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BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 per year or \$5.00 for six months; each additional line, \$2.00 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

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

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

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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.

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PRINCETON HERD OF POLAND-CHINA SWINE contains the most noted strains and popular pedigrees in the U. S. Choice animals for sale. Address H. Davison & Son, Princeton, Franklin Co., Kas.

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

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

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Buff and Black Cochins, B. Minorcas, Brown Leghorns, B. Langshans, B. P. Rocks, L. Brahmas, S. L. Wyandottes and Cornish Indian Games, Ducks, Geese and Bronze turkeys. Birds scoring from 89 to 97 points. Eggs in season, from \$1 to \$2 per set. Twelve years a breeder. Shipping point Warrensburg, Mo. Mrs. James D. Dyer, Hoffman, Mo.

SWINE.

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

BERKSHIRES. We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders. WM. B. SUTTON & SON, Russell, Kansas.

T. A. HUBBARD, Rome, Kansas, Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES. Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

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

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

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

J. T. LAWTON, North Topeka, Kas., breeder of Improved Chester White swine. Stock for sale. Pairs or trios not akin shipped. Correspondence invited.

SWINE.

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Quality Herd Poland-Chinas. For first choice pigs from stock producing winners of seven prizes World's Fair. Darkskin 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

BELMONT STOCK FARM

Geo. Topping, Cedar Point, Kansas. Breeds and has for sale Poland-China and Large English Berkshires. Also Single-Comb Brown Leghorns and Mammoth Bronze turkeys. Farm six miles south of Cedar Point, Chase county.

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, 1470 15th St., Wichita, Kas.

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VERNON COUNTY HERD PEDIGREED POLAND-CHINAS. Forty-five spring pigs sired by Silver Dick 1448 S. and out of high-class dams. Write or visit herd. J. M. TURLEY, Stotesbury, Vernon Co., Mo.

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

R. S. COOK, Wichita, Kas., Breeder of Poland-Chinas. Won seven prizes at World's Fair—more than any single breeder west of Ohio.

CLOVER HILL HERD Registered Poland-China Swine Eighty head, headed by Royal Perfection 13159 S., a son of King Perfection 13155 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.

ELM BEACH STOCK FARM IRWIN & DUNCAN, Wichita, - Kansas, Sedgwick Co. Breed and have for sale Bates and Bates-topped Short-horns—Waterloo, Kirklevington and other fashionable families. Also breed and have for sale the best thoroughbred Poland-Chinas that can be obtained. Write or come and see.

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.

1,309 POLAND-CHINAS Shipped by express to eighteen States and Canada. Original Wilkes, Corwin, Tecumseh and World's Fair blood. Write for one to W. S. HANNA, Box 218, Ottawa, Kansas.

CATTLE.

SUNNY SLOPE FARM

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

ATTENTION FEEDERS

I have for sale 300 Head 3 and 4 year old Steers in good flesh and splendid quality. Will sell in car-load lots, on terms to suit. Come and see me, or write. Mention KANSAS FARMER. Address WALTER LATIMER, Garnett, Anderson Co., Kas.

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

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

THE SHELDON & WHEELER HEREFORD CATTLE COMPANY OWNERS OF THE ROCK CREEK HERD (Founded by Thos. J. Higgins.)

200--Pedigreed Herefords--200 45 Young Bulls, 36 Heifers coming on. 250 High-Grade Cows, 15 yearling bulls, 73 heifers, 154 calves. Stock for sale at all times. Inspection and correspondence solicited. Address all correspondence to C. M. SHELDON, President, BURLINGAME, Osage Co., KAS.

SWINE. E. E. AXLINE, OAK GROVE, MO., JACKSON CO. Breeder and shipper of pure-bred POLAND-CHINAS. Best families. A choice lot of summer and fall pigs, sired by Roy U. S. 24165 A. and Western Wilkes 12846 S., for sale at reasonable prices. New catalogues free. Plymouth Rocks, best strains.

SUNNY SLOPE FARM EMPORIA, KANSAS. We are the largest breeders of pure-bred hogs in the world, and have won more premiums at state fairs this year than any other breeder in the United States. We are breeding this year 200 brood sows and have twelve boars in our herd. At the head of our herd this year we have the great prize-winning boar, Hadley Jr. 13314, who took first prize as boar and four of his get at the Nebraska State fair. He is the sire of the two prize-winning pigs, King Hadley and Samboline, that have won more prizes than any two six-months-old pigs shown in 1895. Longfellow 29785, who has the best Columbian record of any Poland-China boar west of the Mississippi river. J. H. Sanders Jr. 35059, Sir Chas. Corwin 33095, L's Sensation 13316, Clay Dee 25877 (who too! first prize and sweepstakes at the Kansas State fair, 1895). These boars are either individual prize-winners or from sweepstakes boars. We bred the great sweepstakes sow, Faultless Queen Corwin 29798. We now have on hand about 140 boars sired by the above. Our prices are as low as small breeders. Why not come to the fountain head and get boars to head herds? We also breed English Berkshires on a separate farm, four miles from Sunny Slope. One of the largest breeders of pure-bred Hereford cattle. H. L. LEIBFRED, Manager.

(Breeders' Directory continued on page 16.)

Agricultural Matters.

THE DEPRECIATION OF LAND—AN ENGLISH VIEW.

By Hugh Roger, in the *Agricultural Cable*, of London, England.

General prices since 1873, as evidenced by Mr. Sauerbeck's index numbers, have fallen as much as 40 per cent., and no industry in the kingdom has suffered greater disasters from this unprecedented fall than agriculture. It may be doubted whether the public generally have fully realized the enormous shrinkage in value that has taken place in the investments connected with the landed interests during the last twenty years. The figures, when presented in a concrete form, are certainly of a very startling character. Lest I may be suspected of exaggeration, I shall call Sir Robert Giffen as a witness. As is probably well known, Sir Robert makes periodical valuations of the wealth of the United Kingdom, having made such a valuation in 1875 and another in 1885. Taking as his basis Schedule A of the income tax returns, he valued the land in 1875 at £1,951,000,000, while in 1885 his valuation was £1,691,000,000, showing a depreciation of £260,000,000 in ten years. But ever since 1885 the value of land has continued to fall. Its annual rental value for 1893, as shown by Schedule A, has declined some £8,000,000 as compared with 1885. Capitalizing this rental at twenty-six years' purchase (Sir Robert Giffen's figure), we obtain a further depreciation of £208,000,000, and a total of £468,000,000 in the comparatively short period of eighteen years.

Nor is this all, for, in addition, there has to be taken into account the great loss and depreciation of farming capital. Sir Robert Giffen's valuation of the farming capital in 1875 was £652,000,000, and in 1885 £521,000,000, bringing out a fall of £131,000,000 in ten years. Sir Robert Giffen finds his valuation upon the assessments under schedule B, which, for 1893, show a fall of £8,000,000 in comparison with 1885. If this be capitalized at eight years' purchase (Sir Robert Giffen's figure), we get an additional depreciation of £64,000,000, making a total of £195,000,000 in eighteen years. Putting together the shrinkage in land values and in the farming capital as above shown, the aggregate—£663,000,000 sterling—equals the entire amount of the national debt. In the face of a condition of affairs so appalling, need it be wondered at that land-owners are crippled and without resources to maintain and improve their estates, that farmers have been ruined by the thousand, that large tracts of land have passed and are continuing to pass out of cultivation, and that the rural districts are being gradually depopulated, the laborers having to seek employment in our already over-populated cities. We have here a social and an economic revolution of the most wide-reaching character, principally due to the phenomenal fall of prices, or, in other words, to the appreciation of our gold standard.

There is another phase of the phenomenon which is of paramount importance to the interests concerned. From the same cause, a wholesale redistribution of wealth is in progress. Nearly all the land is charged with debts of one kind or another, mortgages, annuities, etc. With every appreciation of the standard of value in which these debts are expressed, a greater quantity of the produce of the land is required to discharge. In accordance with Sir Robert Giffen's dictum, "the debtors pay more than they could otherwise pay, and the creditors receive more." During the last twenty years the land has been steadily declining in value, while the debts affecting it have been as steadily appreciating in value. In very many cases the margin of security has been completely swept away and the owners ruined—the land passing into the hands of the mortgagees. Clearly, Sir Robert Giffen was well justified in saying "no doubt the redistribution described spells ruin to individuals and classes." What, then, is the remedy? There

is not lack of suggested reforms—fixity of tenure in a time when tenants cannot be got to stay; compensation for improvements which tenants are without capital to make; reform of the land laws, to promote distribution of the land which is a drug in the market; readjustment of the burdens on land; scientific education; marking of foreign produce; equalization of railway rates, etc. But suppose all these reforms were carried into effect, to what extent would they be likely to benefit the farming community at large? Would they enable English farmers to grow wheat at 23s. per quarter, and to turn out the other products of the farms so as to leave a fair working profit at the present very low level prices? No one having any practical acquaintance with the agricultural industry will venture to anticipate an outcome so propitious from all this proposed legislation. Eminent desirable as these projected reforms may be, their combined effect can at best do but little to relieve the situation. What has floored agriculture for many years past is the unprecedented and continuous fall of prices, which, according to the most distinguished economic authorities, has resulted from monetary causes. If this be a correct diagnosis of the disease, the remedy is plain. Obviously and incontestably it follows that the only real relief is to be found in a reform of the currency.

Experience With Subsoiling.

All the theories that fertile minds may evolve are less satisfactory than a well-determined fact from experience. The following letter, which we are permitted to copy, makes a clear statement of valuable experience. It should not be assumed that like results will follow the use of the subsoiler in every soil, but the facts here presented should not be lost sight of but preserved and compared with those derived from other experiences:

BURLINGTON, IOWA, December 10, 1895.
W. W. Wicks, Esq., Topeka, Kas.:
DEAR SIR:—My experience during the past season with the Perine subsoil plow is most satisfactory, indeed. My farm is near Plainville, Kas. In the fore part of April, the ground was plowed about six inches deep, and the subsoil plow, pulled by four horses, followed the common plow, and in the bottom of the furrow. Was put down about eight inches below the first six-inch plowing. Soon after this subsoiling was done, two good rains came and the ground was in excellent condition. Alongside of this, however, was same kind of land plowed six inches deep but not subsoiled. In the latter part of April, this ground, both subsoiled and not subsoiled, was planted to corn, and during the season it all seemed to grow alike, and we thought nothing had been gained so far by the use of the subsoil plow. But the test came in the month of August, when the hot weather was very severe and no rain for three weeks, prematurely ripening the greater part of the corn. We still saw no material difference. Later on, when the husking was being done, it developed that the yield on the land which had been subsoiled was forty bushels to the acre, and on the land not subsoiled, twenty-five bushels per acre. The difference was found to be in the length of the ears.

This land is now all in wheat and looking well. Next year will be a better test of the real value of subsoiling land for general farming purposes.

We had another most valuable experience with trying alfalfa on the same farm—this farm all being flat tableland. Five acres was seeded to alfalfa in the following manner: The ground for three acres was subsoiled fore part of April and had two good rains before seeding. The two acres adjoining was subsoiled first week in May and then the whole five acres carefully harrowed and the alfalfa drilled in, about one-half bushel to the acre. About a week later the three-acre part came up perfectly and made a good growth during the season, being clipped twice. The two-acre part, having no rain after subsoiling, came up a poor stand, right to a straight line where it adjoined the other, and while the three acres is in good condition entering the winter, the

two acres is probably so near a failure that it will have to be plowed up and planted to other crops. This shows the life-giving power to land subsoiled and afterwards filled with moisture, over the land subsoiled after the rainfall, and where evaporation had consumed a great portion of the moisture because it lay so near the surface.

I have two subsoil plows now and I shall need two more for my work next year. I believe it pays, in two ways, to subsoil all the land farmed—the increased amount of crops, and the greater certainty of raising a crop. It increased the value of my crop this year \$2.25 per acre, with corn at 15 cents per bushel. L. C. MUDGE.

He "Bulled" the Wheat Market.

At the corner of Broadway and Wall street, says a recent writer, a man accosted me the other day with an inquiry for the nearest police station, and, of course, I asked him what was the matter. He was mournful rather than mad, and not a bit excited as he answered:

"Wall, I guess I don't want the police station after all, though somebody ought to be arrested. I went down in Wall street about two hours ago, thinking I'd speculate. I've heard and read of Wall street so much that I thought I'd try my luck."

"So you went to a broker's office?"
"Noap. I don't know nothin' 'bout brokers. I walked up and down fur awhile and then got my eye on a sharp-lookin' young feller and made up to him and asked:

"'Young man, can you tell me whar I can put up \$10 on the wheat market?'"
"I kin," says he. 'Jest gimme your money and I'll buy ye a thousand bushels.'

"I gin him the money and we stood around fur awhile, and then went into a place to look at what they calls a ticker. Arter he'd looked the young man said:

"'Ole man, she's broke five p'int, and you are closed out. She's sure to turn, though, and you'd better put up another five.'"

"And you did," I asked.
"Wall, yes. I put up another five, and the market went up and I cleared \$3. Then she went down and I lost the hull thing. Then I got kinder excited and put up \$15 all at once. In about five minutes the young man said if Chicago kept out of the deal I'd make a cool hundred. Five minutes later Chicago jumped in and I lost my fifteen."

"And then you quit?"
"Wall, yes. That is, the young feller asked if I had any more money to bull the market with, and when I said no, he did the quittin'. I was lookin' around for him when a man told me I'd been swindled. I was mad nuff to bust at fust, but I guess I won't do nuthin' about it. I've seen Wall street. The lamb has met the lion and the lamb wasn't in it!"

"But the experience will be valuable to you."

"Yes, she will. Jest about the time I realized I'd bin swindled a feller cum along and asked me where Broadway was and I hauled off and knocked him head over heels down a basement! You bet they don't git ahead of me again in this town!"

Wintering Cattle on Millet Straw and Sorghum.

C. B. V., Hutchinson, Kas., writes Prof. Georgeson: "I would like to know the feeding value of millet straw for cattle, also sorghum. Do you know of any one wintering cattle on this ration? Have you published a bulletin on this?"

It is possible to winter mature cattle on millet straw and sorghum, but you cannot expect them to lay on any flesh on this ration. If sheltered and the winter is moderate they may hold their own on it. But young stock should not be wintered on such poor feed; they must be kept growing or they will become stunted. Give them some grain in addition. We have published nothing on the subject of your inquiry.

C. C. GEORGESEN,
Agricultural College, Manhattan.

COUGHS AND HOARSENESS. The irritation that induces coughing is immediately relieved by using "Brown's Bronchial Troches." A simple and safe remedy.

THE OLDEST AND THE BEST

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



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

AYER'S

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

AYER'S Cherry Pectoral

Awarded Medal at World's Fair.

AYER'S PILLS Cure Liver and Stomach Troubles.

The Udder Not a Vessel.

Major Alvord, in a paper given to the Maine Board of Agriculture, says: "The udder should not be likened to a vessel, a 'bag,' or even a sponge. It does not hold any appreciable quantity of completed milk at any one time. The milk cisterns, where alone completed milk can be found in the udder, and this of very poor quality, are quite small, the four together seldom holding more than a pint. The glands, between the milkings, bring together the materials, store up a considerable quantity of the serum or fluid portion and prepare to make the milk. In the cells of the udder the fat globules are formed. They are parts of the anatomy of the cow, like the fat in the other parts of the animal body; they form by the building process, ripen, loosen or slough off and are then moved along, floated by the serum, through the ducts and channels to the cisterns. The final process, the mixing of fats and serum, in due proportion, to make milk, occurs almost wholly during the active operation of milking. The distended udder may indicate that the cow is ready for milking, but it is not true that 'the udder is full of milk.' There is practically no fully-formed milk in the udder when the teats are seized by hand or calf. The milk-making by nature is coincident with the act of milking."

\$100 Reward \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer one hundred dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75 cents.

Santa Olaus

has induced the Nickel Plate Road to sell excursion tickets at very low rates to all points on its line between Chicago and Buffalo during the holidays. Tickets at one and one-third fare for the round trip. Special excursion dates December 24, 25, 31 and January 1, good returning until January 2. For further information, address J. Y. Calahan, General Agent, 111 Adams St., Chicago, Ill. 118

Business Chance--A Good Income!

We pay you to sell fruit trees. Stark Nurseries, Louisiana, Mo., Rockport, Ill.

Rheumatism positively cured by Kidney-kura. We guarantee it. See advertisement.

The Stock Interest.

HANNA'S HOGGOLGY.

EDITOR KANSAS FARMER:—It occurred to me that I might answer your Hoxle correspondent, and assist others.

Always change feed gradually. Always feed your poorest feed first when the animal is hungry in the morning, reserving the best until the last part of the day, or last part of the feed. A mixed diet is as much a necessity to a hog as to man. You might as well expect a man to thrive alone on baked beans 365 days out of the year as to feed a hog corn the same way. Vegetables, grass, milk and corn are the bases or nature's food for a hog, and probably there is no better substitute in a properly balanced ration. Corn alone is binding—about one-seventh, as near as can be ascertained. This must be corrected in feedings and there are various ways to do it. Most farmers do it by greasy house-slop feeding, aided by bran and shorts. The "swill pail breed" is a wonderful, prosperous and profitable breed, and its pedigree runs many generations back. Dry corn and water seems very favorable to the development of worms, which are the great pest of the hog. The hog don't thrive and your feed and profit is wasted. His ears begin to lop, the curl straightens out of the pig's tail, the coat begins to stare. He coughs and his ignorant owner fears the cholera. A mixture of salt, ashes and sulphur should constantly be kept in a convenient trough. These and a thousand other things too numerous to mention are necessary to be known.

But now winter is here. What shall we do now? First, remember it is almost as necessary to fodder a hog as any other animal. When they follow feeding cattle they nearly always thrive, except from overfeeding or disease. They are then salted, foddered, and nearly have a warm, ground, cooked ration. Learn from this to study the cause. Regularly salt, feed and water the hog. In winter he must have vegetable food. Clover or sorghum with corn helps to form a balanced ration. So clover with ground wheat causes hogs to flourish, while without vegetable food, many have condemned the wheat as a feed because they knew no better than to feed it alone. So the writer's experience is, if you feed bone and muscle food and balanced ration and as much as possible a mixed diet, you can accomplish the best result.

The soldier replied that he liked beans occasionally, but he didn't like them 365 times a year. Some hogs as now fed, methinks, could reply in a similar manner with regard to corn, and yet corn with a mixed diet has no substitute as a base for feed, as a cheap and fattening food, but hogs fed exclusively on it have little bone or muscle, while the owner blames the hog.

