnel. The above arrangements will no doubt make the low-rate excursion tickets offered by the Nickel Plate road very popular. Call on or address J. Y. Calahan, General Agent, 111 Adams St., Chicago. 76

Ask your neighbor to subscribe for the KANSAS FARMER.

Irrigation.

SOIL, WATER AND CULTIVATION.

One of the experiments exhibited by Mr. H. R. Hilton, during his lecture at Junction City, July 24 (of which a partial report was given in the FARMER of July 31), was the filling of two glass tubes, four inches deep, with moist surface soil from the farm of Capt. Henderson, in Smoky Hill valley. The soil was given a loose arrangement, to represent as nearly as possible what its condition would be after a good harrowing or cultivation. An inch of water was so placed as to drip into one tube at a rate that would equal a rainfall of one inch per hour, and into the other tube one inch in depth of water was poured at one time. The former was to show the effect of a gentle, steady rainfall on the cultivated soil, and the latter the effect of surface irrigation, or a very rapid fall of rain within a short period of time. The soil in the tube to which one inch of water was applied at one time, was compressed fully one inch, or from a depth of four inches to a depth of three inches. That in the tube on which the water dropped slowly maintained its structural arrangement and settled very little.

Mr. Hilton explains the experiment thus: The spaces between the soil grains in one case were fully filled with water, which, as it settled down through the surface soil, loosened and displaced the soil particles, causing them to assume a close arrangement. The application of water by irrigation on the surface has the same effect. If the soil is quite sandy, this may be beneficial, but in soils of fine texture the effect of either the irrigation water or the heavy rainfall is to compact the surface soil. This shuts out the air completely till drainage relieves the surface soil of its surplus water, and the closer arrangement of the soil grains renders it less permeable to air. In this condition the soil will retain a higher percentage of water in a given volume, but will at the same time be the easier prey to surface evaporation. As the compacted surface soil loses moisture by evaporation, it first crusts on the top and afterwards bakes into hard lumps underneath, and the result is a very unsatisfactory condition of the soil for the preparation of plant food. The diminished air supply limits the usefulness of both the water and the heat that may be present by limiting the atmospheric oxygen so essential to the greatest activity of the micro-organisms that form carbonic and nitric acid. The cracking of the ground will admit the air, but this being a result of reduced moisture supply, this deficiency of water again limits the work of the food-formers.

We can, therefore, safely assume that a compacted surface favors rapid evaporation, which is a serious loss. It prevents free access of air, another serious loss. It interferes with the development of the roots, which are the food-gathering organs of the plant. It is a fatal condition in any soil unless showers or irrigations are very frequent. Further, if the soil is allowed to bake or dry out hard, it works an injury to its physical texture that may require years of patient toil and much manuring to fully restore.

A heavy rainfall that exceeds the capacity of the soil to absorb as fast as it falls, is not an unmixed blessing. Crop-raising would be greatly simplified if falling of our rain was distributed over a period sufficiently long to permit the soil to take it in gradually, but the torrential shower is the rule rather than the exception, and is one of our problems. Soils on which the rains fall slowly do not compact, or at least but slightly, because the water passes along the surface of the soil grains, from particle to particle, and is distributed through the soil without breaking down the structural arrangement left by cultivation, or without shutting out the air. The relation of the soil grains to one another is not disturbed so long as the spaces between are not filled full of water. Even when raining, the air may circulate freely in the soil. The fermenting and nitrifying processes are not interrupted and

the growth of the plant goes on unchecked. The top soil will also more readily dry out and check evaporation than in the case of compacted soils, and has a decided advantage if conditions of crop growth are such that cultivation is out of the question.

This point may be more clearly understood by taking a box of oranges of uniform size, each orange to represent a magnified soil particle. Pack the oranges in layers in a box. Place each orange in the second layer exactly on the top of those in the first or bottom layer, and so with each succeeding layer till the box is filled. This we will call the "cube" form. The oranges will occupy over 52 per cent. of the space in the box, and the empty or air space will be nearly 48 per cent. This is the loosest form in which the oranges could be packed. But if we take each alternate layer of oranges and slip them to right or left half the diameter of each orange, so that they will rest between each other, or in "pyramid" form, as we often see them stacked on fruit stands, then the box will hold 10 per cent. more of oranges—that is to say, we can put 110 oranges in "pyramid" form in the same box that would hold only 100 oranges in the "cube" form. It will be noticed that while the oranges can be arranged more closely, so as to reduce the air spaces between to 26 per cent. of the volume of the box, yet the extent of exposed surface to which water could adhere remains practically the same, because 100 oranges present about the same surface in each case, and by adding ten more oranges we add 10 per cent. more surface within the volume of the box for water to adhere to. The finer the soil the more surface is in a given bulk, and this surface is relatively increased as the soil grains take a closer and uniform arrangement. It naturally follows from this that the more the extent of surfaces of soil grains exposed for water to cling to, the greater the amount of water a given bulk of soil will hold. And this is desirable till we reach the point of compactness where the air cannot freely penetrate. The gumbo spots we often meet are usually composed of very fine soil grains, very compactly arranged. These soils retain a high percentage of water but air cannot penetrate. When aerated they become very fertile.

Two methods of increasing the productivity of our farms are engaging the attention of our Kansas farmers to-day, viz., irrigation and subsoiling, and this experiment has an important relation to both methods.

First, in its relation to irrigation. In sandy soils, with small percentage of silt or clay, surface irrigation probably benefits by compacting, as it is naturally too loose, and allows the water to percolate too freely. Surface cultivation simply aids to check evaporation, but good judgment is needed to apply water to the surface of our fine-textured upland soils and many of the bottom soils of central and eastern Kansas. Prompt and repeated cultivation must follow each application of water to prevent baking, and even then results will not always be satisfactory. This experiment points to a plan that I believe is yearly being confirmed by experience, and that is, to apply the water in furrows and allow it to percolate slowly on each side. In this way only the soil in the furrow is supersaturated. The water is conveyed laterally on each side of the furrow, along the surfaces of the moist soil grains, and if the top soil is dry none of this water will rise to the surface through the dry soil so long as there is moist soil in which to distribute it. The waste of water is slight in comparison with surface irrigation. Weeds will not start in the dry top soil as they will when top soil is wet. The use of the water is greatly increased, and the fertility of the soil and growth of vegetation is not interfered with. When the furrows are sufficiently dried out they should be cultivated repeatedly till a bed of dry, loose soil three inches deep has been secured, and if a mulch of dry soil of this depth is maintained all over the irrigated tract, the fullest use of the water, air and heat will be secured for the growing plant. He

who farms by natural rainfall needs to cultivate much, because it means both moisture and manure, but he who irrigates needs to cultivate more, because his water costs more and he has more to waste.

Second, in its relation to subsoiling. If the soil is cultivated six inches deep, it may take care of a rainfall up to two inches without fully saturating it, but if the rain exceeds two inches this subsoil must take care of the rain as fast as it falls, or the surface soil will be filled full of water, which may result in both washing and compacting the surface soil. In every county in the eastern half of Kansas we find large areas where the soil immediately below the surface plowing has become impacted, if not so naturally, and this takes in the water much more slowly than our ordinary thunder showers choose to deliver it to us. It impedes the downward movement of the water. The subsoil plow serves to break through this impediment, secure a new and better arrangement of the deeper soil, so as to relieve the surface soil of its surplus water, besides making a much larger storage reservoir and a much more valuable one than the neighboring creek or ravine into which it too often finds its way. It is important that all the rain that falls should be retained, as it will all be needed some time. It is equally important that the surplus water finds its way out of the surface soil with as little interruption as possible, for, in our fine-grained soils the great object in all our cultivation is to overcome its tendency to pack. A corn field packed by heavy rain after it is "laid by," and a wheat or oat field packed after it is too high to harrow, are in poor condition to withstand high temperatures and delayed rainfall.

The falling raindrop in a heavy shower strikes the ground with considerable force and aids in impacting the surface soil. To minimize this evil the soil should first be cultivated to dry out the top three inches and afterwards cultivated to leave as far as possible the coarsest soil, little clods, trash, etc., on the surface, so as to receive the force of the blow. After vegetation covers the ground it breaks the force of the raindrop's blow, shades the ground from the sun, shelters it from the wind and aids by this means in preserving moisture for its future use.

At this lecture Mr. Hilton exhibited corn roots from Scott Kelsey's farm, near Oakland, and Albert Tomson's farm, near county farm, that were six and one-half feet in length and broken off at depth of three and one-half feet. A corn plant thirty days old had one root over three feet in length. It was evident from the exhibit made that corn roots will spread laterally six feet or more and go down into the subsoil over four feet.

State Irrigation Convention.

The third annual State Irrigation convention is hereby called to meet at Garden City, October 1 and 2, 1895. All who are interested in irrigation from any standpoint, and all who want to see Kansas restored to her rank as an agricultural State, are invited to be present to see what is being accomplished, and how.

The Kansas Irrigation Association, by its Executive committee.

JNO. E. FROST, Chairman.

H. V. HINCKLEY, Secretary.
Topeka, Kas., July 27, 1895.

Three months \$12. O'Connor's Business College, Kansas City, Kas.

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Fall term begins September 11. Admits both sexes. Facilities excellent. Expenses reasonable.

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Wanted—applications for loans on good city or farm property. Interest 6 to 7 per cent., according to size of loan. Oscar Bischoff, agent for Kansas capitalists, 628 Kansas avenue, Topeka, Kas.

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Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to VACUUM OIL COMPANY, Rochester, N. Y.

CORRECTION.

MCPHERSON, Kas., July 30, 1895.

It is being circulated through the State that The Farmers' Alliance Insurance Company, of Kansas, has been refused a permit by the Superintendent of Insurance to do business in Kansas.

In order to correct this false impression we desire to state that the Farmers' Alliance Insurance Company is duly and legally authorized to do an insurance business.

But the Alliance Co-operative Insurance Co. was refused a permit, and the names being so near alike, has caused the impression to get out that it is one and the same company.

The Farmers' Alliance Insurance Company has had a permit to do business since 1888, while the Alliance Co-operative Insurance Co. is a new concern which is trying to get a permit to do business.

There is no connection between the two organizations and the only similarity is in the name.

FRED JACKSON, Secretary,
Farmers' Alliance Insurance Co., of Kansas.

To the Farmers.

Having bought material for our subsoil plow largely, and needing more funds to pay for same, we make you this special offer: For cash orders we will ship one or more of the Perine Subsoil Plows, with freight prepaid, to any railroad station in Kansas. Price of plows: No. 1, four-horse, \$12; No. 2, three-horse, \$11. These plows have gained a notable reputation. Their operation is most remarkable for moving the bowels of Mother Earth. Over 600 sold and not a single complaint as to their efficiency to do the work. This offer not good after October 1, 1895. For further particulars write

PERINE'S PLOW WORKS,
Topeka, Kas.

An attractive book or folder descriptive of the great Cotton States International Exposition, at Atlanta, Ga., has been issued by the Kansas City, Fort Scott & Memphis Railroad Company, and is now ready for distribution. The book will be mailed free. Address J. E. Lockwood, G. P. A., Memphis Route, Kansas City, Mo.

Excursion to the East Over Vandalia-Pennsylvania Lines.

August 19 to 25, inclusive, excursion tickets to Boston for Knights Templar conclave will be sold via Vandalia-Pennsylvania lines good to stop off at Pittsburgh, Philadelphia, New York and other points. Stop-over privileges permit visits to Atlantic City, Cape May, Long Branch, Asbury Park and seashore resorts. Return limit ample for other side trips. Return journey may be made via Hudson river, Niagara Falls, etc. Details from Brunner, 509 Chestnut street, St. Louis, who will furnish low-rate tickets, or they may be obtained of passenger and ticket agents of connecting lines in West and Southwest. See that your excursion ticket reads from St. Louis over Vandalia-Pennsylvania lines.

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IRRIGATION.



Subsoiling and Forage in Northeastern Kansas.

Special correspondence KANSAS FARMER.

While in Brown county, last week, I spent three very pleasant and profitable hours at the home of Samuel Detweiler, near Hiawatha. Mr. Detweiler is a typical Kansas farmer of the live, progressive school, and everything about his premises indicates a degree of thrift and progressiveness which it is refreshing to see. He regards the old way as good only so long as he can see no better way. His eyes and ears are kept continually wide open for new light and new knowledge of agricultural methods which promise greater net profits and make the labor of the farm less burdensome. When a new idea is introduced which commends itself to his judgment as practicable and of a good degree of utility, he does not wait on some one else to demonstrate its utility for the public benefit, but proceeds at once to do so himself. It is not surprising, therefore, that he concluded last fall to test the value of subsoiling.

