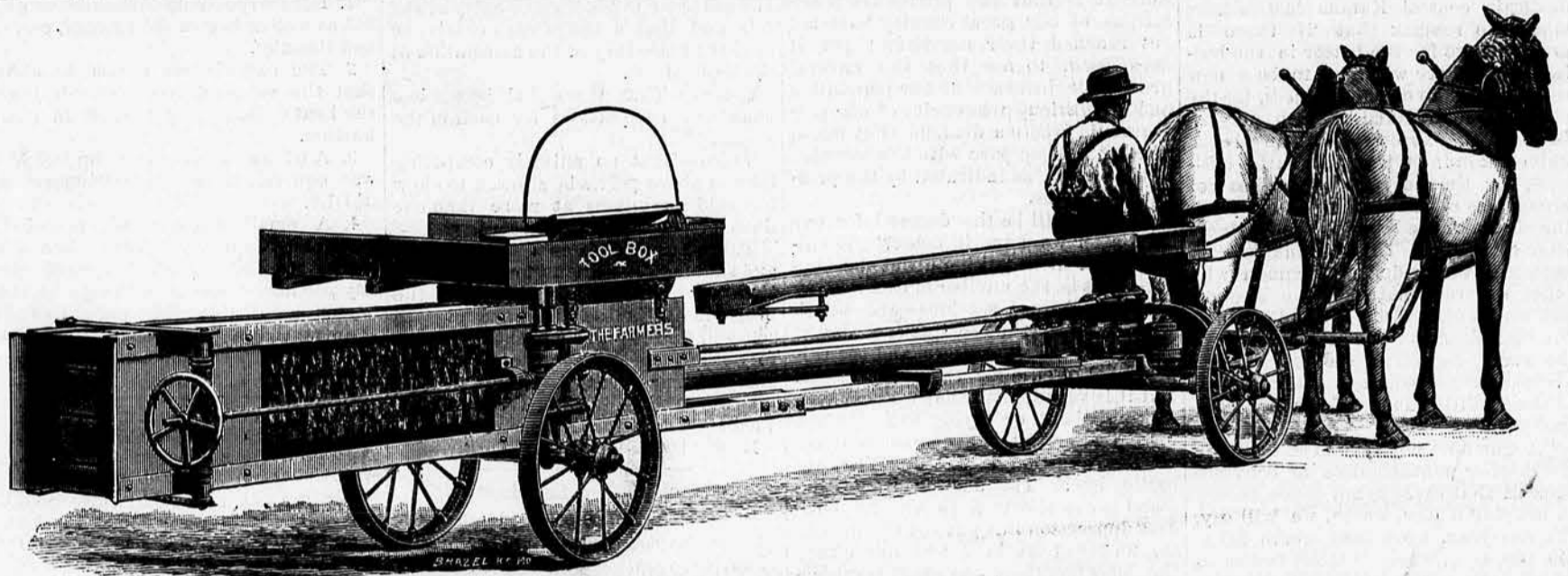


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BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 per year or \$5.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

PROSPECT STOCK FARM.—Registered, imported and high-grade Clydesdale stallions and mares for sale cheap. Terms to suit purchaser. Thoroughbred Short-horn cattle for sale. Two miles west of Topeka, Sixth street road. H. W. McAfee, Topeka, Kas.

CATTLE.

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

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

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From this herd were furnished some of the winners at the World's Fair. Write for catalogue. M. E. MOORE, CAMERON, MO.

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M. H. ALBERTY, Cherokee, Kas., Registered Holstein-Friesian cattle, Poland-China and Duroc-Jersey swine, Rose-comb Brown Leghorns. Stock of all ages and both sexes for sale. Orders booked now for pigs and eggs.

CHOICE Poland-Chinas J. H. TAYLOR, Pearl, Short-horns.

MIDLAND STOCK FARM.—F. M. Owens, Melvern, Kas., breeder of Galloway and Holstein cattle, Poland-China swine and thoroughbred poultry. Best of strains. Come, send or write.

HEREFORD CATTLE.—Archibald 1st 39253 and Cheerful Anxiety 49233 service bulls. One car bull and one car heifer for sale. Leading families. Also Poland-Chinas. J. F. Waters, Savannah, Mo.

ASHLAND STOCK FARM HERD OF THOROUGHbred Poland-China hogs, Short-horn cattle and Plymouth Rock chickens. Boars in service. Admiral Chip No. 7919 and Abbotsford No. 28351, full brother to second-prize yearling at Worlds 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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MAPLE GROVE HERD OF FANCY BRED Poland-China swine. Also Light Brahma fowls. Owned by Wm. Plummer & Co., Osage City, Kas. Stock of all ages for sale at reasonable rates.

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

DLETRICH & GENTRY, OTTAWA, KAS.—Our Poland-China spring pigs are sired by W. Z. Swallow's Ideal Black U.S. 29605 O., Guy Wilkes 3d 12131 C., Pet's Osgood and the great Loyal Duke 29823 O. For choice pigs write us.

A. W. THEMANNSON, Wathena, Doniphan Co., A. Kansas.—Large Poland-China pigs sired by Early Sisson 11993 S. and other good boars. Write to-day. Mention KANSAS FARMER.

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OHIO IMPROVED CHESTER SWINE.—Pure-bred and registered. Stock of all ages and both sexes for sale by H. S. Day, Dwight, Morris Co., Kas.

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

TOPEKA HERD OF LARGE BERKSHIRES.—Boars, sows and pigs always on hand. Yearling boar Wide Awake 30639 for exchange for an extra boar or bred sow. H. B. Cowles, Topeka, Kas.

BERKSHIRES.—Wm. B. Sutton & Sons, Rutger Farm, Russell, Kansas. Choice February and March pigs. Young boars ready for service. Young sows bred. Good individuals and choicest breeding.

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PURE-BRED LANGSHAN, BARRED PLYMOUTH ROCK and S. C. B. Leghorn eggs, one dollar per dozen. Address Robert Crow, Missouri Pacific Railway Agent, Pomona, Kas.

DIVERSIDE POULTRY YARDS.—Have for sale M. B. Turkeys, S. L. Wyandottes, B. P. Rocks, S. C. White Leghorns, Brown Leghorns, Light Brahmans, Pekin ducks, and their eggs in season. Chickens at all times. Lucille Randolph, Emporia, Kansas.

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

H. H. HAGUE & SON, Walton, Kansas, will sell H. H. eggs from the following varieties: Light and Dark Brahmans, Buff and Partridge Cochins, B. P. Rocks, S. C. B. Leghorns, M. B. turkeys, Embden and Toulouse geese. Chicken eggs, \$1.50 per setting, straight. Geese and turkey eggs, 25 cents each.

HARRY T. FORBES—FINE S. C. BROWN LEGHORNS. Eggs for sale, safely packed and sent by express to any part of the United States. Address 701 Polk St., Topeka, Kas.