We believe there is more fat and nourishment grown per acre with a crop of sorghum than any other known food. We are not guessing in any of this experience. Unless we have an experience of years producing similar results we would not give a fig for experiments. Experience born of one or two trials is not profitable, hence we can't speak with regard to the alfalfa. But we remember that we have heard ten farmers praise it to one condemning it. In eastern Kansas, where we raise three tons of red clover per acre, the hog gets it winter and summer. But with the vegetable food he is expected to get four or five ears of corn a day at the very least, as a necessity. If he is a high-grade or a thoroughbred, you can keep him in fair breeding order, but you can feed an "Injun hog" fifteen ears a day and he will trot it all off.

My last experiments: I take my pigs out of clover field and the mast in the woods. Confine in large pen first, then in a smaller one. I feed U. S. condition powder daily, constantly increasing corn ration. I feed apples, raw potatoes, ground oats and corn soaked in house slop, feeding five times a day. The seventh week I feed nearly pure corn and slop, and have thrice thus put

on an average of three pounds of pork a day, and they are then ready for the table in one month, from very thin hogs to start with. I have never succeeded well with hogs without grain for a base of feed. W. S. HANNA. Ottawa, Kas.

Cattle Raising in Western Kansas.

EDITOR KANSAS FARMER:—It is nine years since I came to Edwards county, with considerable money and no experience as a farmer, with the expectation of raising cattle as a means of livelihood. My failure to achieve the end in view was due, largely, to inexperience, and accurate information at the time of my coming was not obtainable. The country at that period was full of speculators who misled those who fell into their hands.

The profit in cattle-raising at the present time leads me to infer that some will embark in the enterprise in this region in the near future, and I write for their benefit.

Eight or nine years ago land was uniformly held here at \$10 per acre. It is now valued at \$4 per acre. Houses are purchased in the over-built adjoining towns at nominal prices and moved on wagons at small cost. More than a dozen such houses have come into this township during the past year. Horses are very low. Fine teams can be bought for from \$100 to \$125. Hogs are cheap—about \$3.50 per hundredweight. Steer calves are in demand at \$10. Long yearlings about \$18. Cows and helpers are lower. I am feeding 100 head of two-year-old steers, furnishing feed, salt and shelter for that sum, which yields usually \$1.25 per head for five months. I raised for this purpose eighty acres of fair corn and twenty acres of sorghum. The yield of both crops was unusually good. I feed daily six shocks of corn fodder, with the corn on it, and from 1,500 to 2,000 pounds of sorghum. The cattle are doing well on this feed, but the best manner of wintering stock is to feed daily twelve shocks of corn fodder to 100 steers and to give these free access to a rack containing wheat straw. Sorghum is not a proper food in cold weather. Millet is good as a change, and a new fodder plant called Kaffir corn excels all others, it is said, for milch cows. My fodder shocks contain about 256 hills of corn each. The cattle should be followed by about twenty-five young hogs, which fatten on the waste material. Cattle fed in this manner come out in the spring in excellent shape and fatten readily on the excellent buffalo grass. We feed from November 15 to April 15. Cattle are pastured at 25 cents each per month, so it is easy to figure the cost of a steer. If we were sure of obtaining the steers, a thousand head could be wintered in this township at \$1 per month each.

This is a fine country for hogs, as cholera is unknown here. The low prices of horses has largely stopped the breeding of mares.

Corn is worth 15 cents per bushel, and some is being marketed at that figure, but a vast quantity is stored in cribs for an advanced price, and the country contains great quantities of rough feed, such as sorghum and millet.

It is not unusual for a farmer to put in from 100 to 500 acres of wheat, but the yield for the past two years has been light and the price low. Wheat should be sown in September to obtain best results, and the finest crops are obtained from that sown on sod.

One great trouble is the effort to do too much with the staple crops, such as wheat and corn. We have an abundant supply of water easily accessible by the driven well and windmill. Some few people have constructed fish ponds and use the surplus water to irrigate a garden, but the great majority of us live at the store. The man of family who will keep cows, hogs, poultry, fish and raise a garden, can live well at small expense, and to make this a prosperous country numbers of such persons are needed rather than ranches of great extent. All the crops, as well as horses, cattle and hogs, fluctuate greatly in price, and the keen pressure of debt affects so many of us that we are unable to depart from the old beaten paths of industry. H. B. A.

Belpre, Kas., December 9, 1895.

Kansas Swine Breeders' Association.

A letter from President R. S. Cook desires public notice given to the effect that he is expecting a very large and interesting meeting at our Swine Breeders' Association, next month, and invites the hearty co-operation of all interested in the industry, whether they be members at present or not; also requests that as many parties as possible bring subjects for the score-card to a place provided by the Secretary, where the practice can be carried on for the benefit of all. Those sending swine for this purpose will please notify me in time.

Owing to the pressure of time and other duties, I have had to arrange a program without consulting any of the parties called on, but have endeavored to enlist in the service well-broken, capable men, who I know will not "kick over the traces," but "jump into the collar" and help pull us along.

Through the courtesy of Messrs. Hankla Bros. we have been offered the free use of their parlors in the National hotel (where our breeders' meetings will be held), located at the corner of Seventh and Kansas avenue, in the rear of the First National bank. The meeting will commence on Monday, January 6, at 4 o'clock p. m.

The following is the program: President's annual address, R. S. Cook; "Why I Breed Chester Whites," John Kemp; "Advantages of Pure-bred Swine for the Farmer and Feeder," James Mains; "What I Know of Berkshires," J. S. Magers; "Swine Plague and Cholera—Sanitary Suggestions," W. P. Brush; "The Poland-Chinas—Eight Months of Pig Life," J. R. Killough; "Swine Diseases and Treatment—Other Than Cholera," H. L. Leibfried; "Is Fattening for Show Detrimental for Breeding Purposes?" Geo. Bellows; "The Bacon Hog for the English Market," H. B. Cowles; "How I Got That '\$999' from Pure-bred Swine," A. W. Themanson; "Condition and Care of Sow at Farrowing Time," Willis E. Gresham; "Public Swine Sales," general discussion led by Col. S. A. Sawyer and Col. Eli Zimmerman; Experience meeting—all present—G. W. Berry, Jr., leader.

O. P. UPDEGRAFF, Secretary.
433 Topeka Ave., Topeka, Kas.

The Berkshire Year Book.

The American Berkshire Association has favored the FARMER with their 1895 "Year Book," which is not only a very handsomely printed volume, but its contents furnish a world of information of interest to every breeder of swine. The year book is profusely illustrated with handsome, full-page portraits of well-known breeders of swine residing in the States of Alabama, Arizona, California, Georgia, Illinois, Iowa, Kentucky, Louisiana, Michigan, Missouri, Nebraska, New Hampshire, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington, West Virginia and Wisconsin. Full-page illustrations are given in the year book of many of the most popular sires and noted prize-winners exhibited at the World's Columbian Exposition and the leading State fairs.

The year book contains statistics and other information not elsewhere published of special importance to every farmer and breeder interested in the Berkshire or any other breed of swine.

This very complete volume contains not only the names and numbers of the boars and sows composing the breeding herds of the leading breeders of each State, but the names and numbers of boars and sows sold by said parties during the previous year, and names of purchasers of same. The list of names of boars and sows recorded in the American Berkshire Association that were awarded first or sweepstakes prizes at duly organized county, State or provincial fairs as published in the year book prominently places before the public the best specimens of the breed in the several States and widely advertises the owners.

The Berry prize essay on the "Berkshire Hog," published in the volume, will be read with great interest, and a careful examination of the many good

Shoe - and

harness-leather wear long, do not crack, with Vacuum Leather Oil. Get a can at a harness or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swob, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

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.

points made by the author, Mr. C. Fred Boshart, for the Berkshire will be heartily indorsed.

Up-to-date items of special interest, contributed by the most prominent and successful breeders of swine, constitute one of the leading features of the year book.

The treatise on the many diseases of the pig constitute twelve chapters in this volume, and will be of great value to every farmer and breeder of swine. Dr. McIntosh, the author of the exhaustive treatise on the various diseases of the pig, has demonstrated in said chapters the claims of leading veterinarians and swine breeders that he is an eminent authority on symptoms and treatment of all the ailments of swine.

The year book will be a very popular work with the housewife, as it contains the best obtainable methods for curing and cooking pork products, salting, smoking hams, bacon, making sausage, etc.; also recipes for rendering lard, seasoning sausage, and the various ways of cooking and serving all kinds of pork products for the table.

The year book is the most complete encyclopedia of useful knowledge for the swine breeder, the housewife and the general farmer that we have seen, and can but prove a popular work at the low price of \$1 per copy, postpaid. The volume referred to may be had upon application to Charles F. Mills, Springfield, Ill.

Important to Breeders.

Every one interested in improved stock should have the *Breeder's Gazette*, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one—both papers one year for only (\$2) two dollars; or we will supply the *National Stockman and Farmer*, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50. Send for sample copies to the papers direct, and save money and get a big benefit by sending your subscription to KANSAS FARMER, Topeka, Kas. No progressive farmer or breeder can afford at this low price to be without this great trio of farm magazines.

Dorset Horn Sheep Breeders' Annual Meeting.

EDITOR KANSAS FARMER:—The next annual meeting of the Dorset Horn Sheep Breeders' Association of America will be held at the Iroquois hotel, Buffalo, N. Y., January 15, 1896, at 10 a. m.

The morning session will be devoted to the regular order of business.

The Executive committee will meet at 9 a. m., for the hearing of reports, etc.

At 2 p. m. addresses will be delivered by Wm. E. Kimsey, of Indiana, subject, "The Care and Feeding of Lambs;" J. E. Wing, Ohio, subject, "Dorsets, a Thought as to Environment."

M. A. COOPER, Secretary.

Washington, Pa.

A genuine ghost-story has yet to be attested; but not so a genuine blood-purifier. Over and over again it has been proved that Ayer's Sarsaparilla stands alone among medicines as the most reliable tonic-alternative in pharmacy. It stood alone at the World's Fair.

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A 16 page monthly 25c per year.
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Irrigation.

SUB-IRRIGATION.

EDITOR KANSAS FARMER:—It is settled beyond question that irrigation is practicable in western Kansas, and that the most abundant and reliable source of water supply is that pumped from the underflow. Ditch irrigation will always have a place in Kansas, but a place secondary to that of irrigation by water secured through the agency of wind power.

The best method of applying the water to the soil, especially to the finer-textured soils that are now being brought under irrigation in Kansas, is still a matter for earnest consideration and discussion. Very few irrigators know of any other than surface methods of irrigation, and sub-irrigation is practically little known or understood in Kansas.

Sub-irrigation has been tried in sandy or gravelly soils in some Western States, and found impracticable, because the soil was too open and the water passed from the pipe down through the porous subsoil and became lost in the drainage. The soil, by reason of its porosity, lacked capillarity to spread the water laterally or bring it nearer the surface. Tile was used in California to sub-irrigate orchards, and while very satisfactory for a time, was finally condemned because the roots of the trees filled the tile and stopped the flow of water. The knowledge of these facts in the possession of those who have been the strongest advocates of irrigation during the past three or four years, would naturally lead them to condemn the system.

It is well to know, however, that Kansas is giving the sub-irrigation system a fair test, on its own soil, and this paper is written to give this method as now being used in Osborne county, and some of the results.

The favorable geographical position of this portion of Kansas, its cheap lands, delightful climate and very fertile soil makes it a most promising field for irrigation, to the extent of its water supply. Experts advise us that 5 to 10 per cent. of western Kansas can be irrigated. So long as the area of rich farming land is in excess of the available water supply, the method of using the water to get the greatest service out of a given quantity will continue to be an important one. If the service of the available water supply can be increased 10 per cent. over present methods of using it, this is equivalent to finding 10 per cent. more of available water.

Sub-irrigation is not adapted to all soils, nor to all conditions, when considered from an economic standpoint; but for any system of gardening or the more valuable field crops, it has proven a profitable investment in the first two years of its trials in Osborne. The success attained has far exceeded all the claims and hopes of those who first advocated it and put it to the test.

Very sandy lands are not adapted to sub-irrigation because the water drains away too rapidly and will not spread laterally. A fine-textured soil, containing silt or clay mixed with fine sand, is the best. This has great capillary power and the water spreads about as readily up from the tiles, or laterally, as downward. There should be no coarse sand or gravel or loose formation that would act as a drain nearer than three feet from the bottom of the tiles, and it is better if the subsoil for a great depth is of a clayish or silty formation. In such a soil, which is constantly being fed with water from the tiles, fifteen to twenty inches below the surface, ideal conditions for plant growth are maintained and the fullest service of the water secured.

It is impossible to irrigate by the surface method in summer months without a loss of at least one inch of water over the entire surface irrigated. If only one inch is applied when the earth is quite dry, it will not moisten the soil over three inches from the surface, and all will be lost in the air within two or three days. If three inches of water is applied at once, at least one inch is lost during the period elapsing between irrigation and culti-

vation, and in the process of cultivating the top two or three inches to secure a dry soil mulch for the protection of the remaining two inches. Our July temperatures will take an inch of water from our freshly-moistened soils in less than three days. On the other hand, when water is applied fifteen inches below the surface, the dry surface soil which acts as a mulch, and limits the evaporation by sun and wind, is not disturbed. The water is distributed through the subsoil, which, being kept uniformly moist, is always in highest capillary condition to carry water laterally or upward toward the surface. The entrance of the air to the soil is never excluded at any time by surplus surface water, except during heavy showers of rain, and the conditions of the soil as to air, water and temperature are more nearly constant than under any other system, and uniformity is the highest desideratum in plant growth. It invites also deep rooting, does away with the slow, muddy surface distribution, unsightly ditches and embankments, which are prolific weed-breeders. No rubber boots are needed. It is not necessary to stay up nights to see that the water does not break out of its proper channels and destroy crops, nor to strike furrows between the vegetable rows to confine the water. There is no difficult engineering required to lay out the grounds. Injury to vegetation is obviated on the lands over-charged with alkali, which in Kansas is largely due to carbonate of soda, which surface irrigation attracts to the surface, where it collects in form of white incrustation in such quantities as to seriously injure and indeed kill many plants, and is also a great factor in baking and cracking the soils. But, on the other hand, in sub-irrigation it is held below and diffused through the soil, so that it becomes a fertilizer. This partly accounts for the remarkable yields of vegetables under this system of irrigation. By the deep culture which it makes possible, much greater quantities of manure can be used, which at low, moist depth does not produce such rapid fermentation as it does at the surface, obviating the damage of burning.

By no means the least advantage is the saving of labor, over surface irrigation. Cultivation after each application of water is not required under this system to keep the surface dry and dusty—a most perfect mulch and death to weeds. Making the earth the reservoir, the expense of ponds and waste of land is dispensed with. Pumping can continue all winter, utilizing the power developed during the months when the highest winds prevail.

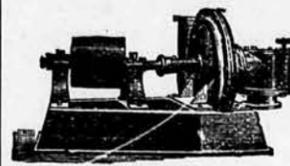
Surface irrigators claim that the well-being of plants is conserved by the reduction of the earth temperature which is produced by evaporation. Do not be deceived by that fallacy. Giving up water to cool the ground, is giving up the life of the plant. It is very questionable as to whether any advantage is gained by evaporation. Many of the most beautiful and prolific spots of the world have been made so by the application of water, they being surrounded by burnong sand on which the temperature rises as high as 160° F., and the line of demarkation between sand and garden as sharply defined as if cut by a knife. In fact, if there is plenty of moisture at the roots, the growth of the plant is more rapid because of an increased amount of water laden with plant food being drawn up by the wind and heat.

If they bears us out in the above position, actual experience also verifies it. My experience last year (1895) was with two plats of ground, one sub-irrigated and the other surface irrigated. After a few days of hot winds, both would show the ill effects somewhat, but in a day or two after the cessation of the wind, it was difficult to see any bad results in the sub-irrigated plat, but the surface irrigated plat never did recuperate, and indeed the results were very discouraging.

The greatest objection to sub-irrigation is the expense, which can probably be offset by the fact that the pumping plant will do the work of two or three similar plants in surface irrigation, leaving the expense of the extra mills



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and wells to be credited to tiling. The tile can be manufactured as cheaply as brick, and by starting local plants freights are obviated.

There is no danger of the water freezing in the tile so as to burst them, as many have feared, because the ground is porous, and when the frost congeals the interstitial water, the particles of soil are pushed asunder by the expanding ice, and the earth, taking on a specular form, leaves it more porous than before the freezing, and in addition the cracking of the soil serves to take up a large amount of water. The temperature of the well water, also, being much above the freezing point, thaws the surrounding soil, all of which was demonstrated with us last winter. While the pumps were running the thermometer was ranging many degrees below zero. The physical effect of the freezing on the soil, at these lower depths, is very beneficial in putting it into a finely comminuted condition, setting plant food free and favoring the deeper rooting and nourishing of plants.

The objection in tree culture can be overcome by using porous tile, cementing at the joints. In the application of the above principles any finely comminuted alluvial soil having clayey base will do; ordinarily second river bottom and all of creek bottom. Common drain tile three inches in diameter, by twelve inches in length, are the kind in use here. We lay them closely, end to end, in level ditches fifteen inches deep, and pour cement over the joints, which runs to the ground, leaving a small aperture at the bottom. The object in doing this is to hold the tile firmly together and prevent the ingress of dirt.

For vegetables, it is well to lay them in sections of from five to ten rows, so as to give complete control of each plat of land, which will enable the gardener to water any given vegetable, more or less, according to its wants at any stage of development.

These sections are watered from a main pipe of glazed tile, which can be procured four inches in diameter, two feet long. The joints are cemented, making them water-tight. Elbows are put in, one for each section, and run into a ten-inch well-curbing tile, having perforations on opposite sides, so as to connect with the main tile and one of the sections. The cut-off is a wooden plug.



The distance between the rows of tile depends on what is to be irrigated. In gardens they should range from ten to sixteen or twenty feet, the closer rows for shallow-rooting and delicate plants, the wider for deep rooters, such as carrots, beets, parsnips, etc.

In orchards one pipe line between the trees is usually sufficient, and for

many years the ground over and adjacent to the rows of the tile could be utilized for small fruit, they being benefited by the fruit trees breaking the winds.