If the claims of those who advocate subsoiling prove by actual experiment to be well founded, it will be a matter of general interest and utility to the entire farming world, and the men who are the pioneers in this experimental work will occupy a proud place near the head of the class in this large agricultural school.

Mr. Detweiler said he subsoiled fifty-six acres last fall, loosening up the soil to the depth of eighteen inches. In the spring he sowed a portion of the area subsoiled to oats, the balance was planted to corn. The winter and spring being very dry—unusually so—Mr. Detweiler says he was not surprised to see his oats and corn on the subsoiled land suffer more for the want of moisture than the same crops showed which were planted on land not subsoiled. This is strictly in accordance with the theory held, and Mr. D. has lost no faith whatever in the merits of subsoiling. If the heavy rains of June had fallen in April or first week of May, fully saturating the subsoil, the results would have been different. In some places in Kansas where subsoiling was done in the fall or early spring, the corn plant showed marked improvement in thrift and vigor. This was because in those places rains had fallen to fill up the subsoil in time to help the plant when moisture was greatly needed.

Again, Mr. Detweiler has known for years, as all live farmers do, that corn fodder has a high feeding value and that it is the worst kind of economy to allow this feed to be wasted. But the difficulty heretofore has been to utilize fully the elements of nutrition stored away inside the woody fiber of the stalk. Mr. D. concluded to remove that difficulty by getting a shredding machine, or rather a corn husker and fodder shredder. This machine husks the corn, carrying the ear by an elevator into the wagon bed, and at the same time it shreds the fodder, putting it in such shape that its entire feeding value may be utilized. Five other farmers joined Mr. Detweiler in the purchase of the machine, which cost \$300. Its capacity, he said, is about ten acres a day of good corn. If it is true—and our scientists generally claim it is—that the corn stalk, as shown by analysis, has as much feeding value as the ear which grows on it, then we see the folly of allowing it to be wasted, and since this feeding value is chiefly in the heavier portion of the stalk and not in the foliage, the necessity of shredding the fodder to make this food available is apparent to all. Mr. Detweiler is highly pleased with the shredded fodder as feed. Says it is equal in value to the best timothy hay, ton for ton. Indeed, I learn that it is baled and sold on the market at fully the same price as good tame hay, and in many cases it is preferred at the same price. Mr. D. thinks he will make but little more hay, or if he does it will be for sale.

It looks much as though a new industry was growing up—shredding corn fodder and placing it on the market. I will add here that farmers about Morrill informed me that the ordinary threshing machine is used to

do the same work as the shredder. Instead of husking, it shells the corn and does a good job of shredding the fodder. I was told that many farmers in that vicinity handle their corn in this way and are well satisfied with the work done by the thresher.

Once more: Mr. Detweiler caught onto the idea, a year or two ago, so well presented in last week's FARMER by ex-Governor Geo. W. Glick. He has a fine flock of sheep—150 head of high-grade Shropshires. Many of them weigh from 150 to 180 pounds, and he says they make him more clear money on the investment than any other stock grown on the farm.

At Morrill I also met with farmers of the progressive school, among them T. S. Lichte, Jacob Heikes and others. Mr. Lichte told me of an important discovery he had made, namely, that sorghum hay was the most valuable forage crop that can be grown in Brown county. "Why," said he, "some years ago I sowed four bushels of sorghum seed on two acres of land, and from that sowing I grew eighteen tons of hay, which I found to be equal in feeding value to the best timothy hay," as I understood, ton for ton. Mr. L. considered this discovery of so much importance that he hastened to tell the good news to farmers everywhere, and now, as a result, he says about every enterprising farmer in that section grows from three to ten acres or more of sorghum for hay, and all regard it as very valuable feed. He thinks sorghum hay will take the place largely of clover and timothy, the latter being grown chiefly for pasturage and as a fertilizer. "Kaffir corn is also a valuable crop in Brown county," Mr. Lichte said. "Dairymen prefer it to all other forage crops, as it has been demonstrated to be the best milk-producing plant that grows."

Now, since sorghum cane and Kaffir are regarded by eastern Kansas farmers as crops of high feeding value and good substitutes for red clover and timothy, the western farmer should take courage. These plants are especially adapted to the soil and climate of that section, and with but few exceptions they are successfully grown there each year, and since corn fodder has a high feeding value, as has been demonstrated, farmers of the West ought not to consider their corn crop a failure when the ear fails to grow on the stalk.

Now, in conclusion, it may be of interest to readers of the FARMER to know that in Leavenworth, Atchison, Brown and Doniphan counties, all of which I visited last week, I was informed that farms were selling readily at from \$50 to \$75 per acre and were renting at from \$500 to \$700 cash rent per quarter. They told me there were many buyers and comparatively few that offered to sell. It is no particular reflection upon the farmers of this section nor upon the farming business that quite a number of them have become bankers and that many of them have good bank accounts and have retired from business, having a sufficient competence earned on the farm, not to go on a "high flyer" to Europe every year, but to permit them to live in comfort and ease in their declining years.

M. MOHLER.

Special Excursion to Boston.

The Knights Templar Conclave will be held in Boston from August 26 to 30, inclusive. Tickets will be on sale via the Nickel Plate Road from August 19 to 25, inclusive. Rates always the lowest; through trains; Drawing-room Sleeping cars; unexcelled Dining cars; side trips to Chautauqua Lake, Niagara Falls and Saratoga without additional expense. For additional information call on or address J. Y. Calahan, General Agent, 111 Adams street, Chicago, Ill. 84

"Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery including the famous Olden fruit farm of 8,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address,

J. E. LOCKWOOD, Kansas City, Mo.

Field Notes.

To those interested in Poland-Chinas, Messrs. Dietrich & Gentry, proprietors of the Highland herd, have a good strong herd representing the blood of Black U. S., Ideal Black U. S. (the \$1,000 boar), Lord Corwin 4th, One Price, J. H. Sanders, King Butler and a strongly-blended Corwin strain in the female division of the herd. The visitor finds about sixty head of youngsters, and among them is an October boar that is a good one, as the saying goes, "fit to head any herd." He is by Loyal Duke 29823 O. The spring pig crop are by six boars, viz., High Ideal 12115 S., Loyal Duke 29823 O., Seldom 27217 S., Riley Medium 12806 S., Claud Duchess (Vol. 17 O.) and Gold Dust Tecumseh (Vol. 9 S.) The breeder will at once recognize the strong array of blood lines and high character of the herd.

On a late visit at the home of the Standard Poland-China herd, the writer found over 200 head of spring pigs coming on in good form. Their owner, Mr. Chas. A. Cannon, has so shaped up his herd within the past twelve months that it now ranks right up with some of the senior Missouri breeders, whose ambition and reputation have become noted throughout the swine breeding world. The visitor finds thirty early spring pigs in a selected paddock that are just hard to beat. Several of the April and May litters belong to the toniest of Poland families. The writer now gives notice that if no mishap overtakes the present prospect at Mr. Cannon's place he will spring an agreeable surprise on his older and more noted swine breeder acquaintances on sale day—Wednesday, October 30, 1895.

Among the Franklin county breeders none are coming along the highway of successful swine breeding more satisfactorily than are the Messrs. J. R. Killough & Sons, whose farm lies near Richmond. The visitor finds their spring pig crop was a successful one and that the youngsters were sired by the excellent individual, Upright Wilkes 18246 S. and by J. H. Sanders Jr. 13739 S., both belonging to the very select of Poland-China breeding. The female lines that make up the strains in the herd are among the very best to be had, either East or West. A few fall boars and a nice string of gilts, taken in connection with the strong array of youngsters, makes it easy for the visitor to conclude that the Messrs. Killough are succeeding and worthy the patronage of those desiring something extra good in the way of Poland-Chinas.

However hard the Kansas Berkshire breeder has labored to get even with "old Missouri," none have come or are coming nearer the front mark than is J. S. Magers, the owner and actual herdsman of the Bourbon County herd, located near Arcadia, south of Fort Scott, on the "Memphis Route." The writer is of the opinion that no breeder in the State exercises more skill in producing the modern Berkshire than does Mr. Magers, nor has better success in accomplishing and attaining the results sought for. Two grand boars are doing service in the herd of as fine brood sows as one finds anywhere, viz., Western Prince 32202, an imported English harem king, and his coadjutor, Majestic Lad 32201, by an imported sire and out of an imported dam. Four good fall boars and some nice gilts by Western Prince could be spared. Fifty spring pigs also getting ready for new masters elsewhere.

The prospective Franklin county fair now promises to be the superior of any held for years, especially is this true if the Franklin county swine breeders all turn out, as is now anticipated. Take Staley, with his Poland-Chinas and Chester Whites; Ed. T. Warner, Polands; H. Davison & Son, Polands; Dietrich & Gentry, Polands; Killough & Sons, Polands; W. S. Hanna, Polands; Kirkpatrick, Polands, and Sam McCullough, the veteran Berkshire man, with the stayer, Mr. Higdon, of Princeton, and the counties bordering on Franklin county will have to look to their laurels if they carry away any big share of "old Franklin's" glory in swine husbandry. Whilst Brown county has the largest number of breeders it is doubtful if they can overcome the Franklin county breeders in high-class breeding and individual quality. There should be more counties in the State as far along as are Brown and Franklin.

An hour's visit at the Tower Hill herd of Poland-Chinas, owned by Mr. B. R. Adamson, of Fort Scott, will prove to most persons interested in the best of pure-bred swine an entertaining recreation. There has lately been added to the herd a young fellow, Hadley M. 14139 S., farrowed February 14, 1895, bred by P. Mayo & Son, that made the strong exhibit at the St. Louis fair last fall. The youngster was sired by Hadley 2d 13665 S., he by Hadley 9493 S. His dam was Perfection Girl 32960 S., she by Corwin's Equal 11039 S. and out of Beautiful Bell 26697 S. He now promises better than did his superior in the herd, Black Stop 1055 S., one of the best individuals and breeding boars in the West. The pig crop are by Black Stop 1055 S., Black Dandy 8809 S., U. S. Butler 13388 S.,

and Joker Wilkes 12682 S., all quartered here on the farm. As the saying goes, "Adamson leads the Poland-China squadron in Bourbon county."

Our field man reports a late trip in Franklin county, and, among other things, states that E. T. Warner, proprietor of the Franklin County herd of Poland-Chinas, has had a good run of sales and the herd is in excellent condition. About three good fall boars are yet awaiting the going out and fifteen as finely finished and growthy gilts as the writer has seen in twelve months will be priced. The spring pig crop is coming on in that way that every successful breeder desires that they should. They were sired by Riley Medium 12806 S., a sure show-ring winner, and a portion of them by Tecumseh J. Corwin 10744 S., one of the strongest Corwin-bred boars in the State and an excellent breeder.

An agreeable half-day's visit was made by the writer last week at the home of the Bayfield herd of Poland-Chinas, situated on the 660-acre farm, one mile east of Linwood, on the main line of the Union Pacific railway, in Leavenworth county. This Bayfield farm was, until a few years since, the quarters of the noted Cruickshank herd of Short-horn cattle owned by Col. W. A. Harris. Mr. J. S. Machir founded the Bayfield herd of Polands two years ago and it now contains 130 head, all ages, headed by Souvenir 9221 S., by Lail's Victor 4298 S. and out of Beauty Corwin 6532 S. His co-worker is Magnet, a son of Young Model 9857 S., he by Admiral Chip 7919 S. and out of Sal Fox 7th 14658 S. The visitor finds twenty-five brood sows, all good ones, and a good strong lot of spring pigs coming on for the fall trade. A more extended notice and Mr. Machir's advertisement will appear in the first issue of September.

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

EXCURSION TO THE EAST.

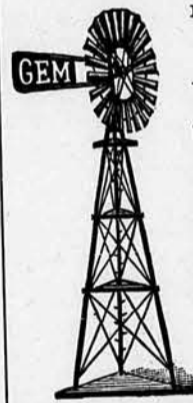
Vandalia - Pennsylvania Lines Through Pittsburgh, Philadelphia, New York to Boston.

August 19 to 25, inclusive, account Knights Templar conclave. Over Allegheny mountains at highest point above sea level; around famous Horseshoe Curve; along the Blue Juanita. Stop-over privileges and first-class accommodations. Excursionists have choice of returning via Hudson river, Niagara Falls and other routes. Write or wire Brunner, 509 Chestnut street, St. Louis, to have tickets ready when you pass through that city. He'll do it cheerfully, and will also arrange Pullman accommodations. No charge for his services.

WIND MILLS AND PUMPS

Gem and Halladay Mills

FOR IRRIGATION OR ANY OTHER USE.



Wooden and Steel Tanks, Iron and Wooden Pumps, Engines and Boilers, Gasoline Engines, Belting, Hose and Packing, Pipe, Fittings, Drive Points.

WRITE FOR CATALOGUE.