LIGHT BRAHMANS AND S. L. WYANDOTTES.—Breeding stock scores 90 to 93 points. Eggs, both breeds, \$1.00 per setting. Prize-winning Poland-Chinas. J. F. Thomas, Maple City, Cowley Co., Kas.

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

J. T. HARRAH, Pomona, Kas., breeder of pure-bred B. Langshans, B. P. Rocks and S. C. B. Leghorns. Eggs \$1 per thirteen. Young stock for sale after August 15.

WHITE GUINEA FOWLS—\$2 each; eggs, \$1 per thirteen. **Plymouth Rock Cockerels,** \$2 each; eggs, \$1 per thirteen. **White Holland Turkeys,** \$3 each; eggs, \$2 per thirteen. **MARK S. SALISBURY,** Independence, Mo.

KAW VALLEY HERD FANCY POLAND-CHINAS.—OF the most noted families, bred for feeding qualities as well as fancy points. Bebout's Tecumseh at head of herd. M. F. Tatman, Proprietor, Rossville, Kansas.

Brookdale Herd of Red Polled Cattle.

Has won more prizes in 1892 and 1893 than any other herd out, including championship at six State fairs and World's Columbian Exposition on Iowa Davyson 10th 3149. His calves for sale. Write.

WM. MILLER'S SONS, Wayne, Neb.

CATTLE.

SUNNY SLOPE FARM,

C. S. CROSS, Proprietor, Emporia, Kas.

Breeder of pure-bred Herefords. Beau Real 11055 heads the herd. Young bulls and heifers for sale. Also for sale, Poland-China swine. Choice bred young boars and sows by the World's Fair prize-winner, Longfellow 29785; and Berkshire swine of the noted Duchess and Lady Lee strains of N. H. Gentry. Bismarck and General Lee, both Gentry bred boars, in service.



MAKIN BROS.,

Florence, Kansas,

Breeders of HEREFORD CATTLE. We offer cheap good well-bred young bulls and heifers. Also choice show heifers and bulls. Write or come.



SHORT-HORN CATTLE

Poland-China Swine, Buff Cochins Fowls.

Inspection invited.

E. L. KNAPP, Maple Hill, Kansas

SHANNON HILL STOCK FARM.

G. W. GLICK, ATCHISON, KAS.

Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Waterloo Duke of Shannon Hill No. 89879 and Winsome Duke 11th 116,137 at head of herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

SWINE.



A. E. STALEY,

Ottawa, Kansas.

CHESTER WHITES AND POLAND-CHINAS. Light Brahma eggs, twenty for \$1.



W. S. ATTEBURY,

Rossville, Kansas.

BREEDER OF

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Exclusively.

Young stock at all times. Satisfaction guaranteed.



J. N. ELLIS

Cameron, Mo.,

Large Berkshires

Choice pigs of best families now ready to ship. Come or write. Satisfaction guaranteed.



RIVERSIDE HERD

Poland-China Swine.

For sale sows bred to farrow in September and October. Also young stock at reasonable figures at all times. Satisfaction guaranteed. Correspondence as well as inspection invited. J. V. RANDOLPH, Emporia, Kas.

Established 1868.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

OCTOBER 2—C. C. Keyt, Short-horn cattle and Poland-Chinas, Verdon, Neb.
OCTOBER 3—W. H. Wren, Poland-China swine, Marion, Kas.

FUTURE OF THE CATTLE INDUSTRY.

"If I had the prophetic power to positively tell what the future of the cattle industry would be," said W. J. Bailey, of Nemaha county, at the last annual meeting of the State Board of Agriculture, "I would be able to roll the burden of anxiety and uncertainty from the shoulders of all who are engaged in the business.

"I believe every cattle man has believed each year, for the past five, that we had touched bottom and had passed the low point in the cattle business, and that next year would certainly be better. While talking with a large dealer in central Kansas last fall, he made the remark that 'if there is not a change for the better in the business soon there will have to be a new set of fellows to do the business, for the old ones cannot stand it much longer.' In short, there seems to be an almost universal opinion that the cattle business, for the past few years, has not brought as much profit as the capital, the risk and the labor of the business were entitled to. This, I think, is true, both with the feeder, or the man who takes the raw material, the stocker, and makes of him the finished product, the bullock, fit for the best markets of the world, as well as the breeder and average farmer who brings the animal to the condition and proper age for the feed yard.

"A man does not have to be versed in the higher mathematics to convince himself that there is not much money in keeping a cow, worth, we will say, \$25, one year, upon land worth \$25 to \$50 per acre, where it takes two acres to pasture each animal five or six months, and then at least \$1 per month for the balance of the year. And this cow brings him one year a steer calf, worth, at weaning time, \$8 to \$12, and the next year a heifer calf worth only about one-half as much. And then, in every herd each year there will be from 10 to 20 per cent. of the cows that will bring no calves. But my friend who is engaged in the dairy business will say, milk your cows, make butter and cheese, and raise your calves by hand. Now, my experience has been that a section of country largely devoted to dairy interests is not a very good place to buy cattle for the feed yard. I don't believe that a dairy exhibit and a fat-stock show were ever intended to go together, or, at least, I don't think the same farm is often represented at both shows at the same time.

"While it is certain that a large majority of stockmen believe there has been a depression in the business, they all as surely believe there will be a time when the business will boom again. And many a man has continued in the business, dissatisfied each year with his profits; but he fills up his yard and tries it again, so as to be sure and be 'in it' when the boom comes; and there is reason for the existence of this idea.

"We find, by actual figures furnished by the United States Department of Agriculture, that we had more cattle of all kinds in 1892 than we ever had before in the United States. True, there have been a great many she cattle put upon the market, and the increase has not been so rapid during the past few years as formerly, and this was indeed fortunate, for the supply has ever kept in advance of the demand.

"And another error has been in supposing that the driving out of the large herds would necessarily shorten the supply. Where before, one man, controlling some water course, would graze a thousand cattle in easy access to the water, and on either side for miles the beautiful prairie, covered with luxurious grass, was worthless, because there was no water for the stock, now adjacent to this same water course and upon these same prairies,

may live one hundred sturdy yeomen, every one of whom has some artificial water supply—either a windmill or a large storage pond—thus making available for grazing purposes a much larger portion of the West than existed before the country was settled and brought under the subjection of man, until, as I stated before, the report of the Department of Agriculture for 1892 gives a greater number of cattle in the United States for that year than was ever known before. And I think it goes without dispute that the quality has fully kept pace with the quantity.