Osborne county has had two years experience in sub-irrigation. During the first summer (1894), one of the most disastrous seasons that we have ever experienced, a few individuals put from fifty to three hundred feet of tile in their gardens. The results were beyond the most sanguine expectations. Among these pioneers was a grocer, Andrew Linn, of Osborne, an unbeliever in the practicability of irrigation, but converted that season into an enthusiastic irrigator and a public benefactor. He boldly entered an unknown field, spent hundreds of dollars, and made a glorious success. This spring he put in a plat of two and a half acres. One-half acre was planted to small fruits, the remaining two acres being cultivated to vegetables, from which he realized \$600. This success was so gratifying as to induce him to extend his plant still farther, and this fall (1895) he tilled one acre more, making his whole plant three and a half acres. In illustration of the great yields under this system it is well to mention results of a few vegetables. Mr. Linn tells me that he raised at the rate of fifty-five tons of beets and 800 bushels of onions per acre. His conclusions are that for edible roots there is no system that equals sub-irrigation.

The disposal of sewerage in country places has been a problem that has never been satisfactorily solved. The cess-pool is expensive, filthy and often dangerous to health. To overcome these objections, I put in 150 feet of tile thirty inches deep, connecting my waste-pipe with this tiling. It served the double purpose of irrigating a garden and taking place of a cess-pool, doing away with all the objections stated. It performs the functions of a cess-pool most satisfactorily. The garden tile used was very small, but the results were so satisfactory that I extended my plant this fall. In fact, this is true of all who have been using the system, and many new plants are being put in besides.

Public opinion in two short years has been revolutionized, and all who have had experience with tile or observed their neighbors' success are its strongest advocates.

E. M. HUDSON, M. D.
Osborne, Kas.

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20th and Main Sts., Kansas City, Mo.

IRRIGATION.

When you write mention Kansas Farmer.

Gossip About Stock.

J. S. Magers, breeder of Berkshire hogs, Arcadia, Kas., reports his herd in the best of condition, also splendid inquiry, although several orders have been cancelled on account of cholera striking the locality of the orders, making them afraid to bring in fine stock.

Those desiring some high-class English Berkshire swine would do well to consult the announcement of Mr. W. B. Vanhorn elsewhere in this issue. He offers a strong lot of animals that are bred in the purple—in fact, no better can be found anywhere. Consult his advertisement and write him for particulars concerning them.

Deltrich & Gentry, Richmond, Kas., report that they have just sold a very fine boar of April farrow to C. T. Zimmerman & Co., Cameron, Mo., to head their herd. They consider him the best \$50 pig (the price paid) they ever sold and had bred two of their best sows to him before selling. They predict those popular breeders will make a good record for him.

Our live stock field man reports a visit, last week, in company with ex-Governor G. W. Glick, at the farm of J. A. Walter, that lies near Shannon, Atchison county, Kansas, where they found a first-class herd of pedigreed Poland-China swine, headed by Cuffie, a yearling son of the noted sire, Chief I Know, and a younger son of the prize winner, Chief I Know Jr. The visitor finds a strong, toppy lot of brood sows and eight young boars, also thirteen gilts ready to go. Mr. Walter has made quite a string of sales and is pleased with his season's success. His 'ad.' will appear later on in the KANSAS FARMER, and the merits of his stock more fully made known to the readers of this paper.

Bailey Bros., Wichita, Kas., report the Royal herd of Poland-China hogs and Barred Plymouth Rock chickens in excellent condition, with a few more choice hogs and cockerels, also two yearling birds, one of which received first premium in pair at the State fair this fall. This bird is an excellent breeder. Will dispose of him, as they cannot use him. Will not be able to furnish any more pullets, but can furnish a few cockerels that are good enough for any one. They received second premium on yearling hog at State fair this fall and he had not been fitted for show. Have a nice lot of young stock sired by this grand hog that they are selling below par. Have about fifteen good males that would do some one good.

Mr. T. A. Hubbard, of Rome, Kas., will hold a public sale of Poland-China and Large English Berkshire hogs, at his farm, adjoining Rome, on December 24, 1895, commencing at 12 o'clock sharp. He has on the farm fifty head of males of all sizes and about 100 sows, and expects to put about 100 head in the sale. His hogs are in the pink of condition, and are smooth and well-bred. His sale is held late in order that all his sows might be safe in pig, and that those attending it might take advantage of the holiday rates which railroads make. Ten or twelve months' time will be given on approved notes, and the sale will be held under cover. Those wanting males or sows for immediate use can buy them of him now at private sale, as he has a great many more hogs in his herd than he will want to make up his offerings with.

Our field man made a day's visit, last week, at Shannon Hill stock farm, near Atchison, Kas., and reports the herd of Short-horns in excellent condition. An elegant lot of two-year-old and yearling heifers are seen by the visitor and a strong, broad-backed, deep-flanked lot of twenty-four young bulls sired mainly by the great, mellow, sappy roan beef bull, Winsome Duke 11th 115137. They are a most pleasing sight and worthy the attention of all Short-horn breeders. Ex-Governor Geo. W. Glick, of Atchison, Kas., the owner, thinks that it is the best lot of youngsters yet bred on the farm, and Mr. Wm. L. Chaffee, the manager, takes pleasure in entertaining visitors and prospective buyers. Write him for free copy of their herd catalogue, one of the best Short-horn "little books" ever issued in the West.

Geo. W. Null, Odessa, Mo., writes: "You can tell your readers that the FARMER has sent me some good buyers, and I still have as fine a lot of young boars ready for service and pigs from 8 to 4 months old as I ever raised. My herd is in first-class condition. The grand old herd king, Lail's Victor 4298, is hale and hearty and as nimble as a pig. My grand yearling boar, Null's King 13517, is one of the best yearling boars I ever saw, and expert judges say he is one of the coming hogs. I have recently bought the 1,000-pound boar, Commonwealth 15701, making Elm Lawn the home of the biggest Poland-China boar and sow on the continent, namely, the 1,000-pound sow, Miss Lord Corwin 28498, and the 1,000-pound boar, Commonwealth 15701. I have mated these two monsters for February litter. This is the largest coupling, to my knowledge, in the Poland-China breed. I have upwards of 100 thorough-

bred Poland-Chinas and some good Chester Whites and am breeding thirty as fine brood sows as one could wish to see for spring pigs. I am better prepared to fill orders than ever. Also have a handsome lot of prize-winning Barred Plymouth Rock, Light Brahma and Cornish Indian Game fowls, that I will sell very low, considering quality of birds. I also have some better-bred Holstein bull calves, and one coming 2 years old and one yearling bull, such as Sir Hartog Twisk and May Overton's Sir Henry Mechtchilde 2d, and others. Everything the best of its kind, and will sell at prices to suit the times."

Publishers' Paragraphs.

Ohio farms may be all right, but you will notice in the "sale column," on sixteenth page, an offer to trade an Ohio farm for good Kansas land and "pay boot" besides. No doubt many Ohio farmers would be happy to trade for a good location in "sunny Kansas."

SMITH'S LATEST LIST.—B. F. Smith, of Lawrence, Kas., has a new and enlarged advertisement in this issue, of his latest price list and catalogue. Mr. Smith is considered the largest supplier of strawberry plants in this country. He has had thirty years experience in the berry field. He considers the outlook for 1896 as very bright and will have two million strawberry and half million raspberry plants. Write for his price list.

IMPROVED TREE PROTECTOR.—The Hart Pioneer Nurseries, of Fort Scott, Kas., are now supplying a device for protecting trees from rabbits and grub worms. This protector, which they warrant to give satisfaction, is made from a wood veneer three-thirty-seconds inch thick, the ground end is saturated with a vermin and worm-proof mixture, of which coal tar is the basis. This preserves the wood, also prevents the deposit of insect eggs. During the meeting of the State Horticultural Society Manager Schell took a great many orders, as they are considered the best and cheapest protection for fruit trees on the market.

Kansas Patents.

The following list of patents is reported through the Kansas City office of Higdon & Higdon, Patent Lawyers and Solicitors, Diamond building, Junction Main and Delaware streets, granted to inventors living in Kansas, the week ending Tuesday, December 10, 1895:

- W. J. E. Carr, Leavenworth, coal-mining cutter-wheel.
J. P. McGuire, Atchison, safety pocket.
W. R. McNutt, Woodston, wire reel.
F. F. Rlohey, Topeka, device for adjusting the beat of clock pendulums.
A. Yates, Yates Center, gate.

A Great Chance to Make Money.

Mr. Editor:—I read how Mr. Jones made \$15 a week. I have a better job taking orders for the new specialties and fancy articles in aluminum, rein hooks and rings for harness, sign letters and figures for houses, stores and vehicles. They are simply elegant, shine at night; aluminum is a great talker. I sell for World Manufacturing Co., Columbus, Ohio; they make family fire-proof cases, electric goods and many good sellers for agents. I made \$27 first week; \$39 second, first month \$172. Goods are catchy; good, honest firm, light, easy work, any one can get a job by writing them. J. EVANS.

Mower Bros., Lost Springs, Kas., said: "The Berkshires we got of you last year did so well we want some more." Result, more sales to them. Don't you want some? Will sell cheap and guarantee satisfaction. Write O. P. UPDEGRAFF, Topeka, Kas.

VETERINARY SURGEON.

DR. U. B. McCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

LIVE STOCK AUCTIONEERS.

Live Stock Auctioneer, JAS. W. SPARKS, Marshall, Mo. Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

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

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

"KNOW THYSELF."

"An Ounce of Prevention Is Worth a Pound of Cure."

These two mottoes have been the guide and life work of the distinguished Dr. Hartman, President of the Surgical Hotel. He has written more to teach the people how to prevent disease than any other living writer. He says the month of December is the most dangerous of the year. In this month cold weather begins. Colds, coughs, sore throat and hoarseness, all of which are sure to set up chronic catarrh or consumption, are acquired in this month more than any other. Thousands upon thousands begin their downward road from health to disease and death in this month.

The doctor has had a life-long experience with Pe-ru-na in the prevention of these affections. Not only has he prescribed it for a vast multitude of people, but this remedy has been his constant shield through his many years of travel and active profession. A bottle of Pe-ru-na, rightly used in the family at this season, is of value untold. Pe-ru-na cures catarrh, cures colds, cures coughs, cures la grippe, cures all diseases due to catarrhal congestions of the mucous membranes lining the head, throat, bronchial tubes, lungs, stomach, kidneys and pelvic organs.

Dr. Hartman's latest book on catarrh and diseases of winter will be sent free for a time by the Pe-ru-na Drug Manufacturing Company, Columbus, Ohio.

The Solid Through Trains

of the NICKEL PLATE ROAD, equipped with the most modern constructed day coaches and luxurious sleeping and dining cars, illuminated throughout with the famous Pintsch gas lights, and colored porters in charge of day coaches, are some of the features of this popular line that are being recognized by travelers seeking the lowest rates and fast time. J. Y. Calahan, General Agent, 111 Adams St., Chicago, Ill. 116

Harper's Weekly IN 1896.

HARPER'S WEEKLY is a journal for the whole country. It deals with the events of the world that are important to Americans.

In carrying out this policy, in 1895, JULIAN RALPH visited China and Japan, and journeyed through the West; RICHARD HARDING DAVIS took a trip through the Caribbean Sea; the evolutions of the new navy were described and illustrated by RUFUS F. ZENGAUM; FREDERICK REMINGTON presented studies of Army and Frontier life; POULTNEY BIGELOW attended the opening of the Kiel Canal.

In 1896 like attention will be given to every notable happening. The chief events in art, literature, and music and the drama will be artistically presented. W. D. HOWELLS, in the new department, Life and Letters, will discuss in his interesting way books and the social questions of the time. E. S. MARTIN'S sprightly gossip of the Busy World will be continued. The progress of the Transportation Commission around the world will be followed, and CASPAR W. WHITNEY will conduct the department of Amateur Sport.

In 1896 will occur a Presidential election. In its editorials and through its political cartoons the WEEKLY will continue to be an independent advocate of good government and sound money.

In fiction the WEEKLY will be especially strong. It will publish the only novel of the year by W. D. HOWELLS, and a stirring serial of a Scotch feud, by S. R. CROCKETT. The short stories selected are of unusual excellence and interest. In every respect HARPER'S WEEKLY will maintain its leading place in the illustrated journalism of the world.

The Volumes of the WEEKLY begin with the first Number for January of each year. When no time is mentioned, subscriptions will begin with the Number current at the time of receipt of order.

Remittances should be made by Postoffice Money Order or Draft, to avoid chance of loss.

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has been in use since 1882. It is the pioneer steel mill. It has beauty, strength, durability, power; it is THE BEST, hence the mill for you to buy. Thousands have them! Our Steel Towers have substantial steel girts and braces—not fence wire. They are light, strong, simple in construction, much cheaper than wood and will last a lifetime. Our mills and towers are ALL STEEL and fully guaranteed. Write for prices and circulars. Address, mentioning this paper, KIRKWOOD WIND ENGINE CO., Arkansas City, Kas.

Experience

has proven conclusively that better grapes and peaches, and more of them, are produced when Potash is liberally applied. To insure a full crop of choicest quality use a fertilizer containing not less than 10%

Actual Potash.

Orchards and vineyards treated with Potash are comparatively free from insects and plant disease.

Our pamphlets are not advertising circulars booming special fertilizers, but are practical works, containing latest researches on the subject of fertilization, and are really helpful to farmers. They are sent free for the asking.

GERMAN KALI WORKS, 63 Nassau St., New York.

TOP SNAP, Extension 513, DOUBLE BROCHURE \$7.50, LEADER. GUNS BUY-CYCLES. Photo, sporting goods, Fishing Tackle, cheaper than elsewhere. Send for 60-page catalogue. POWELL & CLEMENT CO., 126 Main St., Cincinnati, O.

HENRY W. ROBY, M. D., SURGEON. Office 118 Sixth Ave. West, TOPKA, KAS.

PATENTS.

T. S. BROWN, Patent Attorney and Solicitor. Fifteen Years' Experience. 335 Sheldley Bldg. KANSAS CITY, MO.

Machine Work. Let us make your models, patterns and machines. TOPKA FOUNDRY, Cor. J. and Second Sts., Topeka, Kas.

A NEW BOOK FREE. It has 128 pages, is printed on fine book paper, it has hundreds of illustrations—wood cuts, zinc etchings. Its reading matter is interesting, as much so for a man as a woman, and the children also are not neglected.

The mere sitting down and writing for it will secure it for you FREE. Do you want it? If so, send your name and address to

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On HOUSEHOLD SUPPLIES of every kind. Is that not enough of an inducement for you to trade with a home institution? But that is not all, we not only save you about 25 per cent. in the cost of the goods, but WE PAY THE FREIGHT on all shipments within a radius of 300 miles. Ours is the Largest SUPPLY STORE west of Chicago, embracing 31 departments, carrying

Dry Goods, Clothing, Hats, Caps, Boots, Shoes, Hardware, Crockery, FURNITURE, Groceries, Notions,

and everything else needed in the home—the whole family should unite in making purchases of us, and if you can't come to the store, send for our handsome new illustrated catalogue, free, which gives the price of every article in the store. You need not hesitate to send your money to us, because we guarantee that every article is exactly as represented or we will cheerfully return your money to you. Our new line of

CHRISTMAS GOODS

is complete, offering many beautiful novelties not to be found elsewhere. In buying of us you get the best and save a big margin on each purchase—don't fail to write a postal card to-day asking for our handsome new catalogue—sent free by

Model Supply Store, TOPEKA, KANSAS.

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 HONEY OF A KISS.

When the cares of day are ended,
And my baby's prayer is said,
When he lies in peaceful slumber
In his little trundle-bed.
As I sit beside him listening
To his breathing calm and deep,
Comes the question that he asked me
Just before he went to sleep—
With the rosy lips a-tremble
And his laughing eyes a-light—
"Is there honey in the kisses
Of your little boy to-night?"

For I tell my little Louie
If he has been good all day,
True and tender in his speaking,
Kind and thoughtful in his play;
Just as in the fragrant blossom
Of the clover for the bee,
There is honey in the kisses
Of my little boy for me.

But a little noise of nestling
From my baby's trundle-bed,
And a dimpled arm tossed upward
O'er a moist and curly head,
Bring me back from out my musing—
From the world of dreams to this,
And I send him back to slumber
With the honey of a kiss.

—Maud Moore.

Written for KANSAS FARMER.

YULE-TIDE GIFTS.

Again the circling months have rolled around and brought nearer and nearer the Christmas-time—that time of "Peace on earth good will to men," of which the angels sang so many years ago. That song has never ceased to reverberate and touch men's hearts. To this day the coming of the holy Christmas-tide softens men's hearts and makes them forget old feuds. The great gift God gave to us, we seek to symbolize by some loving gift to others.

We may not give much, but the thought we think is something, and it is a good plan to show this thought out to some who do not expect it. Little, simple gifts, even, are indicative of our thoughtfulness, and if we cannot do much let us do a little.

There is the sick woman on the hill. She has been shut in so long. Can we take her comfort in some way? Why not make for her a pillow stuffed with hops? Let us make a white cover for it of linen. We can buy this for 40 cents a yard; and forty inches wide, this will be nearly enough for two pillow-covers. So it really makes them very inexpensive. We will draw or stamp some hop leaves on the pillow and outline them with black Honiton lace silk. Then we will write these words: "Peace be to thy slumbers," diagonally across the pillow, and embroider the letters with the black silk or with yellow twisted embroidery silk. Or we might make a design of poppies and outline them in scarlet etching silk, with their centers of black, according to nature. Or there are handsome scroll designs that are easily made and very effective.

A foot-muff is sometimes appreciated by the sick or the aged. For an invalid who still is able to be dressed, a slumber-robe is very nice. This may be made of cheesecloth and tied with silks, with a row of feather-stitching around the edge made with mediæval silk. Quite a pretty slumber-robe is made of silkoline, or the old-fashioned and ever-useful crazy work may be employed, embroidering it with a simple feather-stitch with Hamburg knitting silk in orange hue. It is well, in making crazy patchwork, to lay a sheet of wadding over the lining before putting on the pieces, then lay every piece well, and sew it neatly in a seam. This shiftless way of lapping the edges and expecting to get neat results is not a good one. Let every seam be well done, and then when you come to the embroidering you need not put the work on every seam, but rather make a sort of vine with the feather-stitching, letting it run rampant all over the robe. This is far more graceful and artistic than the set stitches on set seams.

There are the little children of Widow Brown. They are only about half clad. Is there not something among your belongings that could be utilized towards making them happy and comfortable? How about Janie's clothes, you laid away so carefully after the little form had been tucked away forever under Mother Earth's brown blanket? Can you not bless the unfortunate with her dear possessions? Why not make over some of "mother's" old dresses for those children, and cut over some half-worn underflannels for them. The little gowns may be trimmed with feather-stitching with twisted embroidery silk, and the little knit underclothes in the same way. It is really wonderful how much there is we can give if we only set about the task with a will. Dolls never fail to find acceptance with children, and they cost so little—that is, some of them do. You can dress some of these, if not for your own, then for some one else's children—maybe for the hospital

waifs. The harvest surely is ripe, and the laborers—will not you join them and see if you cannot set the joy-bells ringing in some hearts on Christmas day?