U. S. WATER & STEAM SUPPLY COMPANY, KANSAS CITY, MO.

Irrigation Supplies



"Crane" Irrigator Wind-mills. "Frizell" Irrigation Cylinders. "Lone S." Irrigation Cylinders. Centrifugal Pumps. Gasoline Engines. Pipe, Points, Fittings, etc. Rubber and Gandy Belting. Thresher Tank Pumps.

WRITE FOR CATALOGUE.

CRANE COMPANY, 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 LAST PARADE.

They were days to be remembered,
When at sound of trumpet call,
Young recruits we left the village,
Bent on glory one and all.
And the music round us flashing
Made us feel that evermore
Our lives were worth the living
As they never were before.
I remember the day
When we all rode away,
To the dreams that the music made,
And our hopes one and all,
When the old trumpet call,
Rang out clear for our first parade.

It was glorious while it lasted,
But the years went by too soon—
Youth should stay a little longer
When a lad's a bold dragoon.
Then, like shadows from us drifting,
Comrades fell in foreign land,
Home again! the roll call found us
But a broken little band.
As we rode down the street
To the old measured be it,
It was tears that the music made,
And it seemed like a prayer
For the lads who should ne'er
Stand again by our side on parade!

But the marching days are over,
Veterans! now at ease we stand,
Till the order comes for marching
To the last and restful land.
Only when the troops are passing,
Our ninety years we all forget,
And the old familiar music
Makes us feel we're soldiers yet.
And we're young once again
As we hark to the strain,
Till the sounds in the distance fade.
So we wait one and all
For the last trumpet call
That shall sound for the last parade.
—Temple Bar.

A SONG OF NEED.

When you shall dwell in Tranquil land,
Where sweet the summers be,
Lean in the light and kiss your hand,
And kiss your hand to me.

For I, who dwell in Lonely land,
By that sweet sign shall see
That love to you is kind and grand—
So kiss your hand to me.

When you shall dwell in Midnight land,
Where tears and moanings be,
Fold on your heart the unloved hand
And sigh your soul to me.

And I, though lost in Lonely land,
Will send an answer true,
And groping blindly for your hand,
Creep in the dark to you!

HER OWN EMANCIPATOR.

Abstract of graduating thesis of Florence R. Corbett, of Manhattan, at Agricultural college commencement, 1895.

In all times, past and present, it has seemed that extremes were found in all phases of life—extremes in fashion, in physical culture, in intellectual development, and now it seems that the domestic kitchen of civilized man is to witness the cultivation of a modern art to an apparent extreme. For, according to present day writers, the whole world is going "crazy" over cooking and things pertaining to the kitchen.

This extreme is condemned by many as severely as they condemned the other extreme, not long past, in which no care was given to the culinary art. They claim that this "revival of learning" in the kitchen portends the advent of a race of gluttons, who will sacrifice health, intelligence, everything, to the satisfaction of the palate. Such critics are certainly not viewing the subject in a right light, for they are assuming in the beginning that the influence for good in the kitchen extends but to the kitchen door, only the appetizing dishes going beyond—these possessing no merit, in their eyes. But the "woman of to-day" knows (and who has a better opportunity to know?) that such is not the case. She knows that the comfort, the happiness, the fate of the home, hinges on the influence radiating from the kitchen, be it through the agency of the appearance of the room, the cook's temper, or the success of the dishes prepared there. And first principle of all, she has found after years of experience, that in order that the kitchen may have this influence, it must be in itself the place where the best work can be done in the best way, with the least expenditure of effort on her part and in the least time.

To accomplish this, one must consider everything which is in any way connected with the kitchen. The size of the room, the finish of the walls and floor, the furniture and utensils, the disposal of these all have an important bearing on the situation, the situation resolving itself into this, that the one who has the work to do shall be enabled to do the best work in the best way by making use of every and all means within her reach whereby she may "save herself," the success of the kitchen being none the more sure, that, when her work is finished, she leaves it in utter and complete weariness of mind and body because it has been a grand rush and scramble to accomplish the work in an after all unsatisfactory

manner; but that she has by careful planning and forethought and the use of the many helps which genius has contrived for her, made the best and most economical use of her time and strength. This is why the thoughtful woman asks that her kitchen be not so large that she must walk miles each day to do the necessary work. This is why she wants her kitchen table placed across a window, with all the utensils and stores she is likely to need at that place near at hand. These and other arrangements she needs, knows that she needs and insists upon having, realizing that by so doing there is something remaining of her original self which she can give to other household and society duties. If all the women in the land could so see and practice this we would hear no more of woman as a "slave in the kitchen." They must learn that it is the foolish woman who will not be found sitting down to her work because "it looks lazy," and she likes to be "smart." Such smartness is the kind which prevents a woman from aiding herself in her work by new inventions, which allows her to trust no science but her own, and helps her to cling to old-fashioned ways, deeming it extravagant to invest in up-to-date kitchen helps. Very often she finds out before she kills herself working, that such things are costly only as she lets them alone.

So, in the majority of cases we find that it is the very woman who does the unsatisfactory work, and who will not learn to do otherwise, who complains of being an oppressed and down-trodden being, and who wants more "rights." If she but knew it, it is her inalienable right as well as duty to care for the kitchen in such a way that it becomes the means whereby she may win for herself the other rights. To do this she must consider nothing pertaining to kitchen work too insignificant to be studied, that better results may be obtained. And working in this wise she will find that she can and must free herself from any present bondage, becoming then the "queen" instead of "slave" of the home, proving that "the hand which cooks the dinner is the hand which rules the world."

Influence of Food Upon Moral, Mental and Physical Development.

Abstract of graduating thesis of Ora Yenawine, of Manhattan, at Agricultural college commencement, 1895.

We often hear people speaking of great deeds of great men, and some have tried to explain this by saying "they come of good blood," but how is blood made good, but by eating good food? Food has been called the "great circulating medium" of life, and it has been fully conceded that the blood is sustained by the food eaten and that the mental and moral growth depends on the proper physical nourishment. Our characters are molded in a more or less degree by what we eat each day. We notice that the flesh-eating animals develop a fierce, daring, energetic nature, while the herbivorous animals are peaceful and tender, lacking the courage and energy of the former.

Man is a consumer of all kinds of food, and thus we see all traits of character developed. Perhaps some particular trait predominates, but, nevertheless, however much we attribute to heredity, it is the food eaten that makes this particular characteristic stronger. We agree with one writer who said: "Feed the child properly and he will be the man sought." The foreigners who come to this country soon show the difference in diet by the increase in mental and physical development. It is true that nitrogen tends to develop brain power and it is believed that the source of energy of the English people is due to a nitrogenous diet.

The great question to be considered is not how much we eat, but how well is it prepared? Crimes of different kinds are caused by the want of well-prepared food, and many of the great questions of to-day might have been settled if our housekeepers had known how to prepare food to work the best results.

A person must eat according to his work. He who eats the kind of food that will nourish his body according to the work to be done, is seldom found wasting his time over the gaming table, and he who rises from a table filled with dainty, wholesome food is better prepared to do his work than if he had eaten ill-prepared food that simply satisfied his hunger. It has been said "That the pleasures of the table are those which we first experience, which desert us latest and which we taste oftenest."

Food that is taken into the stomach must be digested before it is of any value. If of no value the system loses its strength and becomes weakened in trying to digest it.

It requires careful, faithful study on the part of every woman to make a success of her meals, for we know that the best of traits—courage, dignity and valor—do not develop from a diet of ill-prepared food. One of the most important studies a woman can undertake is the building of character through her cooking.

When the time comes that the people will look well to the kind of food they eat, then will our nation become better, for good food makes the man and the man makes the nation.

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

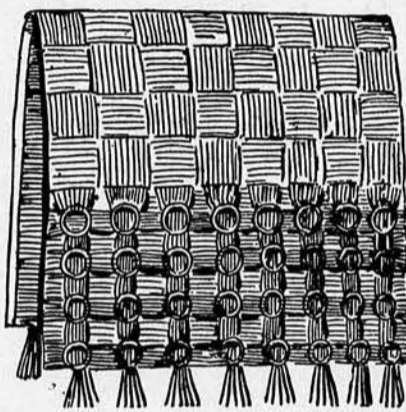
Royal Baking Powder

ABSOLUTELY PURE

CHARMING NOVELTY.

Vell Case Made of Crepe Paper and Other Inexpensive Trifles.

This pretty and unique case is made of the simplest materials—a little straw-colored crepe tissue paper, 72 small brass curtain rings, pale-blue India silk for lining, and a skein of blue embroidery silk. The form is like a book cover with stiff sides and flexible back, or hinge. For the foundation, two pieces of cardboard $5\frac{1}{2} \times 7\frac{1}{2}$ inches, and two others an eighth of an inch smaller all round, are required. The smaller pieces, for the inside, are covered with a thin sheet of cotton wadding—sprinkled with perfumed powder—and then with India silk, after which they are glued to the back piece, or hinge, a



strip of stiff paper three inches wide by seven long, also covered with India silk. For the outside, nine strips of the crepe paper are cut 16 inches long and three-quarters of an inch wide, and 15 strips the same width and $8\frac{1}{2}$ inches long. The strips are laced evenly together, as seen in the illustration, till all but four of the cross-pieces on both ends are used, and these pieces are interlaced with brass rings. It is simple in the extreme, but the effect is beautiful. As this part is open work, the cardboard foundation must be covered plainly with the crepe paper or, if preferred, a contrast in both material and color would be pretty. These cardboard foundation pieces are, of course, first glued to a piece of paper for the back, or hinge, of corresponding size to that already given for the inside; and the smoothly plaited work is fastened to the foundation with a knot of blue embroidery silk in the center of the alternate blocks; the edges are then turned in neatly and pasted or glued in place, and outside and inside are glued together. On the front edges the ends of the strips are secured with embroidery silk, which is worked into the edge in coarse buttonhole stitches and knotted around every strip of paper, giving a sort of tassel effect.

This sort of work would make very pretty wall or newspaper pockets, or cover for boxes; and could, in fact, be turned to a multitude of decorative uses.—Demorest's Magazine.

A Rare Chance to Make Money!

I am convinced that any one that will hustle can make from \$10 to \$15 a day selling Climax Dish-Washers. They give such good satisfaction that every family wants one. You can wash and dry the dishes in two minutes, without danger of breaking dishes or without wetting the hands. In the past six months I have cleared over \$20 a day without canvassing any; people either come or send for washers, and my trade is increasing all the time. This business is equally good in country, town or city, and any lady or man can make money anywhere if they will only try. After careful examination I find the Climax decidedly the best dish-washer made. The Climax Manufacturing Co., Columbus, O., will give you full instructions. Go to work at once and let us hear how you succeed. It is certainly our duty to inform each other of these golden opportunities. A READER.

The truest mark of being born with great qualities is being born without envy.—Rochevoucauld.

Hint About Cooking Rhubarb.

Not everyone knows that rhubarb can be as easily cooked in the oven as on top of the stove. Cut the rhubarb in half-inch lengths; do not peel it. Put it in an earthen pudding dish. To a dozen moderate-sized stalks add two cups of sugar. Cover the rhubarb with a plate and set in a moderately-hot oven. Let it cook in this way for about one hour. If it is rich, juicy, red rhubarb, it will not be necessary to add any water, as the juices will draw out of it fast enough to cook it in. Parts made of rhubarb cooked in this way are especially nice, covered with a thick white meringue.

Harvest Drink.

The following is an English recipe for a favorite hay-making beverage: Put one pound of medium oatmeal in a milking pail, with the rind of two lemons, cut off as thin as possible; cut away all the white pith and remove the seeds, then slice the two lemons. Pour two gallons of quite boiling water over the meal, stirring well, and one pound of the best sugar; stir until the sugar is dissolved, and strain off into another pail. If made over night it will be quite cold, in the hottest weather, for use next day.

STATE OF OHIO, CITY OF TOLEDO, } ss.
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & CO., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1888.

SEAL

A. W. GLEASON,
Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

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

Sold by Druggists, 75c.

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FARRAND & VOTEY ORGANS,

The best organ manufactured, at a reasonable price. Guaranteed for six years. Easy terms.

ALSO

Hallett & Davis, Schaffer and Stodart Pianos

Write for catalogue and prices.

GALLONS FOR 25¢

Not of the preparations of coloring matter and essential oils so often sold under the name of rootbeer, but of the purest, most delicious, health-giving beverage possible to produce. One gallon of Hires' is worth ten of the counterfeit kind. Suppose an imitation extract costs five cents less than the genuine Hires; the same amount of sugar and trouble is required; you save one cent a gallon, and—get an unhealthful imitation in the end. Ask for HIRE'S and get it.

HIRES' Rootbeer

THE CHAS. E. HIRE'S CO., Philadelphia.