"The report for 1893 shows, for the first time in twenty years, a decrease in the total number of cattle, being about two millions less than in 1892. In fact, it makes about the same per cent. of decrease for this year that has marked the increase for several preceding years. Whether this decrease for the year just closed really marks the turning point remains to be seen. Sure it is that the productive possibilities of our great country have not yet reached their maximum; yet it does seem to me that the natural growth or increase of our population and gregarious tendencies of our people would create a demand that would more than keep pace with the increase of the supply, as indicated by the present conditions.

"What will be the demand for our beef after we have it made? We always hear men talking about the supply—that is, the number of cattle being fed in different sections—and watch with interest the receipts each day at the great market centers, and use this as a kind of base for their operations. But it is very seldom that we hear men talking about or trying to figure in a logical way what the demand will be.

"The question is asked, 'Why are cattle low?' The answer is, the demand is out short; a paralyzing business depression has put out the fires in the forges of the land and has closed the busy haunts of the great manufacturing industries. And the conclusion is forced upon us, that the laboring men of America are the meat-eaters of the world. Without money they cannot buy beef, and without work they can get no money. Export cattle are worth as much or more upon the London market to-day than they were one year ago, while the great bulk of the beef product of our farms, if forced upon the market to-day, would sell below the cost of production. And all because the men who would be our natural and best customers are out of money and out of work. What then is the future of the cattle industry? I can only say the answer will come when we know what the supply and the demand will be. It would seem, and I think we can reasonably anticipate, that the increase in the supply, when compared with the natural increase of our population, has already reached its maximum. And as to the question of demand, I cannot help but believe, in the light of present experiences, that the demand for beef, in common with all food products of the great West, depends largely upon the economic policy of our general government."

To Berkshire Breeders of Kansas.

The contest for the premium offered for the champion young herd and the champion aged herd of Berkshires for the State of Kansas will be decided at the State fair to be held at Wichita, Kas., October 2-6, 1894.

The Kansas State Fair Association will award cash prizes at Wichita to Berkshires as follows:

	First.	Second.
Boar, 2 years old or over	\$12.00	\$8.00
Boar, 1 year old and under 2	12.00	8.00
Boar, 6 months and under 1 year	10.00	5.00
Boar, under 6 months old	8.00	4.00
Sow, 2 years old or over	8.00	4.00
Sow, 1 year old and under 2	6.00	4.00
Sow, 6 months and under 1 year	4.00	3.00
Sow, under 6 months	3.00	2.00

BREEDERS' RINGS.

Sow with litter of pigs, not less than five, under 8 months	15.00	8.00
Boar with five of his get, under 8 months	15.00	8.00
Herd, one boar and three sows under 1 year old, bred by exhibitor	15.00	8.00
Herd, one boar and four sows over 1 year old, owned by exhibitor	15.00	8.00

SWEEPSTAKES.

Boar, any age	Medal
Sow, any age	Medal

The American Berkshire Associa-

tion offers the following special prizes to be competed for at the Kansas State fair of 1894, viz.: The first five or the second five volumes of the Record of the American Berkshire Association necessary to complete the set of the successful competitor, and valued at \$5 per volume.

Best breeding pen of Berkshires registered in the American Berkshire Record, to consist of a boar and three sows over 1 year of age, owned by a resident of the State of Kansas, the first five or the second five volumes of the Berkshire Record, valued at \$25.

Best breeding pen of Berkshires registered in the American Berkshire Record, to consist of a boar and three sows under 1 year of age, owned by a resident of the State of Kansas, the first five or the second five volumes of the Berkshire Record, valued at \$25.

CONDITIONS.

First—That the boars and sows competing for the prizes specified above be recorded in the American Berkshire Record prior to the date of entry at the fair, and that a list of such entries be sent the Secretary of the association at Springfield, Ill.

Second—That there shall be not less than two competitors for each of the prizes.

Third—That no animals competing for the above prizes be allowed to show for said premiums at more than one State or provincial fair in 1894.

There has never been a more spirited and satisfactory demand for Berkshires than during the year 1894, and the breeders of Kansas who have pigs to sell will find it greatly to their interest to exhibit stock at the State fair and many of the county fairs held in 1894.

GEO. W. BERRY,
Vice President for Kansas, American Berkshire Association.

Horse Feeding Experiment.

In Bulletin No. 30 of the Utah Agricultural Experiment Station the merits of narrow vs. wide nutritive rations for horses, is given by Prof. J. W. Sanborn, who says that in the third annual report of this station (1892) the result of feeding wide and narrow nutritive rations to horses was given. This trial was favorable to the narrow nutritive ration. This ration was made up of clover, oats and wheat, while the wide ration was made up of timothy and corn. The trial ran through the summer, when the influence of what has been termed heating food, like corn, might be less effective than in the winter season. Many believe that the more varieties of food given the better the result, as the palatableness of food, it is claimed, has a reflex influence on the appetite and digestive system. The weight to be attached to such reasoning is uncertain. The influence of season on the ration to be fed is less doubtful.

The trial was repeated the past year, beginning on October 21 and continuing to December 13, when the rations were reversed in order to ascertain the influence of the individual factor. The doctrine that a very narrow nutritive ration, or a ration containing a pound of proteine to something like five pounds of carbohydrates, is better than a ration made up of one pound of proteine to six or more pounds of carbohydrates, comes from German students of animal nutrition, and has taken a very deep hold on the American mind. It has appeared to the writer that a ration that contains nitrogen enough for the formation of the protoplasm of blood, and the usual wear of muscle, is all that is needed for work animals, animals that have already built up the muscular frame. An examination of the wastes of the body shows that during labor their muscular tissue is broken down very little, and that the nitrogen needed per day to supply this waste is very much less than is claimed by German physiologists. As it is now conceded that carbohydrates may be the source of force, it does not clearly appear that the carbohydrates may not be as effective for a work horse as the proteine foods, for it has been shown by Rubner that the burning of a pound of proteine does not give out more heat than the burning of a pound of carbohydrates, and as the amount of heat derived is a measure of its energy or

ability to do work, it would seem that carbohydrates for the amount of proteine given should be as valuable as the proteine. The claim that proteine has a direct relation to the nervous energy of the animal is not a demonstration, even though proven, that it will enable the animal to accomplish more labor. In short, the energy supplied by food seems to me the measure of utility to work after a certain minimum amount of proteine had been supplied. That minimum amount is supplied by all the foods that a feeder by hap-hazard methods of feeding may give, if the skill to provide foods palatable enough to secure the consumption of an adequate ration is used.

In the experiment the lot receiving the narrower nutritive ration were given timothy, clover and oats, while that receiving the wide nutritive ration received timothy and corn.