Ipswich, S. D. ROSE SEELYE-MILLER.

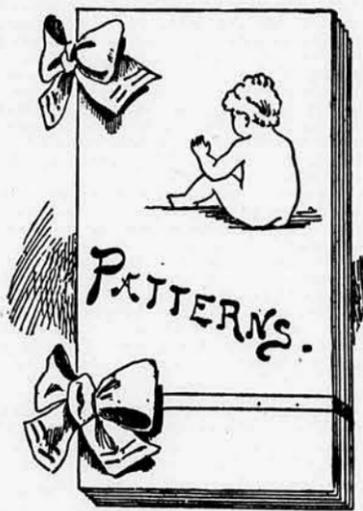
FOR BABY'S PATTERNS.

A Case Which Would Delight the Heart of any Young Mother.

One of the daintiest gifts which could be made for a young mother, and one, too, which she would be sure to appreciate and find very useful, is a case for the patterns of baby clothes which will be sure to accumulate. To make such a case you must purchase one dozen large white envelopes at least nine and a half by four and a half inches in size. Very handsome envelopes may readily be made from some of the heavy white art papers, sold at any art stationery store, by using a common envelope for a pattern. When the envelopes are ready, cut a small hole through each lower corner of the entire twelve. Now place them in a pile, all opening the same way, and run a piece of white silk elastic through the holes at each end. Do not draw it tightly, but sew the ends loosely together so that the envelopes may be opened like the leaves of a book. When each elastic is joined sew on a pretty bow of white ribbon. To the under side of the upper bow attach a piece of white baby ribbon about ten inches long, to which fasten a short lead pencil having a rubber in the end. Next make a band of the white elastic which shall fit rather loosely around the bunch of envelopes, and fasten it, where it is joined, to the under side of the lower bow. This is to serve to keep the whole in shape when filled with patterns, and is made loose in order to take in the requisite number.

If the giver is skillful with brush or pen and ink, a pretty baby's head or child's figure may be painted or drawn upon the outer part of the upper envelope, and beneath it the word "Patterns." If the drawing cannot be done, the words may be applied with fancy lettering in gilt, or, prettier still, in silver. If the pencil attached be not white, it may be given a coat of gilding or silver, according to the color chosen for the lettering.

If it is desired to make the gift quite elaborate, a sketch may be made upon



PATTERN CASE.

each envelope, or, in place of the sketch, a line or a verse may be lettered upon several, if not on all. Any of the following would be appropriate:

"The fashion
Doth wear out more apparel than the man."
SHAKESPEARE.

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."
POPE.

"Order is Heaven's first law."
POPE.

"Oh, what a world of beauty fades away
With the winged hours of youth!"

"Nae shoon to hide her tiny toes,
Nae stookin' on her feet;
Her supple ankles white as snow,
Or early blossoms sweet.

"Her simple dress o' sprinkled pink,
Her double, dimplet chin,
Her puckered lips and balmy mou'
With nae ane tooth within."

"Our wean's the most wonderfu' wean e'er I saw."

It is not wise to place the names of the patterns of the wardrobe upon the various envelopes, as the mother will find it more convenient to write these in pencil upon the flap of the envelope

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

Royal Baking Powder

ABSOLUTELY PURE

so they may be erased and re-written when the patterns are changed.

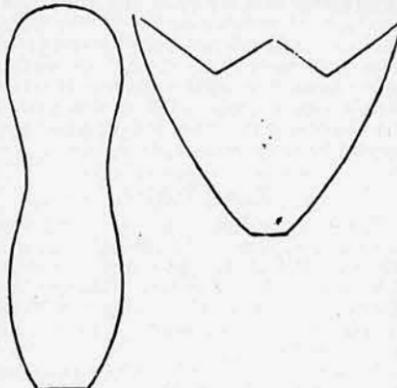
The same idea may be carried out for the patterns of the household as well as those for baby, and manilla envelopes may take the place of the more elaborate white ones.—J. D. Cowles, in Demorest's Magazine.

A SLIPPER WORKBOX.

Very Pretty and Convenient Adjunct to the Sewing Table.

To make the accompanying useful accessory to a work table or basket, a piece of heavy silk, in whatever color preferred, or a bit of the colored linens which come now in fine effects, some cardboard, a spool of black silk, a few bits of flannel, and a supply of needles and pins, besides scissors and thimble, with which to stock the slippers, are required.

Cut two pieces from the cardboard as shown in the diagram. Let the sole measure six inches from heel to toe,



THE PATTERN.

and make the toe piece, or vamp, fit it exactly as the drawing indicates. Cover the toe pieces neatly. On the silk or linen design for the toe embroider some small blossoms, such as the violet, anemone, or forget-me-not. Measure the size and shape of the sole as far as the instep, beginning at the toe, and make a needlebook of the flannel that will exactly fit, then sew firmly in its place

on the under side of the slipper. When so much is done, cut a piece of cardboard the shape of the sole, starting just within the heel, and terminating slightly within the vamp, taking care it shall measure one-quarter of an inch



THE WORK BOX.

wider, as it must allow the scissors to slip into place. Cover it with silk or linen, as the case may be, embroidered like the toe, and when it is complete place it upon the sole, as shown in the illustration, overhanding the edges firmly together. Make of the board a small, curved piece, big enough to keep the thimble safe. Cover it and sew fast just below the scissors case. Baste the vamp in place and overhand it also to the sole, and glue fast a spool of black silk to form the heel.

Fill the needlebook with needles of assorted sizes; slip a pair of scissors into the case, and a thimble into its pocket. Pins stuck around the edge finish the slipper workbox.—N. Y. Times.

Singers, public speakers, actors, auctioneers, teachers, preachers and all who are liable to over-tax and irritate the vocal organs, find, in Ayer's Cherry Pectoral, a safe, certain and speedy relief. A timely dose of this preparation has prevented many a throat trouble.

Notice to Farmers.

The farmers of Kansas, by sending their application, plainly written, name and post-office address, to G. V. Bartlett, Commissioner of Forestry, Dodge City, Kas., will receive by return mail a blank to be filled out by the applicant for a share of seedling forest trees, which will be shipped free of charge, except for freight, which must be guaranteed by the applicant. Delivery will be made in the spring of 1896.

G. V. BARTLETT,
Commissioner of Forestry, Dodge City,
Ford Co., Kas.

THERE'S MONEY IN EGGS

and poultry. There are few more lucrative occupations than poultry raising—if rightly managed. The demand for choice poultry and fresh eggs constantly exceeds the supply. They are the steady source of pin-money to the women folks of many a family. Poultry raising is peculiarly a woman's work. Many of the best egg raisers in the world are women. Farm-Poultry teaches all women how to make money with a few hens. The men also, who are posted on the right management and care of poultry and its preparation for market; who know the secret of making hens lay early and of getting the greatest yield of eggs when prices rule highest, are making good profits. Such are the men and women who edit Farm-Poultry. They are actively engaged in raising poultry upon farms and in suburban towns. They have positive knowledge of the most profitable methods of feeding and caring for all kinds of fowls under all conditions. This knowledge, the result of their practical experience, as well as the newest ideas of the brightest men and women everywhere in the poultry business, you can get by reading

Farm-Poultry

Semi-Monthly.

The best poultry paper in the world. \$1.00 a year; 50c. for six months.

A year's subscription to Farm-Poultry makes a very desirable Christmas gift. Send 2c. for sample copy.

I. S. JOHNSON & CO., Publishers, 33 Custom House St., Boston, Mass.

The Young Folks.

HIS DIVINITY.

I sit within the cushioned pew,
But must confess my thoughts pursue
A rather worldly course, in lieu
Of penitential fire.
Yet none within the edifice
In worshiping are less remiss—
My thoughts are tinged with heavenly bliss,
For Nellie's in the choir.

A witching figure, straight and trim,
She stands and carols forth the hymn,
She blushes 'neath her broad hat brim,
To see how I admire
I watch her lovely pulsing throat,
Her dimples and her curls I note—
Celestial music seems to float,
For Nellie's in the choir.

In through the chancel window slips
A rosy sunbeam, and it sips
The sweetness of her laughing lips,
And never seems to tire.
And while the pastor does expound,
And lull his flock to slumber sound,
'Tis love that makes my world go round,
For Nellie's in the choir.
—Detroit Free Press.

TUBBING ADVENTURE.

Jack and Ted Had a Little More Fun Than They Bargained For.

"When I was a boy," said Uncle John as he sat on the porch and watched the sun go down behind the hill, "I managed to have a pretty good time up here on the farm. How do you find it, boys?"

"We do too," said Ted. "I guess there aren't many things that we haven't tried, are there, Jack?"

"We've been here only a week," replied Jack, "and we know every corner of the farm, and we've tried every way of excitement. We have great fun sliding down the ice house roof and bringing the cows in and riding the horses down in the field. Did you live here when you were a boy, Uncle John?"

"Why, of course," said their uncle. "I was born and brought up here, and if my business wasn't in Japan I'd be here every summer of my life. I'd like to be a boy again with you and show you all the pranks I used to play. Wouldn't



"GAILY SKIPPING DOWN THE HILL."

you enjoy rolling down hill in the cask as we used to do!" and Uncle John laughed heartily as he thought of it.

"Oh do tell us about it," cried the boys, and so after lighting his pipe, he commenced:

"We boys had very inventive minds and were up to all sorts of capers, so it is no wonder that after reading in the fairy tale of the old woman who was rolled down the hill in a cask we decided to see what her sensations were like. We got a large and strong cask which belonged to grandfather, taking care to pull all the nails out, however, and fixed it to start on its travels. We lined it with old grain sacks to make it more comfortable, and then three of us boys piled in, and the fourth sent the barrel rolling down the hill. It was the strangest sensation I ever felt and after practicing for awhile we grew quite fond of the sport, although it was quite a dangerous one, and called it 'tubbing.' The old drawback was in getting the old tub up the hill again, but after awhile we remedied that by rigging up a sort of pulley attachment."

"It must have been fine!" cried Ted and Jack together, and just then Tom Winters, the boy who lived on the next farm, came up and the next subject was forgotten.

The next day when the boys were rummaging underneath the old corncrib looking for some mischief to get

into they came upon a queer old barrel which brought Uncle John's story back to their minds.

"I guess this is the tub Uncle John was telling us about," said Ted. "Isn't it a queer old machine. I say, boys"—to Jack and Tom Winters—"let's try it! Uncle said he used to think it great sport."

So the old cask was rolled out and brushed quite clean and then hoisted on the wheelbarrow and wheeled to the top of Sunset hill. The hill was quite steep, which was all the better for the purpose, the boys thought, but it was a question in which direction it should be started. The woods commenced at the foot of the hill to the south; the railroad track was toward the east, the pond toward the west, so north was the only feasible direction to take, although it did seem rather rocky and quite steep. Only two of the boys could go at once—the third had to be left behind to start the tub rolling. Tom Winters took a look at the sidehill before him and then kindly volunteered to do this, while Jack and Ted took the first ride. So they crawled in.

When all was ready Tom Winters shoved the barrel, and off it went gayly skipping down the side of the hill. At the very first turn Ted and Jack knocked heads violently. Unfortunately, they had forgotten that when Uncle John went down there were three inside, which made it a comfortable fit. At the second turn they were thrown against the side of the barrel, and before they had turned half a dozen times they were sorry they hadn't taken Uncle John's word for it and not tried it themselves. Over and over they went, bruised and beaten about till they were almost insensible, and there was no way of stopping their steed until the foot of the incline should be reached.

Had they been capable of hearing they would have heard a great shout from Tom Winters and have wondered what it meant. When the barrel was about half way down it struck a large stone, which, instead of stopping it, turned its course to the west, and Tom was horrified to see it steering for the pond. The water wasn't very deep, but even in shallow water two boys cooped up in a barrel stood very little chance of saving themselves. It was then that Tom shouted, and, taking to his heels, followed the fast-descending tub as quick as he could run. But, of course, he could not reach the pond before the barrel. The boys inside were unconscious of their danger, but they were not unconscious of the many somersaults they had turned, nor of the many bruises they were receiving.

With a crash and a bang the old tub came in contact with another large stone, and in a minute the new conveyance was in fragments, and the boys, followed by some of the staves, were thrown into the pond by the impetus which they had gained. Fortunately, Tom's call had been heard by Uncle John, and he was on the spot in a marvelously short space of time, considering what a sedate bachelor he was. It was well that he had not entirely forgotten his athletic training, too, for the poor, bruised boys would have found it very hard work to get themselves out of the water, and Tom Winters couldn't swim. In fact, there was not a square inch of space on their bodies that was not black and blue.

Uncle John was blamed for this adventure because he had suggested it by his story. He says even if the boys are his nephews, they are the most stupid his nephews they are the most stupid pack themselves in tight and select a smaller and less stony hill for their ride.

He read about the Guineas,
And I thought of pigs and hens,
And wondered at the flasks and jars,
Which seemed to be their dens,
But when I rose and took the book
To know the reason why,
I found those Guineas all were spelled
G, E, N double I!

Do you know a good farm and fruit paper when you see it? Let us send you the Rural New-Yorker this week. Send your address; no money.

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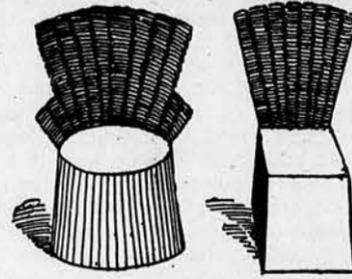
FURNITURE FOR DOLLY.

This Tells You How to Make a Sofa and Chairs from Corks.

A child is happiest when he is busy, and the mother who can invent little pastimes and everyday amusements will greatly add to the happiness of the nursery. One of the most ingenious and at the same time one of the simplest and easiest amusements is the



SOFA



AN ARMCHAIR—A SITTING-ROOM CHAIR.

manufacture of cork furniture for dolly's housekeeping. The long fresh cork must be used for the foundation.

Cut two slices, one larger than the other, of the two sides lengthways, and you will have a flat side for it to stand on, while the broader flat piece will form the seat of the sofa. Cut off a piece of cloth large enough to cover both the seat and one side of the sofa and stick it on with gum, tucking in the corners neatly. Now get some small pins and stick them into one side of the seat and get some larger pins and put them at one end for the "head" of the lounge and wind the cotton in and out, as in the chairs.

A little bed is made in much the same way as the sofa, covering it with cloth, but the pins must be put in at each end and not at the side.

To make a washstand the cork must be cut in half and the sides cut off, as in the bed and sofa. Cover it with cloth and stick a pin in each corner to serve as the legs.

By this time you will think of other things you can make out of cardboard and colored paper which will be quite pretty, and your dollhouse will be handsome enough for the most fastidious doll in dolidom.—Kindergarten.

Prof. C— had to spend the evening at a friend's house. When he was about to leave it was raining very heavily, wherefore the hostess kindly offered him accommodations for the night, which he readily accepted. Suddenly the guest disappeared, nobody knowing what had become of him, and the family were about to retire for the night, when Prof. C— walked in, as wet as a drowned rat. He had been home to fetch his nightshirt.—Mercury.

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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.**

It is announced that the premium lists of the Franklin County Poultry Association are ready and can be had on application.

The Chicago price of No. 2 wheat for May delivery hovers close around 60 cents per bushel, and closed at that figure last Saturday.

The visible supply of wheat has reached almost the figures of this date last year, but is still far below the amount of this time two years ago.

American Gardening is an elegant horticultural magazine. Heretofore it has been a monthly, but it is hereafter to be published weekly at the old price of \$1 per year. For \$1.75 sent to this office we send *American Gardening* and the **KANSAS FARMER** both one year.

In a recent financial paper Henry Clews speaks of the American securities held in foreign countries as amounting to \$2,000,000,000. If the interest on these averages 6 per cent., it is easily seen that to settle this interest consumes a balance of trade amounting to \$120,000,000. Great is the consuming power of a large indebtedness.

Does your subscription expire with the old year? If so, please attend to the renewal now. If 1,000 renewals are attended to between this date and Christmas our subscription department will be considerably relieved of the rush at the beginning of the new year. If more thousands of renewals are made between Christmas and New Years, the good-natured man who presides over that department will smile and work hard to keep all accounts straight.

Prof. Robert Hay, the geologist, of Junction City, whose labors in Kansas have been beyond value, died at his home last Saturday, after a lingering illness of seven weeks. He was 60 years old. His work for the United States Geological Survey and much that was done without on his own account, without compensation, was of that tireless, painstaking kind which serves as a reliable basis for that which follows.

An old toper once said: "There is no bad whisky. All whisky is good and some is better." The writer hereof knows nothing about whisky, having never tasted it. He is of the opinion, however, that all whisky is bad. But it is different with reference to some other matters. For instance, every time of year is a good time to subscribe for the **KANSAS FARMER**. But if any time is better than another, it is the last of the year, so as to have every number for the new year. It is well also to enclose 10 cents extra and get a binder, so as to keep the new volume all together, making of it a book of reference.

THREE FARMERS IN DANGER.

The office of Governor of Kansas for the two years beginning in January, 1897, is said to be abroad, seeking candidates for the political parties. This time it is out among the farmers. It is reported to have been for several months prowling around the farm of the "potato king," Senator Edwin Taylor, of Wyandotte county, with the Populist nomination sticking out of its pocket. The great orchard and storm water irrigation plant of Hon. Geo. M. Munger, of Greenwood county, have also been the scene of some lively efforts of the proprietor to get away from this sprite.

The latest report says that Hon. T. M. Potter, of Marion county, an extensive farmer and stock-raiser and President of the State Board of Agriculture, has had to take to the woods to escape the Republican nomination, which is pursuing him with a dash and abandon which seems to have burned the bridges behind it.

These are all men of high attainments and large experience. Every one is honest and capable, and if the office of Governor succeeds in catching one of them it will be in good luck, and the people of Kansas will congratulate themselves on unusual good fortune.

WHEAT AND CORN IN INDIANA.