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 Breeder's 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.

The Treasury estimate of the population of the United States on August 1 is 70,002,000.

The public debt statement for July 31 shows an increase for the month amounting to \$38,435,938.

The distribution of seeds by the United States Department of Agriculture will be discontinued from and after October 1, 1895.

The Kansas State Dairy Association will hold its annual session at Newton, on the 20th, 21st and 22d of November, 1895. Program will be published later.

The "visible" supply of wheat is decreasing at the rate of about 1,000,000 bushels a week. The "invisible" supply usually shows an increase at this time of year.

Frank W. Elliott, of Dentonville, Kas., sends a raspberry branch of this season's growth on which is a cluster of ripe berries. Horticulturists say this very unusual.

One of the most complimentary notices yet received of Secretary Coburn's great report is in the July number of the Australian *Agriculturist*. The compliment consists in the application of Kansas wisdom to Australian conditions.

Any of our subscribers who are about to renew subscription will find something interesting by reading the advertisement of "Samantha at Saratoga." If you have already renewed your subscription it will tell you how to get the book at the reduced rate.

The statement of the Union Stock Yards & Transit Company, of Chicago, for the month ending July 31, shows receipts of 225,559 cattle, increase over the same month last year 71,895; 22,272 calves, increase 9,602; 382,398 hogs, increase 2,913; 278,898 sheep, increase 144,597; 6,108 horses, increase 3,429.

The call for blooded stock appears to be rapidly on the increase. Prospective buyers are out of patience at finding no advertisements of what they want. One writes under date August 2: "It seems strange that there are no Oxford Down sheep breeders in this State. We think if there were they would show themselves in your paper, if they are alive."

Current estimates place the 1895 corn crop of the United States at 2,225,000,000 to 2,500,000,000 bushels. This is the largest crop the country ever produced, that of 1889 being about 2,112,892,000 bushels, and probably means low prices for grain. A profitable way to market it will be in the finished products, beef and pork. Every bullock and every pig should be looked upon as a friend whose welfare is to be carefully looked after and whose appetite and digestion are to be catered to.

HOW TO BUILD A ROUND SILO.

The controversy between the farmer who uses the silo and his neighbor who prefers air-cured fodder is no more likely to be settled than is that other controversy between the breeder of Berkshires and the breeder of Poland-China swine. Silos are built and are doubtless to be built in future and used at a profit, and the question of the best construction is one that is continually raised. A few months ago a valued correspondent of the FARMER gave a plan for a feeding barn with circular silo at north end. Details of construction were not given. Now come several inquirers as to the entire construction of the silo, and the following is submitted on the subject.

The square form has generally been used and it presents the advantage of easy construction by any carpenter who can handle tools. The square form also fits well with other buildings. When made with sufficient strength and sufficient care is taken to have the ensilage firmly packed into the corners, this form has been found satisfactory. The pressure exerted while the contents are settling and heating has been a surprise to all users of the silo, and the bulging sides of silos having 2x12 joists for studding have suggested the strength of the circular form. The superior strength of the circular form and the fact that there are no corners in a circle are greatly in its favor. The fact that 2x4 studding have been found amply strong for this form, while 2x12's are too weak for the other form, seems to almost settle the matter of form and suggests the desirability of specifications for the circular.

Prof. F. H. King, of the Wisconsin Experiment Station, has used a round silo and from his directions for construction the following is condensed:

"For every silo there should be a foundation wall of masonry. For the round wooden silo the wall should rise not less than twelve to eighteen inches above the ground, and should have a thickness of eighteen inches. On the inside the upper edge should be beveled back, making the upper edge about eight inches thick. After the silo has otherwise been completed the inner face of the foundation should be plastered with a good coat of cement, made of three parts of sharp sand to one part of cement. To cover the bottom of the silo with concrete will save annually about half a ton of silage, which tends to spoil when in contact with the ground.

"The sills and plates may be best made of 2x4's, cut into two-foot lengths on the slant of two radii of the circle of the silo. The sections of the sills are toenailed together on the wall and then bedded in mortar. Only one layer is needed. The plate is made in the same way as the sill; the pieces are spiked down upon the tops of the studding.

"Only 2x4 studding is needed unless the diameter of the silo exceeds thirty-five feet, and these should be placed one foot apart from center to center on the outer edge. If lengths of studding greater than twenty feet are required, these may be made by splicing two shorter lengths together, lapping them about two feet and spiking them together before they are put in place.

"The lining of the round silo is best made of fencing, sawed in two so as to make out of each piece two half-inch boards. Three layers of this lumber should be used on the inside, with two layers of a good quality of tar paper between. [Another writer who uses round silos says he has two, one with and the other without the tarred paper. The latter is entirely satisfactory and the boards are lasting better than in the other in which the tarred paper is used.] The first two layers of lining should be nailed with eight-penny nails and the third with ten-pennies, in order that the boards may be drawn very closely together. The sheeting outside should be of the same lumber for diameters less than thirty feet, but neither the sheeting nor the lining need be dressed. The siding is made from the ordinary beveled type, rabbeted, and on the thick edge deep enough to receive the upper edge of the next board, the overlapping being

like the ordinary ship-lap. In case the silo has a diameter of more than thirty feet, then ordinary deep siding may be used outside, and the ship-lap type is most easily put on. After the sheeting has been carried up to the height for the first staging, it will be best to begin the siding, so as to save staging. If the weather permits, it is usually best to put on the lining before the roof. The plate is not put on until the last staging is up.

"The roof is most easily made conical. The roof boards in this case are pieces of fencing sawed in two diagonally, and have a length of the slant height of the roof. They are nailed to the plate at their outer ends and to circle at the center, the circle being made of two thicknesses of two-inch stuff spiked together. Ordinary shingles may be used to cover the roof. The cupola or ventilator may be made of metal or wood.

"The doors of a round silo should be two feet wide by about three or three and one-half feet high, and placed in line one above the other, the space between the doors being about two and one-half feet. The bottom of the lower door should not come nearer to the sill than eighteen inches, this being necessary to give the needed strength. In providing for the doors, the studding should be made double all the way up where the sides are to come, the studs being put in at first, and the siding and lining put on regardless of the doors, these being cut out after the siding is on. To make the doors, saw two cleats for each door out of 4x4's, having the curvature of the sides of the silo, and to these nail on the inside two layers of notched four-inch flooring up and down, with tar paper between, and one layer outside. Hinge with two six-inch T-hinges and fasten shut with two three-sixteenth inch iron bands one and one-half inches wide and eighteen inches long, bolted to the cleats and provided with a long hole, which shuts over a half-inch bolt put through the studding and provided with a handle nut, like that on the rod of the end-board of a wagon.

"The tendency of wooden silo linings to decay can be very largely if not entirely overcome by providing perfect ventilation. The object is to make it possible for air to pass into the space between each pair of studding at the bottom and pass up and out at the top inside. This keeps the lining dry on the back side and the roof dry on the inside. The air is admitted at the bottom through a series of one and one-half inch auger holes, and covered with wire netting to keep out mice and rats. At the top the air escapes under the plate through openings left by not carrying the lining quite to the top, but these spaces should be covered with netting to prevent silage falling in behind when silo is nearly full."

The silo should be very high for the waste is nearly all at the top. The Wisconsin silo alluded to is sixteen feet in diameter from outside to outside, is twenty-seven feet deep and holds eighty to eighty-two tons. The cost of material was \$176 and the entire cost of material and labor was \$248.

The headquarters of the State Horticultural Society, after abiding in Douglas county for twenty-seven years, has been removed to the State house at Topeka. The resolution of removal was passed at the last annual meeting of the society. The office is now in the rooms of the Labor Commissioner, but permanent quarters are to be provided with the completion of now incomplete parts of the building. Senator Edwin Taylor, though not present at the last annual meeting, was elected Secretary of the society. He finds it impossible to give his time to the duties of the office and has deputized Hon. William H. Barnes, a practical horticulturist of large experience, who, as acting Secretary, is performing the duties of the office and welcomes all horticulturists who visit his office at the capitol.

A subscriber writes: "I would like to have you publish in next issue some information as to where I can find the prize Toulouse goose and the Embden goose." Our advertising columns are open to this class of breeders.

THE RUSSIAN THISTLE.

Talking with Secretary Coburn about this imported pest, the Secretary said: "I hope no one who reads the FARMER will be unmindful of the possibility that the greatly-to-be-dreaded Russian tumble-weed or 'thistle' may, unknown to him, be growing on his farm or garden and likely to do not only himself but all his neighbors injury beyond estimate. Also that one plant produces enough seed to stock a township, and by being a 'tumbler' possesses in itself a perfect means of distribution over many miles of territory.

"The plants are now generally coming into bloom or forming their seeds, and should be sought out and exterminated before any have time to ripen. A majority of the people seem to suppose that because the plant is called a thistle (which it is not), that it is akin to the Canada thistle, with roots that live through the winter and only destroyed by digging, salting, burning, etc., which is all a mistake; this Russian importation is an annual, producing only from the seed each season, and needs but to be cut off near the ground before the seeds mature to prevent its spread. There is, to be sure, a law requiring the destruction of such noxious weeds, under direction of the County Commissioners but no one should wait to be commanded by public officials before beginning a persistent war of extermination on such enemies.

"Our people are likely to find that it is never too early in the morning nor late in the evening to smite their new enemy, and that their best energies are essential in supplementing the law as well as promoting its enforcement."

The State Board of Agriculture has an excellent illustrated bulletin telling all about the "Russian Thistle" which Secretary Coburn will be glad to send to inquirers while the edition lasts.

SHAWNEE HORTICULTURISTS.

The July meeting of the Shawnee County Horticultural Society was held last Wednesday at the elegant home of Mr. Scott Kelsey, just east of Oakland. The street cars run almost to Mr. Kelsey's orchard and finely shaded lawn, and they were patronized to the filling up of the grounds.

The sociability and the dinner were so engaging that the picnickers were loth to enter upon the more serious business of the meeting, and it was 2:30 o'clock before President Lux called the assemblage to order.

Ex-Governor Glick was called upon for a speech and responded with a eulogy of the farmer's vocation, which he contrasted with the scramble for existence, the possible fortune and the probable ultimate bankruptcy of the dweller in the city.

Judge J. G. Lowe, of the Kansas State Board of Railroad Commissioners, was called out, and while stating that farm life means toil, thought that it also means an independence not known to other vocations.

The regular program was then taken up and consisted of an excellent paper on "The Peach," by Geo. W. Berry, of Berryton; an unusually entertaining paper on "Window Gardening," by Miss Lucy Popenoe, of Berryton, and a humorous and instructive paper on "The Cherry," by Mr. Ed. Buckman, of Topeka. These papers, with the principal points of the discussions on them, will appear in the Horticultural department of the KANSAS FARMER next week.

The next meeting of the society will be held at the State house grounds, in Topeka, the last Thursday in August.

The flax seed inspector at Chicago gives estimated crop report and amount received at Chicago, as follows:

Years*	Estimated crop report.	Receipts.
1890.....	13,250,000	8,732,050
1891.....	19,000,000	15,033,100
1892.....	12,191,000	6,634,150
1893.....	12,500,000	7,093,693
1894.....	7,500,000	4,312,412

The prices for these years are reported as follows:

Years.	Price.
1890.....	\$1.33 3/4
1891.....	1.03
1892.....	1.01 1/4
1893.....	1.00
1894.....	1.25
1895.....	1.19

*Ending August 1.

Condition of Crops in Great Britain.

The report of the European agent of the Department of Agriculture, published in the report of the Statistician for July, indicated a very unsatisfactory condition for the more important agricultural crops of Great Britain, and this report is fully confirmed by later and fuller information found in the London Times of July 12. The statement of that journal appears to have been carefully prepared and purports to be based upon returns from "numerous correspondents in every county." The reports of these correspondents were made on a numerical system similar to that used by the United States Department of Agriculture. In the reports on area, 100 represents a breadth of crop equal to that of a year ago, any increase or reduction being indicated by a proportional increase or reduction of the figures. In the reports on condition, 100 is taken to represent "perfect healthfulness, exemption from injury (due to insect or fungous pests, drought or wet, cold or frost) with average growth or development," and numbers above or below are used to indicate the extent to which "the crops are better (or worse) than might have been expected."

The following table shows the results as to area, deduced from the returns of correspondents, for each division of Great Britain and for the island as a whole:

Table with 5 columns: Crop, England, Wales, Scotland, and Great Brit. It lists various crops like Wheat, Barley, Oats, Beans, Peas, Potatoes, Roots, Grass, and Hops with their respective area percentages.

In introducing this table the Times observes that "whilst not inviting a too rigid interpretation of the results" therein summarized, it thinks "that the figures therein given may fairly be taken to indicate that in Great Britain as a whole the areas under wheat, beans, peas and root crops have declined—though the latter may yet be made up should the weather prove suitable—and that the areas under barley, oats, potatoes and grass have increased."