Passing the matter of details of the experiment, the results are given in the following summary:

1. Horses receiving corn and timothy did as well as horses fed on oats, clover and timothy.

2. The experiment seems to show that the value of food depends upon the heat units it may furnish in combustion.

3. A wide nutritive ration up to 1:15.2 was equivalent to a nutritive ration of 1:7.8.

4. A small amount of proteine, amounting in the above experiment to eighty-two one-hundredths pounds per day per horse, was as adequate for the horses as double the amount, thus showing that a very small amount of proteine per day is sufficient for a working horse.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and the Topeka Advocate, to January 1, 1895, for 50 cents, club-rates to keep half the money.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and Topeka Weekly Capital, to January 1, 1895, for 50 cents, club-rates to keep half the money.

Missouri Horse Notes.

Marshall Maid 2:23½ has been put in training again after four years in the stud, and is expected to beat 2:20 this season.

Great things are expected of Walnut Boy 2:11½ this season, as he has been working halves in 1:04 and quarters in 31 seconds.

Jim G. 19203, full brother to Robbie P. 2:13, is doing stud duty at Limestone Valley farm, the property of L. M. Monsees, Smithton, Mo.

Jim Wingfield, of Marshall, Mo., owns a good brood mare in Lucy Glover, dam of Bide a Wee 2:25, and the green pacer Grover Cleveland, that is working miles close to 2:20 over the Marshall track.

T. S. Lewis, Glasgow, Mo., has a good two-year-old pacer in King Lud, by King Herod 2:16, that has been working quarters in 35 seconds, and a green trotter by Dom Pedro that can show a quarter in :36.

Harris Bros., Hustonia, Mo., are expecting great things of their two-year-old pacer, P. J., and yearling, S. P., and will be through the Central Missouri circuit to show what they can do in their class.

Astra, a two-year-old trotter, and Iola T., a yearling pacer, both by Ashland Wilkes 2:17½ and dams by Red Wilkes and Egbert, are doing good work and expected to go fast this season for their owner, J. P. Hammett, Yates, Mo.

Daisy B., dam of Ashland Wilkes 2:17½, foaled June 8, a nice bay colt by Round's Sprague 2:24½. She is owned by Dr. W. P. Harriman & Sons, Pilot Grove, Mo., and has been bred to their great young sire, King Jay Bird 18864.

Dyer & Storts will move their stable from Slater to the Marshall, Mo., track, where they will prepare such good ones for the Central Missouri circuit as Clear Grit (p) 2:17½, Joe Mark 2:28, Hallie Harris 2:24½, and the green mare Belle Collins, by Dom Pedro.

S. J. Zink, Miami, Mo., has a good two-year-old in Red King, by Red Wilkes, dam Nelly (dam of Vrowsky 2:18¼), by Hambrino 2:21¼, that is showing great speed and is expected to trot in the list this season. Also a few youngsters that are doing well, by Reed Wilkes 2:25¼ and Hannis Jr. 2:19.

John R. Gentry is expecting great things of his stable of pacers this year in Jim Ramey's hands, through the Grand circuit. John R. Gentry 2:12½ has been going halves in 1:05, quarters in 32 seconds. Theodore Shelton, his full brother, only 2 years old, has been working quarters in 31 seconds and eighths in 14 seconds. The green pacer Young Ashland has gone miles in 2:25 and the last half in 1:08, last quarter in 32 seconds. COLONEL.

Agricultural Matters.

ONE-CROP FARMING.

The inventive genius of man during ages past has made all dwellers on earth neighbors. It has bound them with iron bands into one dependent brotherhood. It has made the great old-time wars improbable, if not impossible, by making the interests of all climes common.

Fast-running trains and swift steamers not only make all the people of the earth neighbors, but by these means they are also enabled to compete with each other in supplying the wants of the world; and it is the tendency of Anglo-Saxon civilization to make all people want more and more of a variety of the products of the world as time goes on. We find a greater variety of foods in our markets than we did a few years ago. Twenty years ago Kansas merchants sold very little oat-meal, but now oat-meal is used in nearly every home. When the boys went to see the circus fifteen years ago, they would go to the bakery to get lunches of Lincoln pie, cakes, etc., but now they can go to the fruit stand and buy a lunch of tropical fruits for the same money. The foods of different climates now come into competition with each other, and the banana is in a fair way to drive out the sandwich. Dried bananas compete with Yankee dried apples in the London markets and South American beef compels the Texas cowboys to change their business or move.

Under our present system, the supplies which can be cheapest placed in market at the centers of population will rule the price of those products in their respective lines.

One of the chief factors in production is the cost of the necessities of the laborer. This tempts the great brotherhood of man to play a game of "cut-throat"—each trying to buy the products of others as cheaply as possible while selling his own at the highest market price. This also tempted English capitalists engaged in manufacturing to invest in large cotton plantations in India and Egypt, "bonanza" wheat farms in Dakota and British America, sheep stations in Australia, and immense cattle ranches in Argentine Republic. With cheap transportation, they knew they could lower the prices of necessities and then cut down the wages of their operatives without impairing their usefulness as machines. These manufacturers could then compete successfully with manufacturers in other countries where low prices of necessities is looked upon by the laborers as meaning the satisfaction of wants besides those created by mere physical existence.

The bonanza farms are nearly all devoted to special products, as wheat, corn, wool, cotton, beef, apples, coffee, and such others as admit of culture in extensive areas. When men engage in special farming on a large scale, they learn to figure very closely on the price of every article which enters into the price of the crop. Superintendents and foremen are engaged who know the details of the business, and who can make everything work out according to calculations, so far as is in man's power. They know that wheat can be raised in India and in Canada for 10 cents per bushel; that cotton can be raised in India for 2 cents per pound; that beef can be produced in Argentine for three-fourths of a cent per pound, live weight.

When these products come into competition with the beef, wheat and cotton of other lands where it is impossible to produce them so cheaply, the farmers are tempted to quit raising those products and raise only such as do not enter into competition with them, and such as they can produce cheaper than they can be raised anywhere else.

But suppose that this tendency becomes general. Then, if it is pursued to its legitimate end, the whole world will be devoted to special farming, each section producing the crops which can be produced there cheaper than anywhere else in the world, and each man depending upon his one

product to supply all his wants. The result of this system might be delightful for a time, as it might give:

1. Cheaper food and clothing to all the world.
2. Each man employment in a special line of work for which he is fitted by training and it may be by choice.

But the final results, it seems to me, would be:

1. All people dependent.
2. Machinery used in the place of men, even more than at present.
3. Land owned in large tracts, leaving a large majority of people landless and homeless.
4. The landless congregated in towns.
5. All work done by a class of people dependent on the will of the landowner.

6. Education of children of laborers neglected.
7. The masses having no homes would lack patriotism.
8. Laborers would be employed for only a portion of the year.
9. Competition for work so fierce that wages would go down to starvation prices.
10. Laborers expected to be grateful to men who give them work.
11. Manufacturers, merchants, and others in trade would have no respect for the individual laborer, as his trade is worth but little and is likely to be controlled by his employer.
12. The small farmer who maintains his independence would be thought of as a "poor man who tries to hold himself above his 'equals' and ape his betters."
13. Land-owners and laborers would soon come to regard each other as natural enemies, to be cheated in every way possible.
14. The capitalist would not recognize any country as his, but would say, "The world is my home, and to accumulate property is my religion."
15. The soil would become practically exhausted, and would soon fail to produce enough to support the population and then would come the "struggle for existence" when those who get the food live and others must starve.