In a splendid edition in honor of its fiftieth anniversary, the *Indiana Farmer*, among other reminiscences, remarked that in 1845 the wheat crop of Indiana yielded nine to ten bushels per acre as an average. This suggested a comparison with the yield of this year, and it was found that the average of the Indiana crop of 1895, as given by the Statistician of the United States Department of Agriculture, averaged only nine bushels per acre. But both years may have been, and probably were, exceptional. Thinking some interesting comparisons might be made on the wheat record of the Hoosier State, the writer applied to the editor of the *Indiana Contemporary* for the record of the last fifty years. It transpired, however, that the crop records of that State are very incomplete and that no reliable data are obtainable earlier than 1879, since which time the record is complete, with the exception of that for 1887, which is missing.

By the courtesy of Hon. S. J. Thompson, Chief of the Indiana Bureau of Statistics, we have been furnished the acreage and yield of wheat and corn in that State for the two periods of eight years each:

Acreage and yield of wheat and corn in Indiana, 1879-1886.

| Year | Wheat. | | Corn. | |
|------------------|------------|-------------|------------|-------------|
| | Acres. | Bushels. | Acres. | Bushels. |
| 1879 | 2,605,710 | 44,753,208 | 3,887,853 | 115,575,888 |
| 1880 | 3,109,845 | 47,130,684 | 3,130,327 | 87,335,014 |
| 1881 | 3,210,547 | 50,625,683 | 3,135,178 | 71,387,075 |
| 1882 | 3,063,348 | 46,928,643 | 3,312,683 | 115,499,797 |
| 1883 | 3,049,269 | 31,405,573 | 3,125,378 | 89,899,237 |
| 1884 | 2,990,811 | 40,531,200 | 3,137,840 | 8,159,799 |
| 1885 | 2,966,520 | 33,837,230 | 3,271,090 | 117,154,914 |
| 1886 | 2,803,923 | 43,226,317 | 3,229,445 | 108,217,209 |
| Total | 23,799,912 | 318,588,563 | 26,179,762 | 794,328,939 |
| Average | 2,974,989 | 39,823,570 | 3,272,471 | 99,278,617 |
| Average per acre | 13.4 | 30.9 | | |

Acreage and yield of wheat and corn in Indiana, 1888-1895.

| Year | Wheat. | | Corn. | |
|------------------|------------|-------------|------------|-------------|
| | Acres. | Bushels. | Acres. | Bushels. |
| 1888 | 2,726,111 | 28,750,764 | 3,419,377 | 128,436,244 |
| 1889 | 2,778,893 | 41,541,570 | 3,418,051 | 106,542,161 |
| 1890 | 2,821,129 | 28,352,344 | 3,416,459 | 87,092,513 |
| 1891 | 2,891,922 | 58,305,796 | 3,683,927 | 125,092,649 |
| 1892 | 2,654,645 | 42,176,144 | 3,563,387 | 111,217,463 |
| 1893 | 2,550,014 | 38,114,708 | 3,511,020 | 84,580,471 |
| 1894 | 2,540,424 | 50,792,620 | 3,526,116 | 95,205,132 |
| 1895 | 2,523,354 | 20,985,388 | 3,706,146 | 131,103,991 |
| Total | 21,488,432 | 308,969,286 | 28,278,433 | 869,372,664 |
| Average | 2,685,810 | 38,621,161 | 3,528,554 | 108,671,583 |
| Average per acre | 14.4 | 30.4 | | |

These periods are too short to be conclusive as to the development and tendencies of agriculture in this, one of the older of the great agricultural States, but they furnish interesting comparisons.

The average acreage of wheat has decreased from 2,974,989 to 2,685,810, or the decline in area is 289,179 acres. The average yield per acre shows an increase of about one bushel, but this is not sufficient to compensate for the decreased acreage, the average being 39,823,570 bushels per year for the first period and 38,621,161 for the second period.

The record as to corn shows an increase of acreage and a slight increase of yield in the second period over the first. The average of the first period is 3,272,471 and of the second period 3,528,554 acres. It is worthy of note,

however, that the acreage of wheat and corn together averages less during the later than during the earlier period. But the aggregate product of the two cereals is considerably greater during the later period.

If a complete record for a long series of years could be obtained for a great agricultural State, conclusions as to the tendencies of agriculture might be observed freed from the complications which result from the bringing in of new lands, as is the case in all considerations of the statistics for the entire country.

A Dairy Expert Agent Appointed for Missouri and Kansas.

Levi Chubbuck, of Kidder, Mo., Secretary of the Missouri State Dairy Association, has been appointed Special Expert Agent of the Dairy Division, Bureau of Animal Industry, United States Department of Agriculture, and assigned the duty of investigating the dairy industry of Missouri and Kansas.

He will make a thorough examination of the industry, not only as to its present development, but possibilities, including the production of milk and its manufacture into butter and cheese, in farm dairies and in creameries and factories; also movement of and trade in dairy products, particularly in the large centers like St. Louis and Kansas City. The information gathered will be submitted to the Dairy Division for its guidance in the work of aiding in the development of the dairy industry.

Mr. Chubbuck will be glad to hear from any one in the two States named regarding the condition of the industry, and to receive such statements of facts and suggestions as will facilitate the work in hand.

A general and full response to the call for information will undoubtedly result in large benefit.

Questions Answered by Prof. Georgeson.

F. L., Cottonwood Falls, Kas., writes: "Would you please let me know the comparative feeding value of Kaffir corn and common field corn?"

No digestion experiments have been carried out with Kaffir corn seed, and I am, therefore, unable to give figures as to the amount of digestible nutrients it contains in comparison with corn, but we have fed it to pigs with the result that it took 5.15 pounds Kaffir corn seed to make a pound of pork, while it took but 4.38 pounds of corn to produce the same result. We are feeding it experimentally to some fattening cattle at present, and while the experiment has not proceeded far enough to base conclusions on it, the indications are that the red Kaffir corn and corn will stand in about the same relation to each other in the production of beef that they do in the production of pork.

J. J. G., Webster, Kas., writes: "I am about to build a tight board granary, eight feet high, eight feet wide, and twenty-four feet long, with a capacity of 1,000 bushels shelled corn. Would it be safe for me to fill such a bin with well-dried corn and leave it in that condition till next year?"

In reply I will say that it is not safe to keep shelled corn in so large a bulk for so long a time. You can keep it in the ear all right, but if you shell it it ought to be shoveled over often or it will become musty.

The popularity of sweet peas knows no end. They have been the subject of much care and fond fostering by W. Atlee Burpee & Co., the Philadelphia seedsmen, who have just brought out a fine painting of these elegant flowers, by M. Paul de Longpre, who is said to be the master flower painter of the age.

A valuable chart has been published by the *American Agriculturist*, in which are shown in a manner readily to be comprehended, the various feeding qualities of the leading American feeders and other feeding stuffs. On the reverse side of this chart are given tables showing in figures the composition of feeding stuffs and their manurial value, also feeding standards and illustrations of the use of the tables in proportioning rations.

KANSAS STATE GRANGE.

EDITOR KANSAS FARMER:—Of the many notable gatherings which have taken place this autumn, in the city of Topeka, the Kansas State Grange, which convened December 10, ranks with the first, in numbers, enthusiasm and real benefits issuing therefrom. But few outsiders are aware of the amount of business dispatched at its yearly sessions, the momentous questions discussed and passed upon, some of which are really bills in embryo and which eventually find their way into our Legislature, subject to its ultimatum. Every bill which thus becomes a law is found to be of great benefit to the farmer.

The sessions were held in Lincoln Post hall, which was fittingly decorated for the occasion. Tuesday, Master Reardon, of McLouth, delivered the annual address, which was logical, forcible and fairly bristling with telling points, followed by reports of officers, the report of Treasurer Rhodes showing the firm basis upon which the Grange stands.

The afternoon session was almost wholly occupied with routine business.

The evening session was enlivened with music by the Grange choir, and also made memorable by an eloquent address of welcome by Major Wm. Sims, of Topeka, in behalf of the Granges of Shawnee county. This address was given in Mr. Sims' happiest vein and served to cement the brotherly love which beamed from the countenance of each delegate. Brother Allen, of Douglas county, responded.

The real business began in earnest on Wednesday morning. Committees got to work, and questions of various interest were earnestly discussed, especially the Lubin bill, which is so securely cloaked with complications that none but an expert can get down to the gist of it, and which fills, if not a long-felt want, at least seven columns in diamond type. When the discussion was waxing warm, pending a resolution, a sister quietly called for a showing of those who had read the bill. Two hands only were raised, and interest in the Lubin bill suddenly cooled. Those who have studied it do not consider its passage beneficial to the farmer.

A large number of candidates availed themselves of this opportunity to receive the fifth and sixth degrees, which were conferred successfully, in full form, on Wednesday evening. The hall was brilliant with lights and flowers, the platform, especially, being a bower of roses. This was the court of Ceres, Pomona and Flora. After conferring the degrees, the Feast of Pomona was celebrated, which was a pleasant respite from the arduous labors of the necessary business transacted. Tables were placed conveniently, filled with every variety of fruit obtainable at this season of the year, and also delicious candies, etc. Sociability ruled the hour. Toasts were generously given and responses were made in like manner. Edwin Snyder, whose name is familiar to every reader of the **KANSAS FARMER**, and whose quiet flow of wit brightened the sessions, "toasted the Grange," to which Secretary Black responded.

Thursday was spent in committee work and reports of same.

Every session was alive with interest, and the work being wisely guided, all business was dispatched with ability and success, and the twenty-fourth annual meeting of the Kansas State Grange closed its very interesting sessions, to meet at Olathe, December, 1896.

FOOT NOTES.

Mrs. John Sims presided at the organ.

Edwin Snyder was the wit of the sessions.

Vinland Grange was represented by E. A. Allen.

Hayes, the florist, furnished the roses for decoration.

Oak Grange was well represented at the State meeting.

Mr. and Mrs. Westgate, of Manhattan, were present during the entire session.

Mr. Thos. White, of Arkansas City,

formerly of this county, was a visitor at the State Grange.

Wee Dorothy Sims was the winsome mascot at the Feast of Pomona.

KITTIE J. McCracken.

PRACTICAL TESTS OF FEED VALUES.

Answers to inquiries which have been raised in the minds of many and which have been propounded in the KANSAS FARMER and elsewhere, are contained in Bulletin No. 53 of the Kansas Experiment Station. In this bulletin Prof. Georgeson describes and gives the results of feeding pigs with corn, wheat, Kaffir corn and cottonseed. We condense from the bulletin as follows:

The first described experiment was planned with a view to ascertain the relative feeding value of Kaffir corn meal, corn meal and ground wheat. To test it, twelve pigs were selected and divided into three lots of four each. Each pig was given a separate pen and fed separately, a careful record being kept of the feed eaten and the gain made. The pigs had all been bred on the college farm, and averaged eight months old when the experiment began. There were three sows and one barrow in each lot, one of the sows in each lot being a grade Berkshire and the other two a pure Berkshire and a pure Poland-China. The barrows in lots I. and II. were pure-bred Berkshires and the barrow in lot III. was a pure-bred Poland-China. These pigs had been running on pasture during the summer of 1894, with some little grain in addition, consisting chiefly of sorghum seed and low-grade wheat. Owing to the dry weather of that year, the pasture was poor and the grain feed was not abundant, so the pigs were only of average weight for their age.

The feed was all ground. The Kaffir corn was of the red-seeded variety, which has uniformly given the best yield of all the non-saccharine sorghums grown at the station. It is to be noted that while the mill, the Kelly Duplex, grinds the corn and wheat very satisfactorily, it apparently could not grind the Kaffir corn as fine as desirable. The grain would crack up into little hard bits, which would settle in the water when made into slop, almost like sand.

The experiment began December 27, 1894, and until severe cold weather set in, the feed for the three lots was stirred in water twelve hours before it was fed, but during cold weather it was impossible to keep the slop from freezing, and it was, therefore, found necessary to mix it as fed, and even then it would frequently freeze in the trough before it could be eaten. This, it will be noted, was a serious drawback to the experiment and accounts, together with the uncongenial quarters, for the fact that the pigs made only small gains. The feeding was done at 6 in the morning, at noon and at 5:30 in the afternoon. Each pig was given what it would eat and no more. In addition to the regular feed, each pig was supplied with wood ashes and charcoal, with a sprinkling of salt and sulphur, in a separate box.

The experiment continued seventy-seven days—from December 27 until March 14—when the pigs were in fine marketable condition and it was not considered that they could be fed profitably any longer. They were weighed separately every Thursday and their gains noted. The following table gives the results of the experiment in a condensed form. The weekly weighings, with feed consumed and gains made by each pig, have been omitted for the double purpose of saving space and to avoid tiring the reader:

LOT I.—KAFFIR CORN MEAL.

| No. of pig.—Breed. | Weight December 27 | | Weight March 14 | | Average daily gain in seven days | Grain eaten per pound of gain. |
|---------------------|--------------------|-------|-----------------|------|----------------------------------|--------------------------------|
| | Lbs. | Lbs. | Lbs. | Lbs. | | |
| 1. Berkshire sow... | 222 | 373 | 151 | 1.96 | 4.78 | |
| 2. Poland-C. sow... | 140 | 249 | 110 | 1.43 | 5.13 | |
| 3. Berk. barrow... | 188 | 226 | 88 | 1.14 | 5.29 | |
| 4. Grade sow..... | 118 | 188 | 75 | .97 | 5.76 | |
| Total..... | 618 | 1,086 | 423 | 5.49 | | |
| Average..... | 153 | 269 | 106 | 1.37 | 5.15 | |

LOT II.—CORN MEAL.

| | | | | | |
|---------------------|-----|-------|-----|------|------|
| 5. Berkshire sow... | 189 | 337 | 148 | 1.92 | 4.28 |
| 6. Poland-C. sow... | 152 | 302 | 150 | 1.95 | 4.37 |
| 7. Berk. barrow... | 149 | 285 | 133 | 1.77 | 4.41 |
| 8. Grade sow..... | 119 | 208 | 89 | 1.15 | 4.55 |
| Total..... | 609 | 1,132 | 523 | 6.79 | 4.38 |
| Average..... | 152 | 283 | 131 | 1.70 | |

LOT III.—GROUND WHEAT.

| | | | | | |
|----------------------|-----|-------|-----|------|------|
| 9. Berkshire sow... | 185 | 339 | 144 | 1.87 | 4.26 |
| 10. Poland-C. sow... | 195 | 338 | 143 | 1.86 | 4.22 |
| 11. P.-C. barrow... | 150 | 292 | 142 | 1.84 | 3.97 |
| 12. Grade sow..... | 114 | 234 | 120 | 1.56 | 3.95 |
| Total..... | 654 | 1,203 | 549 | 7.13 | 4.11 |
| Average..... | 163 | 300 | 137 | 1.78 | |

From the above table it will be seen that lot I. was fed on Kaffir corn meal, lot II. on corn meal and lot III. on ground wheat. The table further shows the breed of each pig and the weight of each at the beginning of the experiment, December 27. The weights given are the average of two weighings. The next column shows the weight of each pig at the close of the experiment, March 14. This is the average of three weighings. Next is shown in succession, the gain of each pig during the entire period, the average daily gain of each pig, and the grain eaten for each pound of gain, and finally the totals and averages are given under each of these headings.

The average weight of the pigs in lots I. and II. was ten and eleven pounds, respectively, less than lot III., it being impossible to arrange the breeds in each lot so as to adjust the weights better. Pig No. 1 in the Kaffir corn lot was a thrifty Berkshire gilt, weighing 222 pounds at the beginning of the experiment, which was heavier than any of the others, and to avoid making that lot too heavy it became necessary to select the lightest among the remaining pigs to put with her. As a result this lot is much more uneven than the other two, which militated to some extent against the Kaffir corn.

The grade gilt in each lot was lighter than the pure-breds. These grades were somewhat younger than the others, having been farrowed May 10, while the others were from a month to six weeks older. This fact must not be lost sight of in considering the gain made by each.

It will be noted that although pig No. 1 in the Kaffir corn lot made the largest gain of any in the experiment, which is partly accounted for by her greater size, the gains in that lot as a whole are nevertheless smaller than in lots II. and III. by 100 and 128 pounds, respectively. The Berkshire barrow, pig No. 3, proved to be a poor feeder in comparison with the other pure-bred pigs. While this defect may in a measure be charged to the feed, it was also partly due to his individuality. A thriftier pig would have done better under the same conditions.

The last column in the table is perhaps the most interesting one, since it shows the amount of grain required for each pound of gain. It shows that it required 5.15 pounds of Kaffir corn meal to produce a pound of pork, while it took but 4.38 pounds of corn meal to produce a pound of pork, and 4.11 pounds of ground wheat to produce the same results. The red Kaffir corn was here the least effective feed, while wheat was the best, closely followed by corn. This comparison is of special interest at this time when Kaffir corn is growing in favor on account of its drought-resisting qualities. Had the pigs to which it was fed been a more even lot the average results might possibly have been more favorable to the Kaffir corn, but the fact remains that pig No. 1, which was decidedly a thrifty animal with a good appetite, required 4.78 pounds of Kaffir corn meal to make a pound of gain, which was more than was required in any instance of either corn meal or ground wheat to produce the same results. We may, therefore, conclude that while red Kaffir corn is a very desirable grain and will answer the purpose of a fattening feed very well, it was in this instance not quite equal to either corn or wheat fed under exactly the same conditions. Possibly the results will be better when fed to larger hogs and under more favorable circumstances as to temperature and with grain ground to a finer meal. The

seeds are hard and when coarsely ground a considerable percentage pass through the animal undigested. A comparison of the feeding value of these three feeds in this experiment will place them as follows when converted into terms of each other:

| | Ground wheat, pounds..... | Corn meal, pounds..... | Kaffir corn meal, pounds..... |
|---|---------------------------|------------------------|-------------------------------|
| Average number of pounds consumed per pound of gain | 4.110 | 4.386 | 5.155 |

RELATIVE FEEDING VALUE IN POUNDS.

| | Ground wheat, pounds..... | Corn meal, pounds..... | Kaffir corn meal, pounds..... |
|---------------------------------------|---------------------------|------------------------|-------------------------------|
| One pound of ground wheat equals..... | 1.000 | 1.067 | 1.254 |
| One pound of corn meal equals..... | .937 | 1.000 | 1.175 |
| One pound of Kaffir corn equals..... | .797 | .850 | 1.000 |

RELATIVE VALUE IN PER CENT.

| | Ground wheat, per cent..... | Corn meal, per cent..... | Kaffir corn meal, per cent..... |
|--|-----------------------------|--------------------------|---------------------------------|
| Measured by ground wheat at 100 per cent. | 100.00 | 93.72 | 79.74 |
| Measured by corn meal at 100 per cent. | 106.72 | 100.00 | 85.10 |
| Measured by Kaffir corn meal at 100 per cent. | 125.47 | 117.64 | 100.00 |

Coal Oil for Corn Stalk Disease.