The figures on condition for July 1 are summarized in the table given below, and in parallel columns are given those for the corresponding date in 1894, 1893, and 1892, respectively, while on the right there is a column of figures showing the difference between the present condition and that of one year ago:

Table with 5 columns: Crop, July 1, 1895, July 1, 1894, July 1, 1893, and July 1, 1892, compared to 1894. It lists crops like Wheat, Barley, Oats, Beans, Peas, Potatoes, Roots, Grass, and Hops with their condition percentages and differences.

It will be seen that every crop except hops shows a lower condition than that of a year ago, and in most cases the difference is large. In the case of hops, the condition was lower last year and is higher this year than any other crop.

The condition of wheat indicates less than four-fifths of a full crop, and that of oats is still lower, while barley rises but three points above. The condition of beans and peas does not differ much from that of wheat and oats; that of potatoes is comparatively good, but with grass and roots it is even worse than with oats, the least favored of the cereals. The generally low condition is due to persistent drought.

The report concludes as follows: "Since our returns were collected there have been considerable falls of rain in certain districts, and there is still a

prospect of a good aftermath on the grass lands, and of a great improvement in the outlook for the root crop, whilst potatoes are not unlikely—as was the case in 1893—to render yet a good account of themselves. But the fate of the grain crops is settled, and 1895 has now to be added to the long list of unhappy years that have fallen to the lot of the grain-growing farmer."

Weekly Weather-Crop Bulletin.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending August 5, 1895—T. B. Jennings, Observer Weather Bureau, Director:

CONDITIONS.

Only light showers in Washington, Republic and Cloud, and in the south-western and extreme western counties, except Hamilton, where the rainfall was heavy. Fair rains in Greenwood, Coffey and Wilson, with good rains over the rest of the State.

RESULTS.

EASTERN DIVISION.

Corn is in exceedingly good condition except in Brown, Nemaha, Marshall, Riley, Chase and western part of Morris and Greenwood. The early-planted is now generally out of danger while the late-planted will need more rain. In the northern part of Nemaha and western part of Morris it has been cut to save the fodder.

Allen county.—Corn fine, immense, estimated average yield sixty bushels. Anderson.—Rain of 29th insures the largest corn crop in years. Atchison.—It is claimed that the corn crop will be the best and greatest ever gathered in this county. Bourbon.—Corn in exceedingly good condition; early corn in good roasting-ear and practically made; late corn has

safe, late growing very fast; a very large yield assured.

Marshall.—Early corn good, an average crop.

Miami.—Corn never looked more promising, will be a full crop.

Montgomery.—Early corn now insured, good prospects for largest crop since 1889.

Morris.—Corn insured and will have largest crop since 1889 except in the dry strip.

Nemaha.—Corn cannot make even half a crop in the northern part, but good rains would fill it in southern part.

Pottawatomie.—Early corn matured and the prospect is the best for years; other corn well advanced.

Riley.—Early corn will make one-third crop with no more rain; rain will make big crop; late corn poor.

Shawnee.—Corn never looked better and is practically made.

Wabaunsee.—Corn doing extra well; early corn about made, late corn will need more rain yet.

Wilson.—Our corn crop will be the largest ever harvested; early corn now assured, later planting doing well.

Woodson.—Earliest corn will make a big yield, later planted not over thirty or forty bushels.

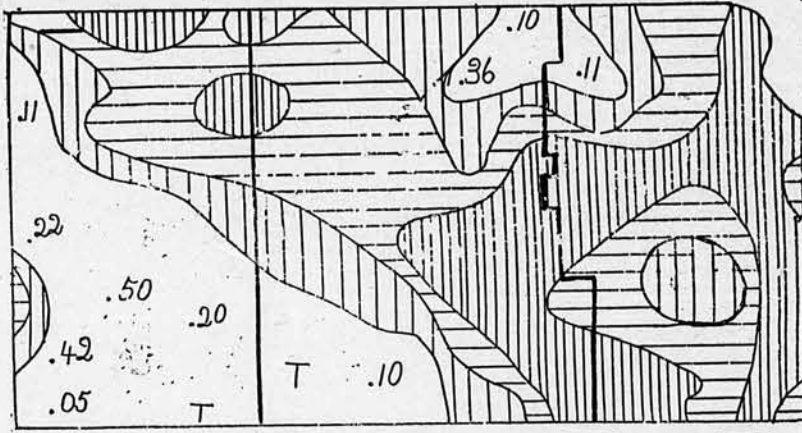
MIDDLE DIVISION.

The acreage is large and the corn usually in excellent condition in this division. A large part of the early has matured sufficiently to be out of danger. The late corn is rapidly nearing maturity and another favorable week will place it largely out of danger. The northeast counties have been very unfortunate this season and the corn is being cut to save the fodder.

Barber.—Corn doing finely.

Barton.—Corn somewhat injured by drought; probably yield half a crop.

Butler.—Early corn is insured, probably forty bushels per acre; late corn



ACTUAL RAINFALL FOR WEEK ENDING AUGUST 3.

tasseled, is well fertilized; the prospects are the best this section has ever had.

Brown.—A good corn crop practically made in the eastern townships, but considerably shortened by heat and drought in central and western.

Chase.—Corn suffered past week, early corn damaged.

Chautauqua.—Largest crop of corn ever raised; early-planted ready to cut in ten days, late-planted past injury by drought.

Cherokee.—Good on corn; apples a heavy crop.

Coffey.—Twenty-five per cent. of corn damaged by bugs, heat and drought; 50 per cent. will make good corn without more rain; 25 per cent. needs one or two more rains.

Doniphan.—Early corn hardening; an immense corn crop in prospect.

Douglas.—Corn promises fair crop with no more rains; with rains will make an exceptional yield.

Eik.—Last week's rains insure the best crop of corn since 1889.

Franklin.—Corn in fine condition, could not be better.

Geary.—Farmers claim to be sure of sixty to eighty bushels per acre of fine corn.

Greenwood.—Best prospect for corn ever known in north part of county, fair to good in central, not so good in western.

Jackson.—Early corn out of danger, but dry, hot weather now would interfere with the late.

Johnson.—Favorable week for corn; yield promises larger than ever before.

Labette.—Corn doing finely; will make 90 per cent. of a crop; far more than anticipated after the recent storm.

Leavenworth.—Corn is safe without more rain and the yield is up to or surpassing the best crop of years.

Linn.—Corn in splendid condition, will average fully forty bushels, is now in roasting-ear.

Lyon.—Corn first-class; early corn

needs more rain; corn in southwest corner injured by drought.

Clay.—Corn in excellent condition, except north part of county, but needs more rain to mature.

Cloud.—Most of the corn almost killed by drought; a few fields in southwest part of county will make some corn if rain comes soon.

Comanche.—A small acreage of corn, in splendid condition.

Cowley.—Hot winds greatly damaged corn; last rain of great help; a three-fourths crop promised.

Dickinson.—North and west part of county promises fifty bushels of corn per acre, east and south twenty-five, in center of the county it is practically dead.

Edwards.—A large acreage of corn, in excellent condition.

Harper.—Early corn has matured well, late corn needs rain.

Harvey.—A full crop assured; average of county forty bushels per acre.

Jewell.—Corn doing well, except in eastern part of county; needs more rain to make full crop.

Kingman.—Corn promises fair; northwestern part of county slightly injured by hot winds; the rest of the county is in good condition; three-fifths of crop assured.

Kiowa.—Early corn almost out of danger; late corn growing nicely but needs more rain.

Lincoln.—Early corn made, a large acreage; late corn in splendid condition.

McPherson.—Yield of corn will be immense; early corn safe; late promises a fair crop without more rain.

Marion.—Corn slightly injured but the late rain has made a large crop certain.

Mitchell.—Both early and late corn growing rapidly, a full crop insured.

Osborne.—All corn in excellent condition; a large yield assured.

Ottawa.—Rather dry for corn; rain needed soon to make the crop.

Phillips.—One more rain will insure an immense yield.

Pratt.—All corn in fair condition; late promises better than early.

Reno.—Some corn badly injured; a two-thirds crop probable.

Republic.—Corn a total failure.

Rice.—Corn doing well; a fair crop promised.

Rush.—Prospects for corn excellent; early corn almost matured, late growing well.

Russell.—Corn in good condition over the county; three-fourths of a crop probable.

Saline.—Conditions excellent; a large crop certain; late corn slightly damaged.

Sedgwick.—Half the corn crop already matured; south part of county damaged by drought; entire county will yield three-fourths of a crop.

Smith.—Early corn made; one rain will insure the late; acreage very large.

Stafford.—A fair crop of early corn assured; late will require another rain; the largest crop for years certain.

Summer.—Middle and eastern part of county damaged by drought; western part in better condition; one-half to two-thirds crop probable.

Washington.—Little corn this year; killed by drought; some being cut to save fodder.

WESTERN DIVISION.

As a rule, this division of the State is not devoted to corn-raising, but what corn was planted is in excellent condition, much of it being now assured. Small grains and forage crops, with alfalfa near the rivers, are the principal crops raised. All vegetation is growing with great luxuriance.

Cheyenne.—Corn doing finely.

Clark.—Kaffir corn principal crop, doing very well.

Decatur.—Early-planted corn will make good crop without more rain; corn stands high on the ground, assuring plenty of fodder.

Finney.—The small acreage of corn in this county gives promise of an excellent crop; oats better than expected.

Ford.—Nothing but wind and hail can hurt early corn now; prairie grass best in twenty years.

Gove.—Present condition 100, compared with past two years 500; prairie grass never better.

Graham.—Corn believed to have enough rain now, and promise of big-crop in our history.

Greeley.—Do not raise much corn here, but the little planted is fine; also forage crops.

Hamilton.—Corn acreage small, crop fine; everything growing with luxuriance.

Kearney.—Corns, Indian and Jerusalem, the very best; all late crops maturing in excellent shape.

Lane.—Corn acreage small, crop fine.

Logan.—Wheat, oats and barley are our cereals and are very good.

Meade.—Corn acreage small, but crop best in years and out of danger.

Morton.—Fine growing week, bringing corn and fodder crops out grandly.

Ness.—Corn acreage small, condition fine; barley and oats will be our most profitable crops.

Norton.—Corn crop immense, thousands of acres now made.

Rawlins.—Early corn now made, late corn will need another rain, which will give us the biggest crop we ever raised.

Sheridan.—Corn crop is made for this year and is extra good.

Sherman.—Corn crop best ever known, acreage 19,341, estimated yield thirty bushels.

Stanton.—Corn acreage small, condition fine.

Thomas.—Corn in fine condition; 65 to 70 per cent. is good, balance is late.

Trego.—Corn doing finely.

Wallace.—Corn prospect best in eight years and another good rain will make more corn here than Wallace ever raised.

Wichita.—Crop conditions good; late crops will fully mature.

"The Great Leak on the Farm and How to Stop It," is the title of an instructive pamphlet recently issued by the Keystone Manufacturing Co., Sterling, Ill. It contains much valuable information about the harvesting and care of the corn crop, especial reference being had to the care and preparation of the fodder. It is intended as an advertisement of the Keystone corn husker and fodder shredder, but presents the latest scientific and practical information as to the feeding value of the parts of the corn plant. It is worth sending a postal card to get.

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

Horticulture.

HUSBANDRY IN THE ORIENT.

By Cadet Gerald Holsinger, of Rosedale, Kas., read before the Missouri Valley Horticultural Society.

Horticulture in the orient is the subject that has been assigned to me by your committee, but, with the consent of the society, I will change it to agriculture, as that will give me more scope, and still give you what I have seen in horticulture.

My observations have been limited, necessarily, as when you are on board a man of war you have to get the consent of several before you leave, and as the ship must be in port before you can leave, and as your leave is only for a few hours, you have not much chance to see anything but city life, and that in the east does not allow you to see as much farming as you could see in our towns and villages, for the people there do not have the same gardens and trees near the house as we find with us.

I will begin with Colombo, on the island of Ceylon. The first thing I noticed at this place was a grove of coconuts. The whole water line seemed to be one immense coconut grove. Some were ready to pull, some soft and watery, some just forming, and some just blooming. I suppose it is needless for me to tell you of the uses the coconut tree and leaves have; how they use the ripe ones for food, the green ones for preserving, drink the milk, use the leaves for building fences, the tree for wood, the shell of the nut for vessels, the husk for rope. They also make an intoxicating beverage of the coconut. The groves are found in different parts of the island and are being planted in large quantities, but I did not see any of the groves that had been planted.

The bananas that are grown in Ceylon are almost all very small, but are very good and are generally preferred to the large ones. The banana groves here are like the other groves that I have seen, except that they are possibly thicker than in other places.