These conditions, or many of them, may now be found in Sicily and England, and the system of special or "bonanza farming," has not been in vogue in either place; but only one of the conditions named has obtained, viz., the concentration of land ownership. In the Southern States of this country the cotton-planters have practiced "special farming" on a large scale until they have worn out nearly all the land which has been used that way, and "ten generations of niggers." They now want to sell their large farms in small tracts of five or six hundred acres each.

On the other hand, if the people who now own free homes recognize the tendency of the times, and do not wish the world to get into the condition described, they will change their system of farming so as to produce food and clothing cheaply without specializing. They will carefully limit their wants, as nearly as possible, to the products which can be produced on their farms. Then the surplus may be sold, and the price will cut a very small figure, so long as the family makes the farm a true home and makes the care of its individual members its only purpose, instead of thinking more of the Poland-Chinas and Short-horns than of the children.—*J. E. Payne, in Industrialist.*

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Alfalfa in Corn.

EDITOR KANSAS FARMER:—Will some one please answer through KANSAS FARMER whether alfalfa will do sown in corn in fall, say 1st of September, and can one expect much of a crop the next year after sowing if sowed in spring, and will the first cutting go to seed, or do you have to save second crop for seed; and will it do well on quite wet, springy ground? And also any other information regarding the growth, care, etc., of alfalfa will be gladly received. Would it do sown with drill in corn in fall with fall wheat? Corn is simply immense in this county. A fine rain is falling this evening as I am writing. Success to the KANSAS FARMER.

M. A. HALCOTT.
Calista, Kingman Co., Kas.

Can Alfalfa be Successfully Sown Now?

EDITOR KANSAS FARMER:—I have a piece of wheat just harvested. The land is fairly clean of weeds and I want to put it into alfalfa as soon as possible. I shall be prepared to irrigate it as may be necessary. Can I not prepare the land and sow as soon as the wheat is stacked? Or will you or some of your readers direct how best to get this land into alfalfa so as to make a crop next season? J. L.
Pawnee Rock, Kas.

[These are important questions and it is hoped they will receive prompt attention and careful answer from KANSAS FARMER readers who have had experience. It has been stated by some that alfalfa may be successfully sown in summer or fall without irrigation, if only there is moisture enough to start it and the weeds can be kept down. But no one has yet written about seeding under irrigation. Will some reader give full directions covering "J. L.'s" inquiries.—EDITOR.]

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and Topeka Weekly Capital, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

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Beginners With Alfalfa.

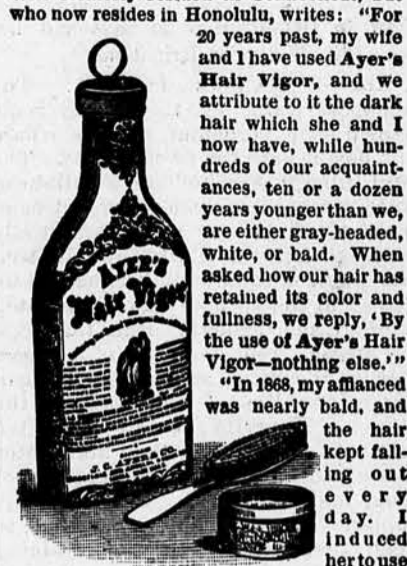
EDITOR KANSAS FARMER:—The following directions are intended for those farmers who have seeded alfalfa this spring for the first time and are desirous of securing a good meadow as quickly as possible. I am presuming that they are not provided with means of irrigation, for the management under a ditch is much simpler.

Your alfalfa, that was seeded the latter part of March or early in April, has grown to a height of ten to fourteen inches on the best lands, and is very foul with the usual annual weed growth. If you have not already done so, mow down close to the ground at once. If the weed growth is heavy, rake off clean; if light and sappy, they may be left on the ground for a light mulch.

It is always safer and better, however, to clean up the land. This first cutting will usually hold the plant back through any dry weather during July. The short stalk will endure almost any amount of drought. The cutting not only destroys the annual weed growth, but lessens the amount of moisture required by the alfalfa plant. Should abundant rains come in July and August, you will observe that, by August 1 to 10, the alfalfa and a less number of weeds have grown to the height of a foot or more. Now is the time for your mowing machine again. This time there will be (in case your stand was good) sufficient alfalfa amongst the weeds to pay you to stack it for your milk cows. Don't expect to get rid of all foreign growth the first year. You will observe after this second mowing a disposition of the alfalfa to stool out and become stocky, unless you have made the mistake, so commonly made, of seeding too heavily, in which case much of it will die of overcrowding. It may be all right to sow twenty to thirty pounds of seed on carefully-prepared land that is to be irrigated, but it will not succeed on lands not under the ditch. Non-irrigated alfalfa is a stooling plant with an immense tap-root, the plant occupying a space twelve or more inches in diameter, and should not be crowded more closely. My experience leads me to believe that from eight to twelve pounds of seed is the proper amount to sow or drill. Many failures have come under my observation caused largely by seeding too heavily and not mowing often enough. The mowing machine, remember, is the cultivator for alfalfa. Don't pasture at all the first season. Don't turn on any stock next year until the first crop of hay has been saved. After that do as you like, but my opinion is that you will prize that piece of meadow so highly that you would not let a chicken range over it. No man can afford to pasture alfalfa. It is too valuable to take any risks of doing it an injury. By following the foregoing directions, a well-established meadow is made the first year; by neglecting to

A Gentleman

Who formerly resided in Connecticut, but who now resides in Honolulu, writes: "For



20 years past, my wife and I have used Ayer's Hair Vigor, and we attribute to it the dark hair which she and I now have, while hundreds of our acquaintances, ten or a dozen years younger than we, are either gray-headed, white, or bald. When asked how our hair has retained its color and fullness, we reply, 'By the use of Ayer's Hair Vigor—nothing else.' "In 1868, my affianced was nearly bald, and the hair kept falling out every day. I induced her to use Ayer's Hair Vigor, and very soon, it not only checked any further loss of hair, but produced an entirely new growth, which has remained luxuriant and glossy to this day. I can recommend this preparation to all in need of a genuine hair-restorer. It is all that it is claimed to be."—Antonio Alarun, Bastrop, Tex.

AYER'S HAIR VIGOR

mow and clean up as directed you need not expect clean hay until the last cutting of the second year.