EDITOR KANSAS FARMER:—For the benefit of the farmers who are pasturing their corn fields—as hundreds of cattle have died very suddenly when running in corn stalks—I will give you a remedy. Last Saturday, my neighbor had a cow that took sick very suddenly after being in the stalks and they sent for me to help give the cow some medicine. When I got there, the cow seemed to be in a great deal of misery, and we poured down her five pints of coal oil and the cow got well, but it was three days before she would eat. There was another case of the same kind close by and they gave coal oil and it got well. This is the only remedy I ever heard of that would cure. AMBROSE COCHRAN. Little River, Kas., December 13.

The A., T. & S. F. railroad system was sold last week by order of the United States court. It brought \$60,000,000, which is reported to be but a fraction of the real value of the property.

If the care of the hair were made a part of a lady's education, we should not see so many gray heads, and the use of Hall's Hair Renewer would be unnecessary.

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

A Man From Newton, Mass.

Has something to say about the greatest horse remedy of the age. He is Mr. S. P. Whitman, and he writes: "Having used Tuttle's Elixir in my hack and boarding stable for the past three years, I heartily endorse it for the general purposes for which it is recommended by the proprietors."

The Most Popular Highway of Travel,

penetrating the principal cities of the East—the shortest line between Chicago and Boston, with solid through trains to New York city via Fort Wayne, Cleveland and Buffalo, and the only line via these cities having colored porters on its first and second-class day coaches at the disposal of its patrons, is the NICKEL PLATE ROAD, whose unexcelled train service and most liberal rates have long been recognized by east-bound travelers. J. Y. Calahan, General Agent, 111 Adams St., Chicago, Ill.

"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 3,000 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.

KANSAS IMPROVED STOCK BREEDERS.

Program of the sixth annual session of the Kansas Improved Stock Breeders' Association, to be held at the National hotel, Topeka, January 7 and 8, 1896, at 2 p. m.: Reports of officers; reports of special committees; "The Comparative Value of Feeding Stuffs," by Prof. C. C. Georgeson, of the Kansas State Agricultural college, Manhattan; "The Type of Horses to Breed for Present Markets"—draft breeds, F. H. Avery, Wakefield, coachers, Hon. O. L. Thistler, Chapman; "The Standard-bred Horse for all Purposes," C. E. Westbrook, Peabody; "Profits in Dairying," A. E. Jones, Topeka; "Holstein Friesians as a Dairy Breed," M. S. Babcock, Nortonville, and C. F. Stone, Peabody; "Good Roads," Hon. G. W. Glick, Atchison; "Give the Mule a Chance," D. A. Williams, Silver Lake, and J. C. Stone, Leavenworth; "Farm Flocks of Sheep for Wool and Mutton," H. M. Kirkpatrick, Hoge, and E. D. King, Burlington; "The Beef Breeds"—Herefords of the past, J. Gordon Gibb, Lawrence, Herefords of the present, C. S. Cross, Emporia; "Prospects and Outlook for Pure-bred Short-horns," Col. W. A. Harris, Linwood; general discussion; "Veterinary," U. B. McCurdy, V. S., Topeka; "Tame Grasses—Pastures," J. W. Babbitt, Hiawatha; "The Relation of the Breeder to the General Farmer," G. G. McConnell, Menoken; "Needed Legislation, State fair, etc.," Hon. W. B. Sutton, Russell.

It is proposed to hold a banquet on Tuesday night, January 7, each one present paying for his plate. This banquet session is to be a general experience meeting and social session, and every one present is expected to contribute a thought or idea for the good of the association or the entertainment of the evening.

The regular program as outlined in the above named topics is subject to discussion, and every member is expected to come prepared to discuss one or more of the subjects under consideration.

In the above program it will be observed that a combination has been made with the Kansas Swine Breeders' Association to furnish all the matter pertaining to the swine industry and their topics, and discussion will precede and not conflict with this program, but the two will furnish the best exercises ever held in the State in behalf of improved stock.

Every old member of the association, as well as every Kansas breeder, is cordially invited to be present. Reduced rates on all the railroads for the entire week have been secured, as the annual meeting of the State Board of Agriculture and Kansas Poultry Show is held the same week. The meeting this year is of the greatest importance, as several special matters are to be considered that will interest every stockman and farmer in the State. In view of the proposed banquet, it is important that all who expect to be present should notify the Secretary at once.

H. A. HEATH, Secretary, Topeka, Kas.
T. A. HUBBARD, President, Rome, Kas.

To Our Subscribers—A Special Offer.

We take subscriptions, at a club rate, to all the magazines in the country, in connection with the KANSAS FARMER. Among the higher priced and well edited publications is the *New England Magazine*, which, with all the features of general interest of the other great illustrated monthlies, has, besides, its own specialty in which it is unrivaled. As its name implies, this is the art, history and literature of New England. To those of New England birth or origin, therefore, it is especially welcome, and a year's subscription makes a perfect present. Whatever else you yourself take you want the *New England Magazine*. \$3 per year. With this paper, \$3.40. Sample free. Address KANSAS FARMER.

Do Not Neglect

the opportunity to visit dear friends during the holidays. The NICKEL PLATE ROAD, always catering to the wants of the traveling public, the popular low rate line along the South shore of Lake Erie, will sell tickets at greatly reduced rates on December 24, 25, 31 and January 1, good returning until January 2. For further particulars apply to J. Y. Calahan, General Agent, 111 Adams St., Chicago, Ill. 115

Horticulture.

KANSAS HORTICULTURISTS.

The twenty-ninth annual meeting of the Kansas State Horticultural Society convened at Lawrence, December 10, 1895. It was the largest attendance for years. President Wellhouse, the "apple king," presided, giving substance as well as proper dignity and decorum to the occasion.

The papers presented at this meeting were, as a whole, superior to those of any preceding meeting.

On the subject of "Reports on Orchards and Fruits," made by delegates, the following is a brief synopsis:

Allen county.—The apple, as well as the small fruit crop, was exceptionally good and the trees were in splendid condition.

Douglas.—The best crops of apples were confined to young orchards. The dry and hot weather caused many windfalls. Small fruits suffered from the same cause.

Franklin.—The fruit crop of all kinds was good in quantity and quality, including peaches and pears.

Geary.—The drought and hot weather practically ruined the apple, grape and strawberry crops. Peaches extra good. Cherries and small fruits a fair crop. The loss of apple trees in old orchards was the heaviest for years.

Greenwood.—This "steer" county was unfortunate in not having any heavy rains until August, and farm orchards suffered accordingly. The September storms knocked off most winter apples. The condition of trees is quite thrifty.

Jefferson.—Apples and pears a full crop, peaches nearly so, small fruits good. Orchards and vineyards quite thrifty. Farmers made a mistake by selling apples too early. Big money would have been realized by having placed fruit in cold storage. Old orchards have too many varieties. Quite a number of new commercial orchards are being planted.

Johnson.—Report similar to Jefferson county, with the exception of grapes.

Labette.—Winter apples a large crop—the best of years, quinces the same, peaches and pears only fair, strawberries a fair crop.

Leavenworth.—Early prospects for apples very promising, but subsequent unfavorable conditions resulted in only a half crop, yet the fruit crop paid better than any of the farm crops.

State of Missouri.—President Evans stated that the two weeks of very hot weather was the only drawback to a fine all-around crop in that State.

Nemaha.—Apple crop a fair yield, but, owing to a very dry season, apples ripened prematurely and about half dropped before picking time. Those that remained on the trees were very fine and more highly colored than usual. Early apples did not drop badly and were good. Yellow Transparent loaded with very fine fruit on very young trees. Many trees only three years planted had a bushel to the tree. Other sorts which did the best were Early Harvest, Maiden's Blush, Rambo, Grimes' Golden, Pennock, Wealthy, Fulton, Fall Wine, Jonathan, Ben Davis, Missouri Pippin, Genet and Winesap. Cherries were a full crop, Early Richmond, Montmorency, English Morello, Governor Wood, Empress Eugenia and Wragg leading. Plums were all loaded and were very fine, with Wild Goose leading all native sorts, and the Lombard, Bradshaw, Pond's Damson, Imp. Gage, fine and almost free from insects, and the Japan plums just splendid; Abundance and Burbank leading. Peaches did well; best varieties fruiting were Alexander, Amsden and Mountain Rose. Keiffer, Bartlett and Buffman pears for standard, and Duchess and Seckel dwarf did best. Apricots did fairly well, American sorts better than Russian. Nectarines, where there were trees, were full. Strawberries were a scant yield. Raspberries were a full crop; those leading were Kansas, Gregg, Mammoth Cluster and Souhegan. Blackberries were a failure—too dry. Gooseberries good; best sorts Houghton and Downing; industry does not show up. Fay's currant, Red Dutch, Versailles and White Grape all did

well. Grapes about a half crop, Concord, Worden and Lady doing best.

Osage.—Strawberries a light crop; raspberries much better. Winter apples in young or cultivated orchards good. One twenty-seven-year-old orchard still in cultivation was the exception of a large yield in old orchards.

Reno.—The dry, hot weather greatly reduced the crop, except with peaches and pears. Many new orchards and vineyards being planted.

Sedgwick.—The hot, dry weather caused many apples to windfall, peaches a fair yield, cherries and plums good, and strawberries nearly a failure. Orchards and vineyards quite thrifty.

Shawnee.—The best apple crop ever grown. Small fruits and peaches a good yield.

Washington.—Excessive drought affected the yield of all kinds except strawberries. There was no rain from early spring until August. The Missouri Pippin and Little Romanite were the chief varieties of apples grown this season.

Wyandotte.—Extra good year for fruits of all kinds, and apples never did better for quantity and quality.

The remainder of the first day's session was devoted to the presentation and discussion of the following program: "National Unity of our Horticultural Interests," E. Gale, of Mangona, Fla., ex-President of this society; "Cold Storage," led by the President; "Apples, Seconds and Thirds—What Shall We Do With Them?" discussion by Evans, Wellhouse, Taylor, Holsinger, et al.; "Welcome," Hon. A. L. Selig, Mayor of Lawrence; "Response," Judge L. Houk, Hutchinson; "A Few Horticultural Statistics," Hon. F. D. Coburn, Secretary State Board of Agriculture; "Soil Moisture" (with large illustrations), H. R. Hilton, Topeka.

SECOND DAY'S SESSION.

At the opening of the second day's session, Mr. John Wiswell, of Columbus, Kas., sole manufacturer of "Carnahan's Tree Wash and Insect Destroyer," was called upon by the society to explain this new remedy. In a brief talk the manufacturer explained how the compound is made. That it would entirely destroy borers and aphids and protect the tree from future attacks. That it would protect the plum from the sting of the curculio and all fruit trees from rabbits. That it is one of the most powerful fertilizers known, greatly increasing the output of the fruit and making it of much finer quality. The mode of application is cheap and simple. It is already being used by many of the largest fruit-growers and nurserymen in the country. The endorsement which it bears and the practical manner in which it is used commends itself to every fruit-grower. Every fruit-grower should try it.

The report of the Secretary, Hon. Edwin Taylor, was then read. It explained that, having been elected without his knowledge or consent, he had been unable to assume the duties of the office in person, but had deputized a practical and successful horticulturist, William H. Barnes, who, as acting Secretary, had performed the duties in a manner which Secretary Taylor highly commended.

The report of Acting Secretary Barnes gave an account of the removal of the office to Topeka and the progress made and the interest manifested.

The Treasurer, Major F. Holsinger, of Rosedale, showed that the State appropriation for the society does not pass through his hands, but is paid by the State Treasurer on warrants from the State Auditor, which are issued directly to the Secretary on the approval of his vouchers. The membership fees remain in the treasury, subject to the order of the society.

Papers on "Small Fruits" were presented by Fred Eason, of Lansing, and B. F. Smith, of Lawrence. In the discussion which followed these papers, J. F. Cecil, of Topeka, asked for remedies for rust in the strawberry and for anthracnose in the raspberry. Replying, B. F. Smith said four crops only should be taken from a raspberry patch, and stated that there have been some indications of anthracnose in blackberries, and five years is long enough to keep a patch in this fruit. Thought

it not practicable to get a crop of strawberries the first year after fall planting. A. L. Entsminger, of Silver Lake, said dip raspberry sets, before planting, in Bordeaux mixture to kill anthracnose. W. H. Brown, of Leavenworth, has for the past two years produced two-thirds crops of strawberries on plants set in June, July and August. Considers Parker Earle the best strawberry for fruit, though not a prolific producer of new sets. He grows strawberries continuously on the same ground, his soil being limestone. Mulches for drought. President Evans, of the Missouri State Society, thinks there has never been any over-production of fruit in this section. Considers judicious marketing by organization and co-operation of first importance. A. Chandler, of Argentine, thinks losses in planting result from carelessness in handling. Last spring he lost only 1 per cent. of strawberry plants set. Acting Secretary Barnes thinks losses on fruits result more from bad distribution than from over-production. Had found it extremely profitable to use the telegraph to ascertain the condition of markets. Dr. Stayman would plant strawberries that don't rust and named a large number.

Billy Edwards, Secretary of State, was called out and made a ringing speech in favor of the society and its work.

Acting Secretary Barnes read a paper on "The Outlook."

The afternoon session was given to papers on "Irrigation With Storm Waters," by Hon. Geo. M. Munger, of Eureka; "Irrigation in Horticulture," by Judge J. S. Emery, of Lawrence; "Remarks," by Prof. Erasmus Haworth of the State University; "Orcharding With Irrigation," by E. B. Cowgill, editor of the KANSAS FARMER; an account of experiences in irrigation, by C. H. Longstreth, of Lakin, and "Horticulture in Japan," by Prof. C. C. Georgeson, of the State Agricultural college.

In the evening there was an address by Chancellor F. H. Snow, of the State University; an illustrated paper on "The Campus," by Prof. J. D. Walters of the State Agricultural college; "Horticulture in Greenland," by Prof. L. L. Dyche, of the State University, and "Horticultural Progress," by Hon. Edwin Taylor, of Edwardsville.

THIRD DAY'S SESSION.

The third day's session opened with the usual attendance and interest. Every one seemed to enjoy the sessions this year as never before. G. W. Bailey gave his paper on "Sumner County Horticulture." Fruit interests have suffered materially from long repeated droughts, especially apples. Grapes and strawberries have never been an entire failure during this period. Cherries have paid better than any other crop.

The question of subsoiling came up, with a spirited discussion, and was denounced and advocated with equal vigor. Some had received splendid results, others had lost by it. Prof. Mason, of the Agricultural college, stated that their three years experience was decidedly in its favor. Such plats did not dry out like others not subsoiled. The society could not agree or disagree, as a body, on the merits or demerits of subsoiling for fruit-raising.

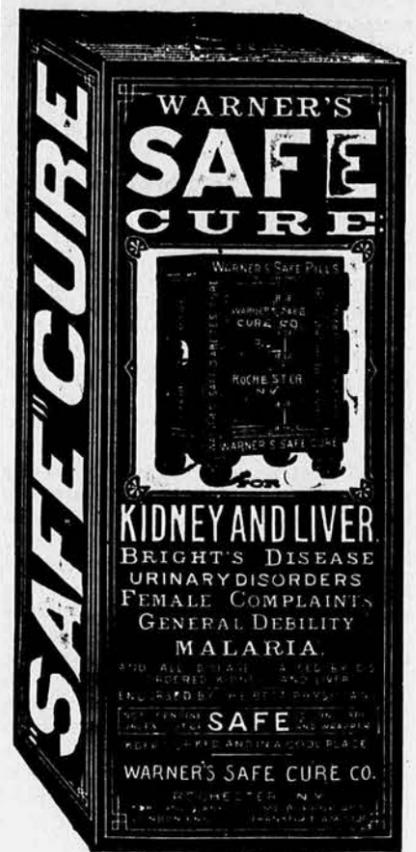
The Committee on Exhibited Fruits made a detailed report, showing that 200 plates of apples were shown from Kansas, Missouri and New Mexico.

The paper on "Kansas Wind and Water," by S. T. Kelsey, Kawana, N. C., was a splay and interesting production by an old-time member of the society. He gave some practical advice, also some inside history regarding the Kansas railroad schemes of experimentation in the timber culture act, which proposed much but finally were dropped. This paper will be published soon in the KANSAS FARMER.

Prof. S. C. Mason, of the Kansas Agricultural college, gave a very able and instructive paper on "Notes on Some of Mr. Munson's Hybrid Grapes."

A graphic story of "Fruit Growing in Western Kansas" was well told in an address by C. H. Longstreth, of Lakin, Finney county.

Prof. E. A. Popenoe, of the State Agricultural college, gave one of his



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famous illustrated lectures on "Some Insects Injurious to Cottonwood Trees," which, if it can be shown in the society's next report as graphically as given, will be considered one of the most valuable reports of this kind the society has ever had.

The afternoon session was "ladies' session," and consisted of a "Talk About Flowers," by Mrs. L. Houk, Hutchinson; "Nature's Lessons," by Mrs. F. Holsinger, Rosedale, and "Rewards in the Flower Garden," by Mrs. T. Lee Adams, of Kansas City. Each of these papers were of a high order and very entertaining, and well filled with practical matters relating to the home and floriculture. They will be presented in due time in these columns.

Before adjourning for the evening session, the Committee on Resolutions presented a vote of thanks to the officers of the Missouri Society for their presence and assistance to the Douglas County Society; to Prof. Dyche, President Snow and other members of the faculty for their entertainment.

Capt. E. P. Diehl offered a resolution, which was adopted, making the *American Horticulturist*, of Wichita, the official organ of the society.

The closing evening session was a special program prepared by the Douglas County Society, assisted by the Oratorio Society and the University orchestra and other talent. Only two orators from the State Society contributed to the entertainment, and they were Senator Taylor, of Wyandotte county, and Hon. Geo. M. Munger, of Greenwood county. The convention then adjourned until the next semi-annual session.

It is hoped that the KANSAS FARMER will be able to lay most of the papers

read, before its readers during the next few months.

Undoubtedly new life and fresh blood has been infused into this society, and those who expect it to be in the future an important factor in Kansas development will not be disappointed.

What to Do With Our Seconds and Cull Apples.

By J. C. Evans, President Missouri Valley Horticultural Society, read before the annual meeting of the Kansas State Horticultural Society.

Since some of the many commercial orchards in the West have come into bearing, the question naturally arises in the mind of the orchardist: "What can be done with the vast quantity of windfalls and culls of our orchards?"