What struck me most in Ceylon, however, was the terracing that was done there. Of course, rice has to have plenty of water, and in the mountains the water they would get on the side of the mountain would not be sufficient so that terracing is resorted to. The height to which this is carried is wonderful. In the places where the ground is fertile, the terracing is carried to the tops of every high hill. On the way to Kandy, I saw places where it was carried up 600 feet. In some places the terraces are not more than long steps, and some would be as wide as fifteen feet. While at Kandy I saw what was probably the largest botanical gardens in the world, but I will not make that a positive statement, for I have not seen enough of them to judge. In this, all tropical fruits, spices, and, in fact, all tropical vegetation is cultivated. In one house there were orchids of every description, in another ferns, in one part of the grounds all fruits were to be found, then hundreds of palms, including date, traveler's, sacred, etc., then spices, then chinchona, and soon through the ground. It was the most interesting place I was ever in, I believe. But I could only stay an hour, so I had to hurry through everything in order to get back to the ship on time.

While there they were picking tea leaves, and we went through one of the large fields where about fifty pickers were at work, and in another field in sight were a hundred more, while there were probably a thousand in the different fields we passed. Coffee was not ripe enough to pick but I saw a great deal of it in different places. We also went through one of the drying houses; here we found the tea in all of its stages, from the green leaf to that made up for shipment.

All around were bread fruit and many others of the same family, but none of these were cultivated. They had a melon here that they claim to be excellent. They also say it is good for the digestion. I took one bite of it and concluded that as long as they liked them it would be robbery to take them from the natives, and for my part

would rather have indigestion. We had a guide and he was always comparing Ceylon with England, much to England's disadvantage. The trip back was as interesting as it was going up, as we never grew tired observing the terracing that had been worked on the mountain sides.

Our next stop was at Singapore, and here we stayed four days, but, as we had to coal ship and provision her here, I did not see very much of the place. I got ashore one afternoon and went to the botanical gardens they have there, and then had to leave for town, as one of the many showers came on us. The first day we got to Singapore we had four showers in the afternoon, and we got in in the dry season. The day after we got in I went on a boarding visit to the American merchantmen in the harbor. As I went to each of them I was told that if we had come in rainy season we would have seen it rain. Each one told me that Singapore was divided into two seasons, the rainy season and the dry season. The way they tell them apart is that if it rains every day it is the dry season; if it rains all day it is the wet season. (Laugh here! You can afford to do it once, for I had to do it at least twenty times that day). I shall always remember Singapore, if for no other reason than that here we first found the mangosteen. This is the most delicate fruit that grows, I suppose, and I do not think it can be beaten as a fruit. The only objection is that it takes a long time to get enough of it. The shell is a brown coating, not unlike that of a ripe walnut in color. By breaking this you find inside the seed, and around this is the meat. It is white and very soft. Its flavor can hardly be described, but it is certainly very fine. It is grown very much now throughout the eastern tropical regions, but cannot be sent very far. We saw some, afterwards, as far up as Hong Kong, but that is still in the tropics. There are five of the seeds in the mangosteen, and they are arranged much like an orange. Some one, in writing, gave it this description: "It has the whiteness and solubility of snow and a refreshing, delicate and delicious flavor, partaking of the compound taste of the pineapple and peach, with many other equally good, but inexpressible, flavors." But do not try to imagine what it tastes like, for it is impossible to do this until you have tasted them.

From here we put to sea, to anchor next in Hong Kong.

On the island there is very little fruit raised. The oranges are very plentiful, but these are all brought down from the main land. The oranges are very nice and juicy, and you find several varieties here and all are better than you find ordinarily. There are hundreds of vendors here and if you get a nickel's worth you have to get a man to carry them for you. For one of the Chinese "cash" you can get a peeled orange. They save all the orange peel, and if, while walking through the street, you drop a piece of orange peel you will see two or three start for it. Here we also found bananas, but oranges were by far the principal fruit. The bananas here, and in fact in all of the eastern countries, were small but very nice. These were the only fruits that seemed to be grown there, at least they are the only ones that are noticed.

In northern China fruit-raising does not amount to very much, so far as I could make out. We were at Chefoo about four months and the only fruits I saw there were the pear, grape and persimmon. They have a pear that I have never seen any place else. It is quite hard when ripe and never does get soft. If it begins to rot it is still so hard immediately around the rot that you can make no indentation with your finger. They are very sweet, however, and every one who goes there likes them very much. When you first see them you think they can not be fit to eat, but one bite is usually enough to change any person's mind on the subject. They are usually very large, and another nice thing about them is that they are always very cheap. The grapes were also nice, but the nicest thing about them was the

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size of the grape and the enormous bunches. The bunches that were found there were much larger than I have ever seen here. Some think the grapes of an extraordinary quality, but I never thought them above the ordinary. They were nice, but nothing to rave over. The persimmons we found at Chefoo I did not think as good as the Japanese persimmon, though they were splendid eating. They were very large, but as they were much like the Japanese, I will not say more about them.

The great Japanese fruit is the persimmon. It is of a splendid flavor and as large or larger than an ordinary teacup and is a grand fruit. The Japanese almost always eat them when they are quite green. They are then firmer and Japanese persimmons do not pucker. All Europeans and Americans, however, like them better when they are ripe. They are, however, passable even when just turning. The difference between them is much the same as between plums just turning red and when ripe—not that the taste of the plum and persimmon are the same, or in any wise resemble each other, however. When it is persimmon time you can see bushels of them in all the little Japanese shops and you can also see Japs everywhere eating them. The persimmon is used in different ways. Many of them are dried and put up for later use. When they are dried they run sticks through them, and when they sell them they go by the stick, about a dozen on each one. The Japs like them very well that way, and while I can eat them, I can also get along very well without them. They also preserve the persimmon in Japan, but I never saw any of the fruit after it was preserved. They also have small fruits of different kinds, but the strawberry is the only one that I noticed, for we were there only in that season.

In traveling through Japan you see on the road-side many plum and cherry trees, but these trees are grown, not for their fruit but for their flower. The ideal of bliss to the Jap is to take his family and sit down under the plum tree when in blossom and gaze at the flowers. At one time I went with a shipmate into the country surrounding Yokohama and accidentally went through one of these fields. I came on a Jap sitting under one of these trees gazing up into the tree as if he might be looking into the eyes of his almond-eyed beauty, from the intentness of his gaze. We stopped to look at him for fifteen minutes, and in that time he did not move a muscle. We might have watched him longer but the scent was too much for us. This I will try to enlarge on later. At another time I went to Tokio to "makee look see" the place and went to one of the parks called "Weno park." The trees were out in full bloom and the park was crowded with Japanese. When I had tired of the place I started for another park and ran across a procession. It consisted of thousands of "cheeseeys" (Japanese children) dressed in white, carrying banners with suitable inscriptions (at least I suppose they were), and all was in honor of the plum blos-

som. They look at it almost as a deity, and if a foreigner was to break off a branch he would probably be mobbed. Of apples I saw none. All that we had were brought in from the United States.

The orientals raise a great many vegetables, particularly the egg-plant. They go in for them in great shape, and, I might add, we did also while there. Potatoes often run short, and while up in Korea we had to pay as high as 8 and 10 cents a pound and then get an inferior quality often. However, if potatoes were scarce, golden pheasants were plentiful, and of these we made the most. Though I guess you are wondering how this comes in among horticultural products, but I will not explain. The hen does come in under this head, though, for on her fruit we had to live almost.

Before concluding, possibly it would be interesting to say something of their methods of farming. In the first place, I never saw a plow in Japan. They have a sort of a pick with a very long curved blade that cuts deep, and with this they cut up the soil. When they cut up the rice ground they go into ground that is entirely under water and break it up in this condition. This tool acts as plow and hoe both. If it is to hoe, they just skim over the ground. If it is to act as plow, they alter their stroke.

In all the eastern countries they terrace, as I mentioned in Ceylon, but in the east they go at it on even a greater scale. In places where the land is comparatively low, where they do not terrace, they have plots arranged in alternate layers, one high, the next low, and so on. I happened to go by one place where they were removing one of the high places to make a rice field. I had better say that they usually put barley on the high fields and rice on the low ones. The way they went at it, to an American, was very curious. They had small pieces of stuff that looks very much like a piece of a hammock, but made of large rope. They used the pick I mentioned to get up the dirt and put it in those pieces of stuff. When they had a couple of hundred pounds of dirt they put a pole through the ends and walked off with it to the place they wanted to take it. It took about twenty men ten times as long as team and scraper would require to do it.

The orientals never let a drop of manure go to waste. They save up all the manure of all kinds, collect from the cess-pools and mix this with water, and in this manner fertilize while they water their crops. They take buckets and water each row separately, and as they keep stirring up the contents, the odor from fields and buckets does not resemble attar of roses a particle more than it does "Jockey Club" or heliotrope. I mentioned the visit I paid to the fellow who was gazing at the plum blossoms. He had finished his farm and another fellow was going on in the adjoining farm. This was why we left. We were neither of us affected by amonia for the next two weeks as a result.

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In the Dairy.

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

BETTER BUTTER.

[From the Junction City Union.]

The Union takes great pride in presenting this week a three-column article on "Butter-Making on the Farm," by Mr. A. E. Jones, editor of the Dairy department of the KANSAS FARMER, and proprietor of the Oakland dairy, near Topeka, with which he has made a phenomenal success. In Kansas, Mr. Jones is looked upon as standing in the front row among our best informed and most successful dairymen. Had he not been so considered, the Union would not have invited him to contribute to our columns upon a question of so much importance to the farmers of Geary county.

We began with the intention of giving our readers, in a condensed form, the best and latest information upon butter-making, and in presenting this article we feel that we give the best Kansas thought. Mr. Jones has written without frills or flourishes. He has prepared the article for farmers—not educated dairymen. We hope every point Mr. Jones makes will be carefully compared with present methods by every reader of the Union. The writer is a man too well informed and too successful to be addicted to hobbies. Had he been so addicted, he would, as dairy editor of the KANSAS FARMER, long ago have had his idols punctured. Every time, therefore, you run up against a statement that does not harmonize with your practice, don't pass on and forget it the next day. That isn't the way to grow. First, be sure that you know what Mr. Jones means, and then test his statements. For fear you omit some important feature, or may be prejudiced, it might be well to call in a competent, disinterested judge.

BUTTER-MAKING ON THE FARM.

To make good butter on the farm during the warm months, and in fact through the larger part of the year, is a problem on which there has been expended by writers on dairy subjects years of hard thinking, thousands of dollars worth of time and an endless amount of paper and printer's ink. Notwithstanding this, the production of bad butter has not decreased in proportion to the efforts that have been put forth for the benefit of farmers and their wives in this, the most common of all work, "butter-making." Our Western towns at this season of the year are overstocked with farm butter, ranging in price from 8 to 10 cents a pound in trade, returning no profit to the producer for labor expended in the care of cows, and the merchant encounters no end of trouble in getting rid of the butter he is forced to handle in order to hold the trade of his customers.

With those who will read and study a good dairy paper or any standard work on dairying, there is a prospect of some improvement, but with that class who never read either, the case is hopeless, and the "go as you please" butter-maker, like the poor, we will always have with us. One fault with many dairy writers of the present day is in using technical language and terms that can not be readily grasped by people in every walk of life. Nearly every one has his hobby, and in reading from various authors there is a "Babel" of ideas which lead to confusion and distrust. In the present article I shall endeavor to use plain English, and write mainly from my own hard-earned experience, with the hope that the drudgery of the farmer's wife may be lightened and their purses replenished with that which rewards all labor. To go into full and minute details of dairying, from the rearing of the calf to the final disposal of the finished product, would take a whole newspaper, therefore only the most vital points can be touched upon in a limited space.

Aside from simply making butter, the matter of feed and stabling cows must be attended to, as on these depend to a greater or less degree the success of your undertaking. A cele-

brated French chef once said: "Catch your rabbit before you cook it." With this text in view, our advice will be to get *butter cows* if you expect to follow the business of butter-making. The better plan is, however, to sell the milk directly to the creamery if one be located within a reasonable distance, especially in all cases where farmers are not in shape to make butter at home. Creamermen claim that with a separator they are enabled to get 20 per cent. more butter fat from the milk than is usually done when set and skimmed at home, and, as milk is paid for on the fat system, every one gets the value of its contents. The better the cow and the richer the milk, the more profit there is, even when selling to the factory. In either case, if you have cows that will not make more than 200 pounds of butter a year, sell them to the butcher and begin breeding for such as will come up to 250 to 300 pounds. It costs on an average \$35 to feed a cow per year, saying nothing of the work tending her. Now figure up how much butter you have sold, how much has been used in the family, how much skim-milk has been fed to the pigs, and finally, how much the calf is worth that you have been feeding milk to. Strike a balance and see whether the cow is in debt to you or you to the cow, remembering that it takes 200 pounds of butter at 17 cents to pay the feed bill, and if only 12 cents is obtained it takes nearly 300 pounds. If you are falling behind don't rest until you have cows that make 300 pounds. It has been done and can be done again. Two years ago I made from eleven Jersey cows over 3,300 pounds of butter in twelve months, and some of them were young cows at that. Cows that are below standard in the production of butter can best be disposed of by feeding to the full extent of their digestion, and milking at the same time. After a few months an improved condition will be noticed and the cows can be sold for beef soon after drying off. There is a loss in trying to fatten dry cows, and can only be made profitable when sold very soon after the milk flow has ceased. With the low price of beef, the thinking farmer will readily see that a dry cow cannot be fed without either losing on the beef or the grain.