Advice given as to the proper time for cutting alfalfa for hay does not apply to the treatment of a young meadow. The time to mow is when the mixed growth of weeds and alfalfa get up so that the machine will cut them. W. J. WORKMAN.
Ashland, Kas., June 24, 1894.

Timothy, Wild Hay and Lucerne.

The Utah Experiment Station reports some experiments undertaken for the purpose of determining the relative feeding value of these three kinds of hay. It is explained that the value of the test was much reduced from the fact that the animals had too little exercise to provide them with good appetites. The following is the summary of the results:

1. The experiment with cattle appears to show that lucerne is a more valuable food, pound for pound, for growth, than timothy hay or wild hay.
2. The experiment with steers appears to show that a pound of wild hay is more valuable, pound for pound, than a pound of timothy.
3. The experiment with sheep appears to show that a pound of lucerne hay is much more valuable than a pound of timothy or wild hay.
4. The experiment appears to show that a pound of wild hay is more valuable for sheep than timothy hay.
5. It adds another proof to those secured at this station, that exercise is indispensable to appetite and growth.

Leasing Oklahoma School Lands.

All persons wanting to lease school land in Oklahoma will be rewarded by sending for a free sample copy of the HOME, FIELD AND FORUM, Guthrie, Okla., the leading agricultural paper of Oklahoma Territory.

Mountain and Ocean Resorts of the East

Are readily reached via St. Louis and the Vandalia and Pennsylvania Short Lines. The only route to Cresson and other cool retreats in the Alleghenies. Solid vestibule trains leave St. Louis daily over these lines for Cresson and Altoona, running through to New York, where connection is made for the White mountains, the Adirondacks, Mt. Desert Island and places of summer sojourn in the mountains of eastern New York, Vermont, New Hampshire and Maine. At New York connection is also made for Fall River, Newport, Narragansett Pier, Martha's Vineyard, Nantucket and famous watering places along the Atlantic, to which passengers via Vandalia and Pennsylvania lines have choice of all-rail route or palatial steamers of the Fall River line from New York. Atlantic City, Cape May, Long Branch, Ocean Grove, Asbury Park and summer havens along the New Jersey coast are on divisions of the Pennsylvania system. Any desired information will be cheerfully furnished by J. M. Chesbrough, A. G. P. Agent, St. Louis, Mo.

Irrigation.

How to Obtain, How to Save and Use Water for Irrigation.

EDITOR KANSAS FARMER:—The cheapest water for the farmer is obtained from perennial streams, where the flow is uniform, or nearly so. The first thing to do is to build a bulk-head at the place where you tap the stream. This should be well and substantially built, as follows: Build two solid timber piers, of square timber, halved together at the corners and drift-bolted through and through. Run the cribs up stream from the point of intersection of the ditch at about an angle of 45° to the line of the bank of the stream. The cribs should be about ten feet inside and higher than high water mark in stream and at least fifty feet long, and filled with stone and ripped well on outside with stone to keep the water from undermining them, the walls facing each other to be plumb and straight, so as to admit of a tight-fitting gate, so the water can be shut off at any and all times.

Next comes the ditch. Run the line of ditch on easy grades, not over three or four inches to the mile. Never lay out a ditch that the water will travel more than two and one-half to three miles an hour. If the surface of the ground will not admit of it, it is better to put in steps or falls at intervals. These steps should be built of lumber or stone, so that the action of water pouring over them will not cut or wear the bottom of ditch. A supply ditch should never be made on different grades, for the water running through the high grades will wash and carry the bottom and sides of the ditch and deposit it along the lower grades and fill up the ditch at these points. If the ditch runs through any loose sand or gravel places, clay should be hauled on them. Then puddle with water. Use plenty of water. A good way to puddle the bottom is (after you have got the clay spread on evenly) to flow it with water two or three inches deep and hitch a team to a drag boat and load it with five or six hundred pounds and drive back and forth until the bottom is hard and smooth and it will make it perfectly tight and it will always remain so.

As all the streams in this State are subject to floods and carry a great deal of sediment at times, it is very necessary to have a catch-basin or settling reservoir outside of the main reservoir to keep the main storage reservoir from filling up. This should be built as near to the main one as the lay of the land will admit, and it should have very sloping banks, so it can be cleaned out, when it needs it, with team and scraper.

Reservoirs should be built on as high ground as possible and get the water into them. If you have a basin or valley on high ground you are in luck. Never select a place for a reservoir where the bottom is more than four or five feet below the point where you wish to take the water out, for all surplus water below this point does you no good and you have to build so much stronger dam to hold this extra head. The pressure on the dam is no greater where the flowage is large than where it is small. It is the height of the column of water at the dam you have to figure on. High dams, when not properly built are unsafe, and if they give way oftentimes cause great damage and loss of life. Surface is what you should strive for in a reservoir. The evaporation don't cut any figure where you have a running stream to feed from. If the reservoir is so situated that it will catch any amount of surface or storm water, it must be provided with ample waste-way, large enough to take off the surplus water, so that in no emergency can the water raise over the dirt banks of the dam and the waste-way must be provided with large and wide aprons, so the momentum of the water pouring over the waste-way will not cut out the bottom below the dam and undermine it. More dams are lost from the action of the water on the lower side, than the upper side.

Every dam should be provided with

a self-acting gate. These gates can be operated by a ten-year-old boy, no matter how high the water is. They open down and they can be set at any point and keep the water in the pond at any level you wish. They are perfectly automatic and will raise of their own accord as the water raises in the pond above.

To build a reservoir, select your place on as high ground as possible and have it so you can get the water into it. If you have no natural basin which you can utilize, take a piece of level land. The first step to be taken, is to build your waste-way. This should be built of timber bents, planked up with two-inch plank. You must make a water-tight bottom under the waste-way. This can be done either with lumber or brush. If made of brush, cut your brush (willow brush is the best) and tie them in bundles six or eight inches in diameter; the length of the brush should be ten or twelve feet. Tie two bands around them about three or four feet apart. Commence with the brush at least thirty feet below the center line of dam and lay the bundles butt ends down stream, close together in tiers at least six feet wider than your waste-way; then commence with another tier, putting them back three feet up stream, and so on until you reach above into the reservoir fifteen or twenty feet above the center line. Put onto the brush a light coat of gravel, so as to fill up all of the cracks, and then erect the bent-work on this bottom. Plank up the sides with two-inch plank and fill in between the sides of bent-work level with gravel and put plenty of gravel on that part of brush above the bent-work. After having this work well done, take your teams and plow up the size you want your reservoir, scrape it out and build the earth work to the pond. Use water and tamp the earth down well around the bent-work. The banks of the earth-work should slope at an angle of about 35° and be at least four feet wide on top. It is a good plan to use a few barrels of water on sides of bank when building them to make the earth pack well. Do not dig the bottom out more than two feet below the top soil but get what dirt you need to finish earth-work on the outside of bank. If the bottom of pond is gravelly and porous, draw on some clay and pound it down with a heavy piece of the body of a tree sawed off square, with a hole bored through and a pin put in to handle it with. Take your water out of the waste-way. Always sow plenty of grass seed on the banks and fence to keep stock off. J. S. SHERMAN.
Baxter Springs, Kas.