It is a natural result of every orchard that bears fruit that, from first to last, at least 30 per cent. of the crop is not fit to be packed and sent to market. Nor is this confined to the apple orchard. The pear, the peach and the plum all come in for a large share of waste. The latter are still more difficult to handle than apples, as they come earlier in the season and must be handled quickly, if at all.

There is always some demand for canned or evaporated peaches, at some price, but since the country has been flooded with canneries and evaporating plants the prices are so low that the products will scarcely pay for the labor, to say nothing of \$5,000 or \$6,000 invested in canning machinery or several hundred in evaporators.

There is a growing demand among hotels, eating-houses and pie-makers for canned apples in gallons, and at one time we thought we had solved the problem as to what to do with our cull apples, but, like most other products in this line, the price has gone so low that it barely pays for the labor and other expenses of getting them ready for market.

Apples may be evaporated at a cost of about 3 cents a bushel, and a bushel will make about five pounds of dried fruit, worth on the market now about 4 1/2 cents a pound, or nearly 25 cents for the product of a bushel of apples, leaving less than 10 cents for fruit, freight and commission.

If we were prepared and could utilize in canning and evaporating all the waste products of our orchards, and could sell them all readily and quickly at a small margin of profit, then the problem would be solved. But can we? I say, no. There are now in the hands of the producer canned goods of the pack of 1894 that could not be sold any time up to now for more than barely the cost of packing them. Slick-tongued agents, mostly representatives of a Chicago firm, have flooded all the country and persuaded the people of many small towns that their only salvation was a canning factory. They agree with them to furnish the outfit for a canning plant for so much (about double the value), and as an inducement will take a liberal amount of stock in the concern, and the deal goes, the plant is erected and run the first year at a loss, the products, good or bad, are forced on the market at a great sacrifice, and this is one reason why canned goods are so very low. It is said there were erected last year in the State of Indiana alone enough canneries to produce canned goods for almost the entire country.

A large amount of our culls may be worked into jelly stock, but then it would have to compete with the cheap stuff made from gelatine and other cheap material, so there would be nothing left for the man who grows the apples.

A vast amount of our culls might be worked into cider, but that is sold at so low a figure now by those who are prepared to make it in large quantities that there is nothing in it for the grower. You say: "Make vinegar." Well, apples do make the best of vinegar, but what will be done with it when it is made? Go to the dealer and offer it for sale and he will tell you he can get all the vinegar he wants at 6 or 7 cents a gallon, and his customers are satisfied and he gets his profits, admitting it is a worthless stuff, made of cheap acids; so there is no money for the grower, in cider. Even if we could utilize all our culls in all or any of

these ways there would yet remain a large amount of what we call "waste." Those too rotten, knotty, ill-shaped ones and those that have dropped prematurely, and so on. What will be done with all this waste? You say: "Feed it to hogs." Well, a reasonable amount of it is good for the hog, but too much without other feed is harmful; besides, what commercial orchardist keeps a sufficient number of hogs to consume all the waste of his orchards?

Now, Mr. Chairman, as there is no money in canning, evaporating, making cider, or vinegar, or even feeding to hogs, the question remains unanswered, "What shall we do with our culls?" There is a way to answer it, however, but it is a way I would hardly dare suggest to the Kansas fruit-growers, besides the statutes of the State prohibit him from availing himself of it. In that way every bushel of fruit not suitable to pack and ship to market can be made worth from 30 to 50 cents, besides converting them into a greatly condensed form, saving largely in packages and freight, and shipping when you please. Many are taking advantage of this. Some, perhaps, as a matter of choice, but most of them through necessity. The extremely low price of fruits the last few years, and the extremely high rates of transportation have made it necessary for the fruit-growers to look for some other way to turn the products of his labor into money. In this way the wind-falls, culls and waste of a commercial orchard may be made to go a long way toward paying the running expenses.

While the manufacture of fruit spirits is not popular in some sections, it is the only way to answer the question, besides it enables the fruit-growers to furnish the laboring man more work and pay him better wages and give his children better schooling. It is an inducement to the orchardist to clean up and take out all wormy, scabby and diseased fruit that would otherwise remain on the ground and breed destruction for the next crop.

Mr. Chairman, your Secretary has asked me to answer this question, and if I have not suggested anything that will help your orchardist to utilize his culls, I may at least have told some ways that will not pay, so that they need not make the mistake that so many have made, and squander their means in canning factories, to be sold out at 50 cents or less on the dollar after running the first year at a great loss.

In the Dairy.

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

An Ex-Governor as a Butter-Maker.

Ex-Governor Lewelling has moved his creamery from 120 North Market street to 325 West Douglas avenue.

Yesterday a reporter for the *Eagle* sauntered into his new place of business and found nothing in the office but the Governor's shoes, that had just been taken off. A seductive smell of buttermilk inspired a desire to make further explorations, and opening the door to a back room, the tall form of the ex-Governor, clad in an ample white apron and slippers, was seen. Mr. Lewelling is always affable, and inside of a minute he was beside a barrel with a dipper in his hand ready to serve buttermilk with a generous hand. It makes no difference who goes to see Mr. Lewelling, poor or rich, statesman or laboring man, he is always sure of a hearty welcome and as much buttermilk as he deems wise to drink.

"I have to do my own work now," said the Governor, as he dug a big wooden cleaver into a pile of butter and sent it flying into a tub. "There is as pretty a piece of butter as you ever laid your eyes on," as he presented a piece of it to the reporter to examine; and it was nice butter.

"Do you do your own churning, too?"

"Yes, that is the first thing I do in the morning, when the cream comes in. You didn't know that I made this butter from cream. Well, that is strange. Why, of course, I make it from cream, and the very best cream

at that. I first examine the cream, see that it is all right, get it in the right temperature and then put it into the churn with a little coloring. When the butter is made, I wash it thoroughly, remove every drop and sign of the milk from it, so that when I put it in the tub it will stay fresh and sweet for months. If I do say it myself, I think I make the best butter in the market to-day. I make it for a high-class butter, and, of course, must get a fair price for it. My butter goes almost everywhere, and wherever it goes once, there is a big demand for it. Owing to the hard times people are contenting themselves with inferior goods, and hence my trade is not as large as it used to be a few years ago, although I sell in a more extensive territory than ever before."

That Mr. Lewelling understands the business of making butter no one who sees him in his laboratory will deny for a moment. He is not only a hard worker, but a neat worker, and when a firkin of butter is ready for the cover it is as nice as any woman with dainty hands could make it.—*Wichita Eagle.*

Relative Milk Yield.

Careful comparisons made in Germany from the records of large herds, show that there is no relation, or even approximate relation, between the live weight of cows and the yield of milk. The record of a Norwegian herd for ten years, shows that in different years the average yield of milk per pound of live weight averaged, for the herd, between 4.39 and 6.6 pounds. The amount increased during the first eight years. The individual record for 1893 for a herd of eighteen cows shows that the milk yield varied from 4,205 to 8,196 pounds during the year, and yield per pound of live weight ranged from 4.4 to 7.3 pounds.

Dairy Notes.

Give the cow a clean stall by herself.

Have your cow stables warm yet well ventilated.

A popular feed for the cow this winter should be ground oats.

To be a good dairyman requires intelligence rather than large capital.

The secret of success in the dairy is to reduce the cost of making good goods.

Have your cows gentle by kind treatment if you want big returns in milk and butter.

Butter at 20 cents per pound today will make as much profit as did 30-cent butter ten years ago.

No business requires to be kept more emphatically under one's thumb than does successful dairying.

Study the nature of your cows and fall in with their moods. It pays to be agreeable, even to a cow.

The reputation of this State for growing alfalfa and soiling crops is a feather in her cap as a dairy State.

Everybody is agreed as to the virtue of the silo as a means of preserving corn and corn fodder in their best estate.



If you have FIVE or more Cows a Cream Separator will save its cost each year of use. Beware of imitating and infringing machines.

Send for new 1895 Catalogue. **The DeLaval Separator Co.**

Branch Offices: ELGIN, ILL. General Offices: 74 CORTLANDT ST., NEW YORK, N. Y. H. W. CHENEY, Agt., North Topeka, Kas.

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

WILLIS NURSERIES.

Offers for fall of 1895 large stock, best assortment. Prices low. Stock and packing the best. We should be glad to employ a few reliable salesmen. Address: A. WILLIS, Ottawa, Kansas. [When writing mention KANSAS FARMER.]

EARLY KANSAS SEED POTATOES

345 bu. per acre. An enormous yielder, a great keeper and a splendid table potato. Supply limited.

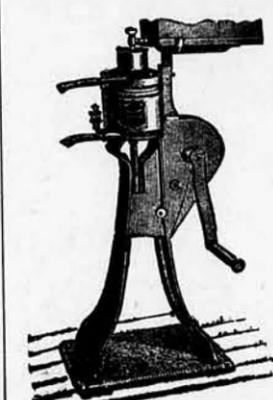
CLARENCE J. NORTON, Morantown, Kas.

CROUP, PILES, Colds, coughs, hoarseness, etc., positively cured. One to three doses relieve. Price, fifty doses 50 cents. All forms, diarrhoea, dyspepsia, etc., immediate relief. Price 50 cents. To those never having used our celebrated remedies, will send a prescription of either for 25c. as a trial. Dr. W. T. Kirkpatrick, Lincoln, Ill.

I suffered from catarrh of the worst kind ever since a boy, and never hoped for cure, but Ely's Cream Balm seems to do even that. Many acquaintances have used it with excellent results. — Oscar Ostrum, 45 Warren Ave., Chicago, Ill.

CATARRH ELY'S CREAM BALM opens and cleanses the Nasal Passages, Allays Pain and Inflammation Heals the Sores, Protects the Membrane from colds, Restores the Senses of Taste and Smell. The Balm is quickly absorbed and gives relief at once. A particle is applied into each nostril and is agreeable. Price 50 cents at Druggists or by mail. ELY BROTHERS, 56 Warren Street, New York.

THE KING CURE OVER ALL FOR RHEUMATISM, NEURALGIA, SCIATICA IS



NO TIME TO LOSE If you are losing valuable butter fat by inefficient separation, profit by the experience of others and get the best machine on the market. **The Improved U. S. Cream Separator.**

12 1/2 PER CENT. MORE BUTTER. We were getting 12 lbs. of butter at a churning, and with the Improved No. 5 U. S. Separator we get 13 1/2 lbs. When I was away our boy, 11 years old, run the milk of six cows, and said it did not tire him. Our girl, 13 years old, cleans the machine. We run 45 lbs. of milk in 7 1/2 minutes (360 lbs. per hour). ELKDALE, PENNA., Sept. 28, 1895. W. B. CHURCHILL.

We have the Best Separator for the Creamery. We have the Best Separator for the Dairy. **PRICES, \$75.00 AND UP.** Made under Patents owned exclusively by us. Beware of imitating and infringing machines. Send for Catalogues of anything for the Creamery or Dairy. Agents wanted in every town and county where we have none. **VERMONT FARM MACHINE CO.,** Bellows Falls, Vt.

WELL-TRAINED BEES.

An Englishman Once Educated a Swarm of the Busy Insects.

In the education of animals it is more remarkable to see the smaller ones trained to exercises that seem absurdly out of place by the patient care of the human brain that devotes itself to this educational process. Mice, canary birds and fleas! They have all been upon the boards. The idea of teaching the vivacious flea to perform certain specific antics! How was it instilled into its small imperceptible faculties that in obedience to certain signals from the master, man, it should do things which would never enter into the mind of the simple, natural flea!

Among the smaller animals there is none that seems so intelligent, so practical and sober-minded as "the little busy bee." He will mount in the air, and fly in a straight line for his hive. It has passed into a proverb, and when a man wishes to say that he has gone by the shortest line from one point to another (and that, as mathematics teaches, is the straight line), he says he "made a bee-line" for the place. So in the structure of their cells they apply by instinct the form and proportions which reason proves to be most effective and economical of space. They are fine subjects and obey implicitly their queen, and they take good care of the drones as long as they are useful to the well being of the community, and kill them as soon as they cease to be so.

It would appear, therefore, a very simple thing to teach bees tricks and introduce them to a professional life as performers on the amusement stage. Yet probably very few have ever seen them trained. In 1831, however, a man named Wildeman, of Plymouth, did train a troupe and exhibit them for the recreation of the curious public. He got swarms of bees so well trained that he could make them enact maneuvers with as much precision and unity as troupes of soldiers go through field tactics. This man used to exhibit the bees in a large hall, outside of which was a garden. When the bees got through working as trick performers they could have a good time playing among the flowers. Wildeman would appear before the audience with the bees swarming all over him. They were on his face, on his hands, crawling over his clothes, and his pockets were full of them. It looked as if he were a great flower full of material from which honey could be made, from the assiduous attention which these busy little bees paid to him. Whether they had been despoiled of their stings or not is not said. But he must have felt uncomfortable if he knew that many scores of bees, were they so minded, could have stung him at will. Such a quantity of bee stings as that could easily settle a man and leave him stung to death. Anybody who has ever been unlucky enough to receive the sting of even one healthy, vigorous bee will not find it difficult to believe this.

The hives of the bees were in a certain part of the large hall quite removed from the stage where Wildeman stood with them thickly clustered on him. All at once he would give a whistle and presto! The bees started off and flew straight to their hives. When they had got well settled there he would whistle again, and back they flew and settled on his face and hands and clothes once more. This was done with the greatest promptness and regularity. It must have been with some solicitude that the spectators assisted in this performance. But it is due to the bees, and perhaps to Wildeman, to say that no one was ever stung by them.

Virgil, the great Latin poet, who wrote four poems on different agricultural themes, devotes one of these Georgics, as they are called, entirely to bees. But he nowhere says they can be taught to do the things which this man of Plymouth trained them to perform. Virgil's bees know a great deal, but they have learned it all from nature.—St. Louis Republic.

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

BEATS THEM ALL!

Eggs turned without opening the machine. Send for circular of the best INCUBATOR, also book of plans to make the same. Price of book \$1. JACOB YOST, Arkansas City, Kas.

FRENCH BUHR MILLS

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

BUY THE Blue Valley Feed Mill



If you want a mill that will grind corn and cob and all small grains. The largest mill made, hence the greatest capacity. FULLY WARRANTED. Made in sweep and power styles and five different sizes. Write for illustrated circulars.

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THE HEATING ATTACHMENT!



In connection with the Lake City Automatic Stock Fountain, will enable you to water 50 to 150 pigs daily, as conveniently in the winter as in the summer. You will never have to cut ice from trough. Bank up barrel thoroughly, attach fountain to same or to tank, slip the small attachment under drinking cup, and it will never freeze. The heat is produced by a chemical combination of ground charcoal and coke, pressed into bricks 2 1/2 x 2 1/2 inches, burning 12 to 18 hours. As usual, will send one on trial, express prepaid, to any address, for \$3.40, and include free, coal to try the matter thoroughly to be paid for when found satisfactory. As it costs nothing to try, send for one. Mention express station. AGENTS AND DEALERS wanted in every locality. STOCK FOUNTAIN CO., Lake City, Iowa.

FEED COOKERS AND TANK HEATERS.



Write for Catalogue and Prices. U. S. WATER & STEAM SUPPLY CO., KANSAS CITY, MO. When you write mention Kansas Farmer.

By using one of these Feed Cookers you can realize on your present crop of **Corn 75¢ per bushel.**

This Justly Celebrated Feed Cooker will save any farmer, feeder or Dairyman Hundreds of Dollars each Year. Will pay for itself the first year it is used. Cook your corn before feeding to cattle or hogs, increasing its fattening qualities 50 per cent. and make each bushel go about 1/4 further. It will enable you to realize 75c per bushel for your present crop—it will steam moldy hay or corn perfectly sweet and make dry cornstalks or straw soft and palatable. Made of steel boiler plates, with boiler tubes passing directly through the water—will do your work quicker, cheaper, and is guaranteed to be better and give better satisfaction than any other.

CREAMERY AND DAIRY SUPPLIES of every description; Boilers, and Engines; Milk Cans or Butter and Cheese making supplies. **Creamery Package Mfg. Co.** Dept. B. Kansas City, Mo. When you write mention Kansas Farmer.

THE STRAY LIST.

FOR WEEK ENDING DECEMBER 4, 1895.

Lyon county—C. W. Wilhite, clerk. STEER—Taken up by Chas. Moss, in Agnes City tp., November 4, 1895, one two-year-old steer, all white, part of left ear gone, branded on left loin, has been dewlapped; valued at \$30. STEER—Taken up by A. McCutcheon, in Emporia tp., November 2, 1895, one red two-year-old steer, white face; valued at \$24.

Rooks county—Chas. Vanderlip, clerk.

HORSE—Taken up by Israel Morris, in Northampton tp., November 13, 1895, one black horse, 3 or 4 years old, four feet four inches high, both hind feet white, small star in forehead, blind in left eye; valued at \$10. STEER—Taken up by Philip McNulty, in Stockton tp., November 10, 1895, one roan muley steer, 18 months old, white face, white belly, two white feet, line back; valued at \$15.

Wabaunsee county—J. R. Henderson, clerk.

STEER—Taken up by A. D. Elmore, in Mill Creek tp., (P. O. Halifax), one red two-year-old steer, droop horns, white spot in forehead, no marks or brands; valued at \$20.

HEIFER—Taken up by T. B. Henry, in Wilmington tp., (P. O. Eskridge), one red two-year-old steer, slit in left ear, crop off right ear; valued at \$16.

STEER—Taken up by A. Schwartz, in Wilmington tp., (P. O. Eskridge), one red two-year-old muley steer, branded K on left hip, hog ring in left ear; valued at \$35.

Hodgeman county—John L. Wyatt, clerk.

COW AND CALF—Taken up by John Knouffer, in Sawlog tp., (P. O. Jetmore), one red and white cow, branded J- on left side, both ears marked by cutting out underneath; valued at \$18.

Elk county—S. D. Lewis, clerk.

STEER—Taken up by P. H. Hard, in Painterhood tp., (P. O. Busby), November 20, 1895, one red and white three-year-old steer, branded S on left hip; valued at \$30.

FOR WEEK ENDING DEC. 11, 1895.

Osage county—E. C. Murphy, clerk.

COW—Taken up by W. H. Dodge, in Vassar tp., November 9, 1895, one roan cow, left horn broken off, branded P on left hip, brush of tail about half gone.

Labette county—J. F. Thompson, clerk.

MULE—Taken up by J. W. Eikenberry, in Mt. Pleasant tp., November 29, 1895, one light bay or sorrel male mule, 4 years old, fifteen hands high, black mane and tail, dark stripe on back and across withers; valued at \$25.