I am asked to throw light on the following questions:

- First.—Points essential to good butter.
- Second.—How can farmers' wives, under conditions usual on the farm, best attain them?
- Third.—Emphasize points where many stumble and point out the remedy.
- Fourth.—State temperature best for cream when ready to churn.
- Fifth.—Temperature best for the milk when cream is rising.

Upon the first proposition, let your aim be to produce an article of butter bearing that delicate flavor and unbroken grain so highly prized by critics. This will insure you at all times the highest market price. To obtain this it will be necessary to begin with the cow and her feed. The cow is a machine for turning our hay, rough fodder and grain into a concentrated product that can be easily taken to market and turned into cash, and still leave the refuse and waste matter behind to enrich the land. This machine requires a certain amount to keep it in running order; the profit comes from what she consumes, after having taken care of herself. A food may be so lacking in palatability that she will only consume enough to sustain herself, in which case our profit is a missing dividend. The question of digestibility enters into the problem, but the experience of most dairymen is that the palatability and digestibility go together, or, at least, a food that is relished is a digestible food. With farmers who have no silo, early-cut hay, such as clover, alfalfa or millet, supplemented with wheat bran, finely-ground corn chop, or oil meal, with an occasional feed of beets or carrots, make a good winter feed. When on grass, it pays to feed one-half as much ground stuff as is given in winter. When the pasture dries up in August and

September, have a piece of Kaffir corn, sorghum or late-sown oats that can be cut and fed green at the barn night and morning. Then the cows will lie in the shade (if there be any) and not be obliged to roam the pasture over in quest of a little dry grass. By this means the milk flow will be kept up during the hot weather, and the cows come through in much better flesh.

In addition to the foregoing, bear in mind that cleanliness in every department, from feeding and milking the cow to the golden butter, must be conducted with the utmost scrutiny. If you can not, or will not, do this, quit the business and try something else.

I use a double strainer. The milk goes first through a fine wire sieve around the sides and then through a cloth. This takes out all the dirt. By running through the sides the filth is not forced into the bottom of the strainer where much of it will, of necessity, pass outside into the milk can.

In regard to the second question, I wish to say that under the conditions usual on many farms the essentials to making good butter are entirely lacking, and in order to make such an article very radical changes will need to be made. Of course there is some good butter made on the farm already, but the surroundings where this is made vary greatly from those where the bad article is turned out. This goes to prove that the fault lies with the individual and not with what nature has placed around us. In many instances milk and cream are hung in the well, but this is troublesome and very inconvenient. In this State, from the first of June to the 15th of September, there are very few, if any, cellars that are cold enough wherein to set milk. If the milk gets sour in twelve hours, and the mercury where the milk is kept runs above 60°, then other arrangements should be made at once. Let me say right here that not to use the thermometer is fatal to good butter.

(To be continued.)

The Baby Separator and Gathered Cream.

In this part of Iowa the separator factory makes nearly all the butter that is made in the county, and it is the leading county in the State in quantity of butter produced as compared with size. This is why the separator factory has such a hold. Were there but a small amount of butter made the creameries would have to be further apart in order to pay running expenses, and if much further apart the burden of hauling milk would be greater than the patrons could stand. In counties further north the cream is yet raised on the farm and gathered and hauled to the creamery. In some southern and western localities the same practice yet prevails, because milk is not produced in so large quantities that it can conveniently be delivered to the separator. To meet such cases the baby separator is warmly advocated.

At the last meeting of the Iowa Stock Breeders' Association, Mr. Leighton, then the butter-maker at the agricultural college creamery, maintained that the baby separator is demanded by the exigency of the situation. Among other things he said:

"The next great improvement will be one that will lessen the expense of hauling milk to the factory, and the baby separator is going to obviate this trouble some time in the future. Creameries will be managed just the same as at present, only instead of the expense of taking the milk to the factory to be separated, each patron will have a hand separator and send only the cream. This method has been adopted by Mr. Sutton, of Nebraska, in one of his creameries. He has furnished each one of his patrons with a machine and has allowed 2 cents more a pound for butter fat than the regular price at his other creameries, and I am informed that it is very satisfactory both to the patrons and the proprietor. That this system will be a great improvement over the present way there is not the slightest doubt."

The Babcock test has been found to be as accurate to ascertain the butter value of cream as of milk. The only difference in the manipulation is to use a smaller amount of cream and a test

tube with a larger neck. In some of the northern creameries where the gathered cream plan is used, they haul the cream from the farm to the factory for three-fourths of a cent per pound for the butter it makes, while in this part of the State, with the separator process, it costs as much to get the milk to the factory as to get the butter to New York and have it sold. This expense could be greatly lessened by the use of the baby separator. Creameries that employ a dozen teams at the present time could gather the cream with less than half that number. It would also lessen the expense of manufacturing. It would not need so many creameries in the same territory as at present. In some dairy localities one gathered cream factory will accommodate the same territory that requires five or six separator factories. Another big advantage, and undoubtedly one of the greatest to the patron, would be in the better quality of the skim-milk. The only difficulty at present in adopting this system is the price that is asked for the small farm separator.—Rural Life.

W. Atlee Burpee has brought out a dwarf sweet pea, under the name "Cupid." He describes it as follows: "The foliage is very dark green; blossoms pure, waxy white, of unequalled substance, and fully as large as 'Emily Henderson.' The plant does not grow over five inches high, and never more than twelve to fifteen inches in diameter. The stems are about four inches long, bearing two or three blossoms, all very near the end of the stem. It is a wonderfully free bloomer, and begins to flower as early as May and continues until November. The seed is white and of usual size."

"Mamma, was that a sugar-plum you just gave me?" asked little Mabel. "No, dear, it was one of Dr. Ayer's Pills." "Please, may I have another?" "Not now, dear; one of those nice pills is all you need at present, because every dose is effective."

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Gossip About Stock.

Willis E. Gresham, of Burrton, Kas., writes, announcing through Col. S. A. Sawyer, that he will hold a public sale during September, at Hutchinson, of a choice draft from his Quality herd of Poland-China swine.

Col. S. A. Sawyer, fine stock auctioneer, Manhattan, Kas., writes: "Please say to the prospective buyers of Poland-Chinas this fall that they cannot afford to miss the dates of Walter Latimer, Garnett, September 6; W. H. Wren, Marlon, September 11; Martin Meisenheimer, September 18; J. R. Killough & Son, Richmond, October 10, and J. H. Pegram, Virgil, about October 20. For honorable dealing, intelligent breeding, rich pedigrees and fine hogs, these sales will meet any competition. Other announcements later."

Bert Wise, Reserve, Brown county, Kansas, writes: "Am now very busy preparing catalogue for my September 17 sale. If my stock continues to improve for the next six weeks as they have been, I will have an offering worthy the attention of breeders far and near. In Butler's Darkness No. 6846 Kansas can truly lay claim to having within her borders one of the grandest breeders in the United States to-day, his pigs having that uniformity of build, with extra finish and growth, with head and ears that are so much desired by all good breeders."

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

The separate prices of these are: Dr. Orr's Book.....\$1.25 KANSAS FARMER, one year..... 1.00 Total.....\$2.25

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

R. Scott Fisher, of Holden, Johnson county, Missouri, again places an advertisement of his famous Poland-Chinas with us. In former years Scott was a regular advertiser in the columns of the FARMER, but owing to crop failures in so many places he dropped out, but the great boom in our Western country has brought him back and we hope that he will have no cause to leave us again soon. He says that (although his sales through the FARMER in previous years were both satisfactory to himself and his customers) his stock this season is the best he ever raised. He has spent several hundred dollars in the past year for stock in order to improve his herd. He has on hand a very superior lot of pigs, sired by six grand boars, such as Chief I Know 11992 S., King Finch Jr. (Vol. 10), and a very fine son of the famous McWilkes 9242, U. S. Wise, and two other very fine yearling boars. His sows are by such boars as Nod-away Lad 4132 (the sire of the great Short Stop), Herschel Boy 10688, Hoosier Boy 7880, Commander 8005 (sire of The Col. 8236), Square Quality 7918, Victory 8152, First Prize 5483, and several others. His pigs are good individuals with gilt-edge pedigrees. His sow, Sunrise (Vol. 10), out of Sunset W. 12th 22467 and sired by Buckeye Boy 7198, that now heads the herd of W. T. Huls, of Wolfe, Mo., has a litter of seven March 30th pigs that we think the best litter we ever saw, and they ought to be good ones, as they are the direct descendants of show stock on both sides. Their grandsire, McWilkes, a show hog, and their granddam never was beaten in the show ring, sweeping everything at Holden last fall, and among her opposition was a \$500 sow. His prices are low considering quality of stock. Write him.

Publishers' Paragraphs.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. OR KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

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

There are two well-equipped and growing business colleges in the State of Kansas that give such broad, thorough and business-like courses that the most conservative business men are enthusiastic in their endorsement. They are the Emporia and Hutchinson business colleges. Their methods of business practice are far in advance of that in ordinary business colleges, approaching so nearly the actual affairs of life. Shorthand and telegraphy are also thoroughly taught. For particulars write to either school.

"FRANC ELLIOTT."—Those who are interested in the social life of New York and

Washington will enjoy reading Clarence Herbert New's forthcoming novel, "Franc Elliott," which will appear upon the stands in August. The author has been an extensive traveler and, in two chapters of the story, gives a graphic account of Major Forbes' campaign against the Matabele in South Africa, together with the loss of Major Wilson's detachment. There is also a rich coloring of the Bohemian life which appears in many of his magazine and syndicate stories. The book is published by G. W. Dillingham, New York. Paper cover, 50 cents.

TOUGH-ON-FLIES.—This preparation will instantly and positively relieve horses and cattle whereon it is used from any annoyance from flies, gnats, lice, etc. It is, without question, the most wonderful compound of this enlightened age and the crowning chemical discovery of the nineteenth century for the protection of animals against these dreaded pests. Therefore, no owner of horses or cattle for the sake of his interest should be without it. Immediately upon one application, either to your horses or cattle, they will secure entire instant relief from any annoyance from flies, gnats, etc.; no matter how thickly they may swarm, your animals will enjoy perfect ease and rest for at least twenty-four hours. By the use of "Tough-on-Flies," fly-nets and all other unsightly coverings can be abolished forever. It is soothing and healing if applied to sores, and prevents thrush and other hoof diseases when applied to the hoof. As a disinfectant during the prevalence of infectious or contagious diseases it stands unrivaled. Applied to cows it will more than pay for itself in the extra large increase of milk they will give and their gain in flesh by being able to feed and rest well. It will be observed that by the use of about one-half cent's worth of this lotion per day your cow will freely give about one-third more milk during the fly season. "Tough-on-Flies" prevents the savage attacks of the dreaded greenheads, buffalo flies and the Texas heel fly, which cause much suffering to the animal. By writing to the manufacturers, The Crescent Manufacturing Company, 2109 Indiana Avenue, Philadelphia, and mentioning the KANSAS FARMER, you will receive full description and testimonials of this invaluable safeguard against flies, etc.

Alfalfa Hay Safe for Horses.

EDITOR KANSAS FARMER:—May "dry alfalfa" (alfalfa hay) be fed to horses with safety? Please answer in the KANSAS FARMER as early as possible. S. Junction City, Kas., July 30, 1895.

No complaints have been made of bloat or other harm to horses from dry alfalfa hay. Horses are not affected as frequently as cattle and sheep from eating uncured alfalfa. Hogs are not hurt at all. Even cured hay when moistened is said to be unsafe for cattle.

Rabbits Eat Melons.

EDITOR KANSAS FARMER:—Can you tell me, through the KANSAS FARMER, of any good method of preventing rabbits from destroying melons? It seems utterly impossible to destroy the rabbits. They gnaw holes through the rind of the best melons in the patch and eat portions of the heart and then begin on a new melon. Any information concerning the ridding of these pests or preventing harm to the melons from them will be gratefully received. GEO. A. GOULD.