How an Orchard is Irrigated With Little Water.

EDITOR KANSAS FARMER:—A good deal is being said in your paper and all papers now about irrigation, and of course there is but one opinion about the advantages of irrigation where it can be done. But the great trouble is there is so much sand that it will never be possible to irrigate, both on account of lack of water and the lay of the land. Land has to be comparatively level to be irrigated, even though you had abundance of water. I don't think there is any system of irrigation for high rolling prairie, i. e., to raise crops of grain, etc. I believe at the same time the high rolling prairie is the best adapted for commercial orchards, such as Judge Wellhouse's, and at the same time there is no crop that it would be of greater advantage to irrigate in dry times than an apple, peach, pear or any fruit crop. Now, I know of a system of irrigation that could be practiced in every orchard, be it an ordinary family orchard or a large commercial orchard like that of Judge Wellhouse, and at very small expense. Any one can try it on a few trees to see if it will work, without any expense at all hardly. I know it will work for it is in operation near El Paso, Texas. A man (I don't know his name) has gone out on a piece of land there which was absolutely a desert of sand, on which nothing grew but an occasional cactus and Spanish bayonet. He sunk a well, put up a windmill and tank, got him a water wagon and set out a large

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orchard in the sand. He took fence boards and sawed them in pieces about two and one-half feet long and nailed four of them together and made a spout of them. This spout he sunk in the ground at an angle of about 45°, so that the bottom reached right under the root of the tree. He fills his water wagon, which has a piece of hose on it for an outlet, and drives alongside of each tree and fills the wooden spout with water. There, of course, where it hardly ever rains, he does this regularly, as it is the only water the trees ever get. But here it would only have to be done when needed on account of a dry time, though I think there is two or three times every year when it would be advantageous to the tree. This man I speak of has a fine, thrifty and luxuriant an orchard as one would wish to see and a very profitable one, there in that desert, with no more water than can be got out of most any good farm well. A man and team could water a great many trees in a day. They get the full benefit of the water and none is wasted. It does as much good as several times as much would on the surface and does not bake the earth. The spout does not seem to injure the growth of the tree in any way. A. J. HOUGHTON.
Elmdale, Kas.

Best Quantity of Water for Irrigation.

The Utah Experiment Station reports the results of four years' trials of different amounts of water used in irrigation and also some observations as to the effect of irrigation upon fertility, temperature of the soil, etc. It was found that the water required to saturate the soil to a depth of one and a half feet is 15.86 inches. The summary of the results is as follows:

1. The plats saturated to the depth of one and one-half feet gave a better crop of grain than a greater or less amount.
2. For timothy, the plats saturated two and one-half feet gave the best results.
3. Soils remove most of the solids from water applied beyond soil saturation.
4. The water that does escape from soils by leaching is richer in the elements of fertility than before it entered, the amount so escaping, however, being so small that the total contains but a fraction of the solids applied.
5. Where water applied is in small amount, the temperature grows higher and higher on decreasing amounts.
6. Water applied to our gravelly soils appears to evaporate inside of twelve days.

Irrigation in Nebraska.

The Kearney (Nebraska) Daily Journal, of June 21, contains a glowing account of a private irrigation plant just erected a few miles from that city. The machinery of this plant consists of a gasoline engine and centrifugal pump and is intended to furnish water for 100 acres. The cost of the machinery was \$600, and it is expected that reservoirs, ditches, engine-house, etc., will make the entire cost \$1,000. This, and also twelve similar plants in Nebraska, have been put in by Fairbanks, Morse & Co. In the matter of this

style of pumping plants, which will run whether the wind blows or rests, Nebraska is far outstripping Kansas.

The fact that a small plant of this kind can be completed at a cost of only ten dollars per acre for the investment, and that it can be operated with little attention at a cost of only 60 cents per day for 100 acres, while for larger plants the relative cost is much reduced, a 500-acre plant costing only about \$1,800, removes all question of the practicability of this method of irrigating even large areas. The advantages of the private irrigation plant with which the farmer raises his own water from the supply on or under his own land, and uses it when and in such quantities as suit his convenience, will be appreciated by every one who has thought on the subject.

Weather Report for June, 1894.

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

The temperature of the past June has only been exceeded in the years 1874, 1881 and 1890. The rain was abundant and well distributed throughout the month. Nearly all of the rain storms were accompanied by lightning and thunder. Notwithstanding the large number of rainy days, the cloudiness and humidity were much below the average, and the barometer was above. The velocity of the wind was comparatively low.

Mean temperature was 76.13°, which is 2.85° below the June average. The highest temperature was 96°, on the 30th; the lowest was 50°, on the 6th, giving a range of 46°. Mean temperature at 7 a. m., 71.83°; at 2 p. m., 85.85°; at 9 p. m., 73.67°.

Rainfall was 6.04 inches, which is 1.18 inches below the June average. Rain in measurable quantities fell on twelve days. There were ten thunder showers. The entire rainfall for the six months of 1894 now completed has been 16.10 inches, which is 1.68 inches below the average for the same months in the twenty-six years preceding.

Mean cloudiness was 36.43 per cent. of the sky, the month being 4.91 per cent. cloudier than usual. Number of clear days (less than one-third cloudy), sixteen; half clear (one to two-thirds cloudy), eight; cloudy (more than two-thirds), six. There were two entirely clear days and one entirely cloudy. Mean cloudiness at 7 a. m., 31 per cent.; at 2 p. m., 39.6 per cent.; at 9 p. m., 38.6 per cent.

Wind was southwest, twenty-seven times; southeast, sixteen times; south, twenty-six times; east, three times; north, three times; northeast, five times; west, five times; northwest, three times. The total run of the wind was 8,599 miles, which is 1,249 miles below the June average. This gives a mean daily velocity of 287 miles, and a mean hourly velocity of twelve miles. The highest velocity was forty-eight miles an hour, between 3 and 4 a. m. on the 25th.

Barometer.—Mean for the month, 29.108 inches; at 7 a. m., 29.133 inches; at 2 p. m., 29.104 inches; at 6 p. m., 29.088 inches; maximum, 29.822 inches, on the 12th; minimum, 28.804 inches, on the 27th; monthly range, 0.518 inch.

Relative Humidity.—Mean for the month, 65.3 per cent.; at 7 a. m., 72.4; at 2 p. m., 53.9; at 9 p. m., 71.2; greatest, 93, on the 17th; least, 27, on the 7th. There was no fog.