Cherokee county—P. M. Humphrey, clerk.

MARE—Taken up by D. C. Jennings, in Garden tp., (P. O. Galena), November 16, 1895, one dark bay mare; valued at \$15.

HORSE—By same, one flea-bitten gray horse, scar on right front foot, weak eyes; valued at \$10.

MARE—Taken up by William Mallett, in Lowell

tp., (P. O. Galena), November 18, 1895, one bright bay mare, lame in left hind leg; valued at \$12. COLT—By same, one male colt, 1 year old; valued at \$10.

FOR WEEK ENDING DEC. 18, 1895.

Wilson county—V. L. Polson, clerk.

MULE—Taken up by John Miller, five miles southwest of Fredonia, November 25, 1895, one black horse mule, 1 year old, no marks or brands.

Labette county—J. F. Thompson, clerk.

MARE—Taken up by D. M. Nafus (P. O. Oswego), November 28, 1895, one iron-gray Norman mare, 4 years old, fifteen hands high; valued at \$20.

HORSE—Taken up by John Rosson, in Howard tp., (P. O. Valeda), November 21, 1895, one black horse, 4 years old, white spot in forehead, white spot on nose, right hind leg white half way up.

COLT—By same, one black horse colt, 3 years old, white spot in forehead.

Lyon county—C. W. Wilhite, clerk.

STEER—Taken up by Henry Drier, in Center tp., November 30, 1895, one one-year-old steer, red with some white spots, some white in face, medium size, branded on left hip with indistinct brand; valued at \$18.

Coffey county—T. N. Bell, clerk.

HEIFER—Taken up by Milford Hill, in Neosho tp. (Crotty P. O.), one black heifer, 1 year old, white belly, crop off left ear, no brands; valued at \$10.

Chase county—M. K. Harman, clerk.

TWO STEERS—Taken up by Geo. C. Ellis, in Toledo tp., (P. O. Cottonwood Falls), December 9, 1895, two red steers—one has white face, branded L B on left side and I on each hip; the other is a muley, branded H L B on left side and I on each hip; valued at \$32 50 each.

Wabaunsee county—J. R. Henderson, clerk.

HEIFER—Taken up by Wm. Threshy, in Mission Center tp., (P. O. Eskridge), November 30, 1895, one red heifer, 2 years old, no marks or brands.

Bourbon county—G. H. Requa, clerk.

SWINE—Taken up by John Smith, in Timber Hill tp., four black sows, three sows and one barrow.

Allen county—Jas. Wakefield, clerk.

HORSE—Taken up by D. D. Pisor (P. O. Geneva), November 25, 1895, one brown horse, left front foot white, right hind foot white, star in forehead, spot on the nose, branded S on right side, shoes on front feet.

PONY—By same, one small bay horse pony, small star in forehead, spot on nose, white line across left arm, Mexican brand on left side, shoes on front feet.

Pottawatomie county—Frank Davis, clerk.

STEER—Taken up by R. F. Glenn, in Grant tp., December 9, 1895, one red line-back steer, crop off left ear; valued at \$20.

KENDALL'S SPAVIN CURE. Certain in its effects and never bil-ters. Sold everywhere.

THOS. B. SHILLINGLAW, Real Estate and Rental Agency, 115 East Fifth St., Topeka, Kas. Established in 1884. Calls and correspondence invited.

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A GREAT BOOK FOR THE PATRIOTS OF AMERICA! A CITIZEN'S MANUAL IN LIBERTY AND PROGRESS!



AN EPIC IN PROSE OF GLORIOUS STATES AND A MIGHTY AND PROGRESSIVE NATION!

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THE AMERICAN HISTORIAN.

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- Voyages of the Old Norsemen to the New World;
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Historical Illustrations!

Original Sketches, Fine Engravings,

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Man sailed and sailed upon the turbulent bound Of ancient seas and continents in quest Of something better—till at last he found The Indies of Freedom in the West!



The weight of this book is nearly three pounds, and it requires 40 cents to pay the postage on it to any address in the United States. It has heavy covers, and would be an ornament to any library. Retail price made by the publishers is \$3.75. **OUR OFFER!**—Send us \$2.40 and we will send you KANSAS FARMER one year and mail the Book to any address in U. S. Address **KANSAS FARMER CO., Topeka, Kas.**

1896.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Dec. 16.—Cattle—Receipts since Saturday, 6,211; calves, 112; shipped Saturday, 1,748 cattle, no calves. The market was nominally steady. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Lists prices for various types of cattle and sheep.

TEXAS AND INDIAN STEERS. 56 Ind. 1,006 \$3.25; 30 fed. 990 \$3.15; 15 1,024 3.10; 23 Ind. 1,004 2.95; 73 Ind. 1,076 2.90; 11 907 2.80; 1 Ind. 1,150 2.75; 4 906 2.25

WESTERN STEERS. 37 1,591 \$4.00; 11 1,118 \$3.35; 10 1,030 3.35; 9 672 3.15; 2 570 \$2.50

WESTERN COWS. 25 872 \$2.30; 21 can. 810 \$1.80

COLORADO COWS. 54 934 \$2.35; 2 935 \$2.00

TEXAS AND INDIAN COWS. 14 797 \$2.30; 28 heif. 596 \$2.50; 20 1,079 2.20; 42 803 2.15; 30 668 2.00; 1 520 2.00

COWS AND HEIFERS. 26 869 \$3.50; 4 1,005 \$3.25; 2 985 3.00; 21 Her. 1,040 3.10; 8 731 2.90; 1 670 2.85; 18 506 2.70; 1 1,140 2.75; 1 1,150 2.70; 1 1,240 2.65; 6 612 2.60; 23 878 2.50; 43 961 2.45; 2 1,270 2.40; 1 1,170 2.35; 10 1,038 2.30; 4 912 2.10; 2 1,040 2.00; 1 1,100 1.75; 1 1,180 1.25

STOCKERS AND FEEDERS. 5 880 \$3.45; 2 1,135 \$3.25; 2 1,001 3.30; 3 627 3.25; 1 1,710 3.10; 3 1,143 3.00; 1 730 2.75; 3 700 2.35

Hogs—Receipts since Saturday, 5,049; shipped Saturday, 211. The market opened uneven and closed 5c lower and dull. The following are representative sales:

Table with columns: No., Price, No., Price. Lists prices for various types of hogs.

Sheep—Receipts since Saturday, 1,151; shipped Saturday, none. The market was about steady. The following are representative sales:

Table with columns: No., Price, No., Price. Lists prices for various types of sheep.

Horses and Mules—Receipts since Saturday, 638; shipped Saturday, 160. The heavy receipts and the large number of buyers on the market looks favorable for a good trade this week. The auction sales began this morning and there were a number of new southern buyers on the market. As usual trade was slow at the opening.

Chicago Live Stock. CHICAGO, Dec. 16.—Cattle—Receipts, 15,000; market steady; best beefs, \$3.21@4.75; Christmas beefs, \$4.75 @5.00; stockers and feeders, \$3.40@3.65; mixed cows and bulls, \$1.40@3.55; Texas, \$2.75@3.50.

Hogs—Receipts, 45,000; market active and steady; light, \$3.40@3.65; rough packing, \$3.35@3.40; mixed and butchers, \$3.40@3.60; heavy packing and shipping, \$3.45@3.60; pigs, \$2.40@3.50.

Sheep—Receipts, 15,000; market strong; western, \$2.50@3.20; Texas, \$2.00@2.75; lambs, \$3.00@4.75.

St. Louis Live Stock. ST. LOUIS, Dec. 16.—Cattle—Receipts, 3,500; market 10c higher; native steers, \$3.55@5.00; Texas steers, \$2.40@3.75.

Hogs—Receipts, 3,000; market 5c higher; light, \$3.25@3.50; mixed, \$3.50@3.55; heavy, \$3.30@3.60.

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

Chicago Grain and Provisions. Dec. 16. Opened High'st Low'st Closing

Table with columns: Dec. 16, Opened, High'st, Low'st, Closing. Lists prices for various types of grain and provisions.

Kansas City Grain. KANSAS CITY, Dec. 16.—The tables were full of samples of wheat this morning and buyers were slow to trade. A few early sales were at almost steady prices, but bids generally were a cent lower on the good wheat and 2 cents lower on poor samples. Most of the offerings were finally cleaned up at about those declines.

Receipts of wheat to-day, 170 cars; a year ago, 11 cars.

Sales were as follows, track, Kansas City: Hard; No. 2, 6 cars 57c, 4 cars 56 1/2c, 4 cars 56c; No. 3, 1 car 53c, 14 cars 52c, 3 cars 51 1/2c, 3 cars 51c, 7 cars 50c; No. 4, 1 car 47c, 3 cars 46c, 3 cars 45c, 2 cars 44c, 1 car 43c, 3 cars 42c, 1 car 40c; rejected, nominally 35@40c. Soft, No. 2 red, 1 car 67c, 3 cars 68c; No. 3 red, nominally 64@66c; No. 4 red, nominally 53@58c; rejected, nominally 45c. Spring, No. 2, 4 cars 57c, 4 cars 56 1/2c, 2 cars 56 1/2c, 5 cars 56c, 2 cars 55 1/2c, 2 cars 55c; No. 3, 1 car 54 1/2c, 4 cars 54c, 3 cars 53 1/2c, 4 cars 53c, 3 cars 52c; rejected, nominally 45@48c; white, No. 2, 1 car 56 1/2c.

Corn met with an active demand, both for spot and futures. Some sales were 1/2 to 1/4c lower. Offerings were large. There was a good demand for January corn.

Receipts of corn to-day, 160 cars; a year ago, 81 cars.

Sales by sample on track, Kansas City: No. 2 mixed, 4 cars 22 1/2c, 19 cars 22 1/4c, 16 cars 23 1/4c, 40,000 bu. December 22 1/4c, 70,000 bu. January 21 1/4c, 5,000 bu. 21 1/2c; No. 3 mixed, 3 cars 22c; No. 4 mixed, nominally 21@21 1/2c; white corn, same as mixed.

Oats were a little lower as a rule. There were large offerings and the demand was fair.

Receipts of oats to-day, 36 cars; a year ago, 8 cars.

Sales by sample on track, Kansas City: No. 2 mixed, 3 cars good 16c, 1 car color 17c; No. 3, 2 cars 14 1/2c, 1 car 14c; No. 4, nominally 13@14c; no grade, nominally 13c; No. 2 white, 1 car 17 1/2c, 12 cars 17 1/4c, 1 car 17 1/4c, 1 car 17c, 1 car 16 1/2c; No. 3 white, 1 car 16c.

Hay—Receipts, 112 cars; market weak. Timothy—Choice, \$11.50 @12.50; No. 1, \$10.00 @11.00; No. 2, \$7.50 @9.00; No. 3, \$5.00 @6.50; fancy prairie, \$7.00 @7.50; choice, \$6.00 @6.50; No. 1, \$5.00 @6.00; No. 2, \$4.50 @5.00; packing hay, \$3.00 @4.00.

St. Louis Grain. ST. LOUIS, Dec. 16.—Receipt, wheat, 103,834 bu.; last year, 11,714 bu.; corn, 145,000 bu.; last year, 65,865 bu.; oats, 44,000 bu.; last year, 29,700 bu.; shipments, wheat, 8,000 bu.; corn, 21,000 bu.; oats, 5,100 bu. Closing prices: Wheat—Cash, 63c bid; December, 55 1/2 @56 1/4c; May, 60 1/4c. Corn—Cash, 23 1/4c; December, 23 1/2 @23 3/4c; February, 23 1/2c bid; May, 23 1/4c bid. Oats—Cash, 16 1/2c; December, 16 1/4c; May, 16 1/2c

Kansas City Produce. KANSAS CITY, Dec. 16.—Butter—Creamery, separator, 23c; firsts, 19 @20c; dairy, fancy, 14 @15c; store packed, fresh, 10 @12c; off grades, 8c; country roll, fancy, 13 @15c; choice, 10 @12c.

Eggs—Strictly fresh candled stock, 18c per doz.; cold storage, 14 1/4c.

Poultry—Hens, 4 1/4 @5c; springs, 6 @6 1/2c; roosters, 15c; young, 17 1/4c; turkeys, 7c; ducks, 7c; geese, young, fat, 6c; pigeons, 60c per doz.

Fruits—Apples—Fancy, \$2.25 @2.50 per bbl.; choice, \$1.75 @2.00; common to good, \$1.00 @1.50 per bbl. Cranberries, \$3.25 @3.50 per bbl.

Kansas City Sheep Market. (Special report, furnished by KNOLLIN & BOOTH, Kansas City stock yards.) Receipts, 1,200; shipments, none. The run of sheep was light and less than one-half as large as the same day last week. Prices were fully 25 cents higher than a week ago. Everything fit for killers sold early and market closed strong.

Table with columns: No., Price, No., Price. Lists prices for various types of sheep.

HORSES SOLD AT AUCTION on Tuesday, Wednesday and Thursday of each week. Private sales every day at the Kansas City Stock Yards Horse and Mule Department. The largest and finest institution in the United States. Write for free market reports.

W. S. TOUGH & SON, Managers, KANSAS CITY, MO.

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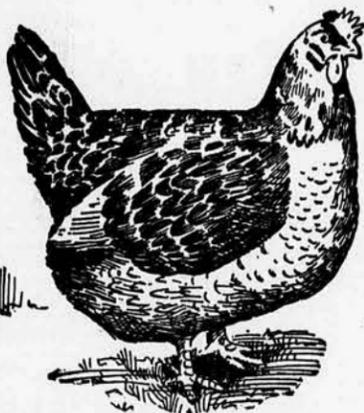
The Poultry Yard

THE DORKING BREED.

Some of the Reasons of Their Great Popularity Abroad.

This variety of fowl has existed practically unchanged for over two thousand years, and is still the most popular breed in England, where even the most mongrel specimens of fowl generally exhibit some traces of Dorking blood and characteristics. In this country they are but little known, as they do not thrive well here, and the chicks are delicate and difficult to rear. This may be partly owing to ignorance of their habits and peculiarities and partly owing to the fact that they have been closely inbred, owing to the trouble and expense of procuring fresh blood from abroad.

The secret of the popularity of the Dorking is her merits as a table fowl. The meat is very tender, juicy, of fine flavor and grain, while the breadth, depth, fullness and plumpness of the breast make the birds unequalled as producers of breast meat. The peculiar build and characteristics of the breed have called forth the remark



PRIZE DORKING.

that this variety occupies the same place among fowl that the shorthorn does among cattle. The Dorking would be at a disadvantage in America owing to its having white legs and skin instead of the popular yellow ones. The fowls are poor layers as a rule, though there are some exceptions. There are three varieties of Dorkings—the colored, the silver gray and the white. The colored is the most highly esteemed, because with equal quality and beauty it has the largest size. The breed is good for crossing purposes. The mating of a Dorking hen and Brahma cock gives hardy, plump, compact and rapidly maturing fowls.—N. Y. World.

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Posts 6 inches in diameter are set in the ground around the square to be occupied by the house, which should be roomy, say 10 by 30 feet for 50 hens. The long way of the house should be east and west, and the door and window face the south.

Ten feet from the east end a row of posts should be set across the square, leaving the building divided into two rooms, one 10 feet square and the other 10 by 20 feet. The best height for the posts is about 7 feet, and after they are set the tops should be even. Securely spike a 2-inch plank on top of the posts to serve as a plate to support the roof. Now take any rough lumber and board up the 10 by 20 foot room on all sides, leaving an opening on the south side for a door and one for a window. The 10-by-10-foot room should be boarded on the east and north sides, leaving the south side open, the wall of the larger room making the west side.

The posts should be boarded on both sides, but it is not necessary to have boards that fit nicely, as the space be-

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tween the outside and inside boarding is to be packed tightly with straw or wild grass. This will be done more easily if the plank is not spiked to the top of the posts until after the walls are finished. When the walls are finished stout poles are laid across from side to side, and the whole topped with straw or grass, as shown in the cut. The window may be covered with



A CHEAP POULTRY-HOUSE.

heavy muslin which has been soaked in linseed oil, instead of using glass, as the muslin serves every purpose. A small door is cut through the wall to let the fowls go into the open shed, and the larger door may be kept closed during cold weather.

The floor of the roosting-room and of the open shed should be kept littered with straw at all times, and this should be renewed regularly at least twice a week. In the open shed grain should be thrown in the straw, where the hens can scratch for it, and they will soon learn to stay there the whole time if the weather is very cold. Such a house with its walls well packed is almost entirely frost-proof, and in the spring it is but a small task to take off a row of boards at the bottom and remove the packing, and leave a cool house for summer use. With good lumber and a little care such a house will be quite neat in appearance. — Farm and Fireside.

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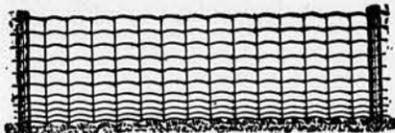
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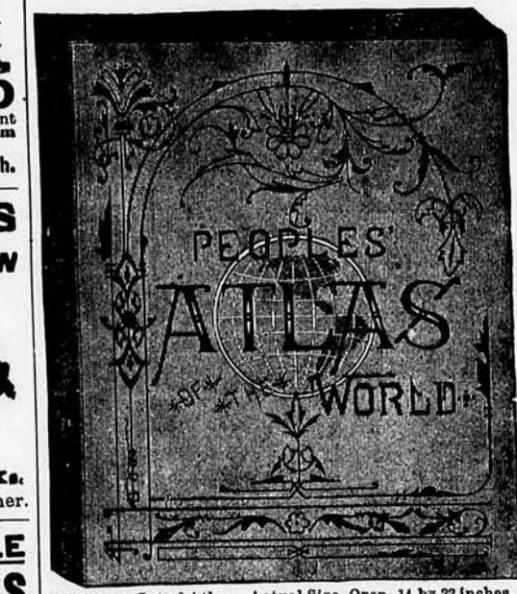
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"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion. Initials or a number counted as one word. Cash with the order. Special!—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates, cash with order. It will pay. Try it!

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Table with 6 columns: Cattle and calves, Hogs, Sheep, Horses and mules, Cars. Official Receipts, 1894: 1,772,545; 2,547,077; 589,555; 44,237; 107,494. Slaughtered in Kansas City: 959,648; 2,060,784; 387,670. Sold to feeders: 808,181; 11,496; 69,816. Sold to shippers: 409,966; 468,616; 45,780. Total sold in Kansas City, 1894: 1,677,792; 2,530,896; 503,116; 28,903.

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