Solomon, Kas., August 2, 1895.

This is a hard inquiry to answer. Destruction of the rabbits or fencing against them with some of the woven wire fences would be effectual.

Valuable Books Cheap.

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:

- The Beautiful Flower Garden. A delightful book by an artist. . . . \$.50
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A HEALTHY WIFE,

Who Was Once a Hopeless Invalid, Writes of Dr. Hartman's Free Home Treatment.

Mrs. F. M. Badgett, 819 New street, Knoxville, Tenn., writes a letter for publication, which she desires all her suffering sisters to read. She writes: "When I was sixteen years old I suffered with female weakness of the worst kind and spent all I had trying to get cured. I tried several of the best physicians, but they all failed to cure me. I gave up all hope of recovery. Finally Dr. Hartman's treatment was recommended to me by my teacher, who also lent me money to get the medicines which Dr. Hartman prescribed. I took the treatment and it cured me. I am now a healthy woman, weighing 194 pounds, and I owe it all to Dr. Hartman's treatment. I am sure I would not be living now if it had not been for this treatment. I cannot help recommending it to all sufferers and will answer all inquiring letters." Any woman wishing to apply for Dr. Hartman's free home treatment has only to send age, symptoms, duration of disease, when the Doctor will prescribe the proper treatment. The medicine can be obtained by each patient at the nearest drug store. Every woman should have a copy of Dr. Hartman's book on female diseases. Sent free by the Pe-ru-na Drug Manufacturing Co., of Columbus, O. For free book on cancer address Dr. Hartman, Columbus, O.

The twice-a-week Commercial Gazette, of Cincinnati, O., is now clubbed with the KANSAS FARMER, both papers one year for only \$1.65. Send us your order.

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For Knights Templar.

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List of Kansas Fairs.

- Allen County Agricultural Society, C. L. Whitaker, Secretary, Iola, September 11-13.
Allen County Fair and Moran Driving Park Association, H. P. Smith, Moran, August 20-23.
Anderson County Fair Association, M. L. White, Garnett, September 3-6.
Brown County Exposition Association, C. H. Lawrence, Hiawatha, September 10-13.
Chase County Agricultural Association, J. P. Kuhl, Cottonwood Falls, September 10-13.
Clay County Fair Association, J. J. Marty, Clay Center, (no date set).
Coffey County Fair Association, J. E. Woodford, Burlington, September 9-13.
Cowley County Fair and Driving Park Association, A. C. Bangs, Winfield, September 24-27.
Crawford County Agricultural Society, John Viets, Girard, August 27-30.
Finney County Agricultural Society, D. A. Mims, Garden City, October 2-5.
Franklin County Agricultural Society, C. H. Ridgeway, Ottawa, September 17-20.
Franklin County District Fair Association, J. J. McCabe, Lane, (no date set).
Jackson County Agricultural and Fair Association, S. B. McGrew, Holton, September 30, October 4.
Jefferson County Agricultural and Mechanical Association, George A. Patterson, Oskaloosa, October 11-13.
Johnson County Co-operative Fair Association, C. M. Dickson, Edgerton, September 10-13.
Johnson County Fair Association, W. T. Pugh, Olathe, August 27-31.
Lincoln County Fair Association, Ed. R. Smith, Monard City, October 1-4.
Marion County Agricultural Society, Manly I. Hill, Peabody, September 25-27.
Miami County Agricultural and Mechanical Association, Geo. P. Leavitt, Paola, September 24-27.
Montgomery County Agricultural Society, D. W. Kingsley, Independence, September 17-20.
Morris County Exposition Company, E. J. Dill, Council Grove, September 24-27.
Nemaha Fair Association, John Stowell, Seneca, September 3-6.
Neosho County Agricultural Society, H. Lodge, Erie, September 3-6.
Neosho County—The Chanute Agricultural, Fair, Park and Driving Association, R. C. Rawlings, Chanute, August 13-16.
Ness County Fair Association, Sam G. Sheaffer, Ness City, October 10-12.
Osage County Fair Association, E. G. Pipp, Burlingame, (no date set).
Osborne County Fair Association, M. E. Smith, Osborne, September 24-27.
Riley County Agricultural Society, H. A. Ames, Riley, August 10-13.
Rooks County Fair Association, I. N. Pepper, Stockton, October 3-5.
Saline County Agricultural and Horticultural Association, Samuel Carlin, Ballina, (no date set).
Sedgwick County—Kansas State Fair, W. H. Hewey, Secretary, Wichita, October 1-5.
Wilson County Agricultural Society, C. R. Cantrell, Fredonia, September 10-13.

The Western Trail

Is published quarterly by the Chicago, Rock Island & Pacific Railway. It tells how to get a farm in the West, and it will be sent to you gratis for one year. Send name and address to "Editor Western Trail, Chicago," and receive it one year free.

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CLOVER HAY FOR HENS.

It Is Excellent Because It Abounds in Mineral Matter.

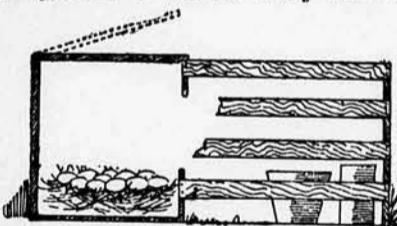
It is only recently that clover hay has been found to be the cheapest and best winter food for laying hens, and that by its use the great difficulty of procuring green food is overcome. In fact, the essential want of hens in winter is not so much that of green food as of bulky food of a nitrogenous character. For many years the writers and breeders have made a specialty of recommending all kinds of grain for poultry, the only variation being that at certain times some of it was to be whole grain and at other times soft food was to be given. It did not occur to them that the effects of a long-continued diet of grain was as injurious to fowls as to cattle, and that the concentrated grain food gave the best results when diluted (if we may use the expression) with some kind of bulky material, which not only promoted digestion, but also largely assisted in supplying the elements necessary for the albumen of the eggs, which was lacking in the carbonaceous food of the grains.

Another important advantage in the feeding of clover hay is that it abounds in mineral matter, thus providing lime in a soluble condition for the shells, and in supplying the bony structure for the chicks in the eggs. The phosphates, salt, soda, magnesia, iron and nitrogen are easiest obtained from the grasses, but in less proportion than from bran, or some product of the preparation of grain. Yet it is less concentrated and more soluble, while the fowls can consume a much larger quantity. To attempt to feed clover, however, without grain as an assistant would be going to the other extreme; and hence, the best results can only be obtained from a mixed or balanced ration, by which the laying hens are supplied with food abounding in all the elements essential to the production of eggs, as well as to supply the hens with animal heat and to repair waste of tissue.—Farm and Fireside.

IMPROVED HEN'S NEST.

Its Inventor Calls It the Very Best Thing Yet Discovered.

The accompanying illustration shows the very best way to set a hen that has yet been discovered, so far at least as the writer is concerned. The nest is made in a roomy box, with a cover. Nailed to one side of the box is a little slat yard—slats on top also—in which water and food are kept constantly. The hen can go out into the yard at any time, eat and drink, and has no temptation to wander away and let



IMPROVED HEN'S NEST.

her eggs get cold. Where several hens are sitting, a contrivance like this for each saves all bother of looking after them, to see that two do not get on one nest, etc. You put food and water in the dishes—the hen "does the rest!"—Orange Judd Farmer.

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It Yields More Satisfactory Profits Than Any Other Stock.

The farmer has plenty of room on his farm for poultry, and the land so devoted will return as large, if not larger profits than an equal area planted to a crop or used for other stock. Cheap houses can be built to shelter a hundred or more fowls, which will bring in the cash in the winter season by producing eggs, thus largely aiding him to purchase many necessities while waiting for his crops to grow. There is but little risk of loss in keeping hens if they receive only a part of the attention bestowed on animals, and a very large percentage upon the cost is the certain return that may be realized by a farmer, on a small scale, where the business is conducted properly. There is more profit in raising choice poultry and making

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a specialty of eggs, considering the cost and outlay, and which can be had annually, than from any other sources, not excepting cows, pigs or sheep, and yet the animals are fed and cared for at an expenditure for labor that would be considered appalling if bestowed on the hens, though the hens pay cash dividends daily for all they receive. Farmers would do well to look into this matter, and now is the time to consider it. Good fowls of any of the improved breeds may now be had at a very reasonable price, and we call the attention of those who have the facilities for keeping fowls of taking advantage of their opportunities.—Prairie Farmer.

AMONG THE POULTRY.

SUNFLOWER seed add luster to the plumage.

OATS are one of the very best feeds for moulting hens.

THE Pekin ducks develop early and are good market fowls.

GEESE thrive on plenty of good pasture and plenty of water.

TRAIN the young poultry to roost in the poultry house from the start.

TO BE certain of having fresh eggs now, care must be taken to gather them daily.

A POUND of copperas dissolved in two gallons of water makes a good disinfectant.

MIXING scotch snuff or insect powder in the dust bath will help to rid the fowls of lice.

IF ducklings are exposed to wet weather they are apt to take cramps in their legs.

BETTER not hatch out any more chickens until September. They will not thrive in the hot weather.

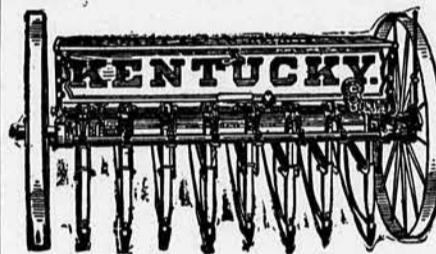
THE roosts should be low, especially for large, heavy fowls, and should all be of the same height.—St. Louis Republic.

Protect Fowls Against Heat.

If the fowls must be shut up all summer in a winter house, with more or less glass to the south, it will be cruelty not to give them an opportunity to take shelter from the fierce heat and strong light. The windows should be covered with cotton cloth or protected with a rude awning made of the same cloth, or with evergreen trees cut and set like posts before the windows, or the glass may be whitewashed.

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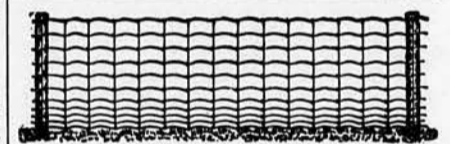
The best is none too good. DR. KAY'S RENOVATOR is the best, safest and most effectual family medicine known for renovating and invigorating the whole body. It increases the appetite, promotes digestion, will make you gain in flesh, renew your blood and prevent your having a run of fever if you will take it in time. Delays are dangerous. If you would guard against fevers, so prevalent at this time of year, take at once DR. KAY'S RENOVATOR. It removes the cause and you get fat and healthy, instead of languishing with fever. It cures dyspepsia, liver disease, constipation, etc. If your children's breath smells bad and they have a poor appetite, etc., it is unsafe to neglect them. Give at once the RENOVATOR, a part of a tablet half an hour before each meal, and it will restore them to health in a few days. Always keep it in the family and by its prompt use thousands of lives will be saved, and many a doctor's bill as well.

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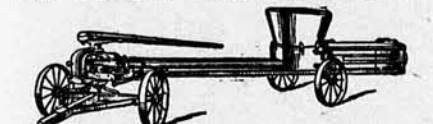
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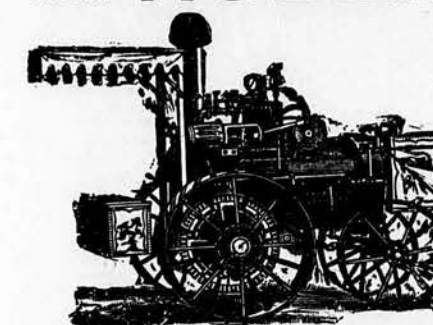
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(Continued from page 1.)

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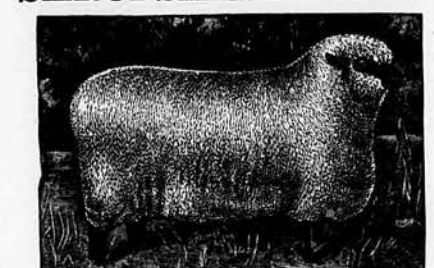
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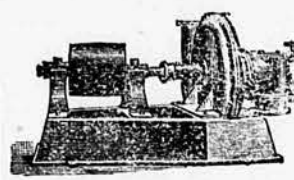
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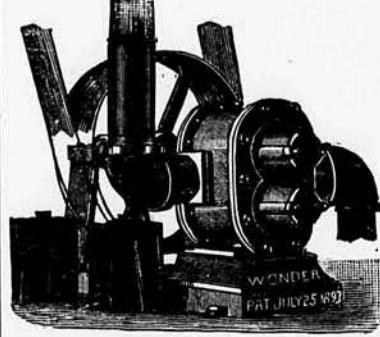
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