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Conservation of Moisture.

EDITOR KANSAS FARMER:—The experience of your correspondent, Chas. A. Babbitt, of Rooks county, in KANSAS FARMER of June 27, and his conclusions regarding deep plowing, are full of interest, especially at this time, when subsoiling is being so much advocated. His experiment is valuable, but until followed up by other experiments and observations is not conclusive.

Your correspondent does not state whether any rain drained off the surface of the cultivated land during the heaviest showers, and which held back most of the rainfall, the deep or shallow cultivated. But, if the shallow cultivated land takes in all the rain that falls, then deep cultivation is unnecessary and will work injury unless the ground is moist or gets a good soaking after deep cultivation and before planting.

The experience related by Mr. Babbitt is one to which I have often called attention, that water does not descend readily through a dry soil, because surface tension or capillary attraction cannot act except where there is moisture. A soil as fine as that described by Mr. Babbitt, will hold one inch of water for each two inches in depth of soil, if it is not brought in contact with other moist soil. His statements prove this. The rains of June 27 and 29—probably not to exceed one inch—did not wet three inches, and he was able to run the plow below the moist soil into the dry soil after the rain of one and one-half inches July 10 and 11. To test this question, I have sitting on table beside me a glass tube, six inches long and two inches in diameter, in which I placed loosely Kaw valley soil, finely powdered, and poured in on top one and one-half inches of water. In three minutes this wet the soil down three inches from the top and the water had all disappeared. In one hour it was moistened four inches deep and there it stopped, and will go no further. The top four inches, now moist, will give up this moisture to the atmosphere only. On the other hand, if I pour one and one-half inches of water into a tube of soil twelve inches deep and slightly moist, the water will distribute itself equally throughout the entire mass, and much more rapidly than it will descend in dry soil.

If Mr. Babbitt's deep-plowed land had received a thorough soaking to wet down at least two feet, and settle or compact the loose soil, followed by shallow or mulching cultivation, his results would no doubt have been far different and he would have seen some advantage in the pulverized soil. On the corn land adjoining, where cultivation was shallow, or rather, his mulch was only two or three inches deep, the compact soil beneath evidently contained some moisture drawn by capillarity from below. When the rain fell on this, the water was pulled down by the capillarity of this moist soil and stored far below. On the land plowed or mulched seven inches, the rain was all held near the surface, which started vegetation freely and encouraged rooting near surface, but in a few days it was all evaporated and wasted. It was not the dry ground below, as Mr. Babbitt surmises, that took the water from the roots, but the dry air above.

I have repeatedly cautioned those proposing subsoiling that they must not follow deep cultivation with wheat or oats, unless heavy rains intervene to thoroughly soak the ground down deep. Capillarity must be re-established first. Plants that can root in a firm soil with capillary power will withstand dry weather for a considerable length of time, but if soil is loose and dry the roots cannot reach to the moist subsoil below, and must have frequent showers to keep them growing. Corn or sorghum seeded deep are best to follow subsoiling done the previous summer.

If the soil of Rooks county will take in all the rain that falls with three-inch cultivation, then it is probably better without subsoilers, but whichever is practiced, the greatest benefit will always follow keeping the surface as loose and light as possible. This economizes the moisture. A good axiom

for every farmer is, when the rain falls, let no water run off. When it enters the soil let none escape, except through the growing plant.

Mr. Babbitt's experience illustrates one point that is important to western Kansas. Ordinary showers are of little benefit when the subsoil is dry, and where there is a great depth of dry soil between the surface and that beneath, crop-raising must be precarious. One-half the rainfall will give better results where soil is moist from the surface to the depth where well water is found than on soils where dry soil intervenes.

This will, I think, illustrate the advantage of irrigation by pumping or otherwise. The first year will require great quantities of water per acre, but once thoroughly moistened and constantly kept moist, the service of water will be more than doubled and the rain that falls will do very much greater service.

To the soil that hath (moisture) will be given (moisture), and from the soil that hath not will be taken away, even that it hath. H. R. HILTON.

The Farmer's Hay Press.

Every farmer that makes hay, especially those who bale hay and ship, are more or less interested in the evolution of the hay press. He already recognizes the many improvements that have been made from time to time as experience developed and suggested changes in its speed and durability, as well as lightness and general usefulness. The influence of W. S. Livengood, now of the firm of Devo-Livengood Manufacturing Company, of Kansas City, Mo., has been felt all over the great American hay field through his inventive genius along the highway of improvements in inventing and perfecting the Monitor, Scott, Electric, U. S., Midland and some of the latest improvements in the Lightning presses. His latest and last was christened "The Farmer's Hay Press," and seems to be the ultimate of human ingenuity in the construction of a machine for baling hay, straw or any fibrous materials for the easy handling and greater ease in shipping. Messrs. Devo and Livengood, among other things, say: "The Farmer's Hay Press is the equal of any hay press made, in capacity, in quality of workmanship, in material used, the lightness of draft, and in every essential particular we warrant the best of and most satisfactory results. It has fewer parts and more simple in construction and can be manufactured cheaper and sold at figures below prices heretofore paid for first-class presses. Not only this but it is the lightest and strongest press on the market, weighing only about 2,500 pounds. There are now several good presses made, but in four essential particulars the Farmer's has great advantages over all others. Its new automatic tension is easily manipulated with one hand and gives ten times the amount of power yet attained by any other press. Our head-block has a yielding device that always gathers up all the hay and makes that desirable appearance of smoothness of the bale, thereby rendering it more pleasing to the eye, and therefore more salable on the market. The plunger takes at each stroke nine inches into the baling chamber, instead of six as in rival presses, and the result is easier feeding and lighter draft on the team. The fourth, and perhaps the most important advantage, is that there is a slight pause at the beginning of each stroke, during which time the team travels five feet, the plunger remains at rest, thereby enabling the feeder to put a full charge into the chamber. The rebound is absolutely steady and is better controlled than in any other press, it being brought to rest without a jar, shock or noise, making it easy and steady work for the team. Another fact, and that is the baling chamber is the largest made, holding, as it does, three bales, giving the tyer ample time to perform his work." To see the Farmer's Hay Press is to buy and use it, and the company announce that their business idea is to offer a first-class press at uniform prices and be satisfied with moderate profits. They invite inspection and comparison and will cheerfully answer all inquiries pertaining to the merits and prices, as they wish to substantiate that the "Farmer's" is the best of all hay presses. Our first-page illustration gives the reader an idea of the press on the road, and in the advertisement elsewhere in this issue a representation of the press at work.

Where Will You Spend the Summer?

The Baltimore & Ohio Southwestern railway has an attractive list of summer resorts reached via its lines. Before you decide where to go, ask some agent of the B. & O. S. W. Railway for a copy, or write O. P. McCarty, General Passenger Agent, St. Louis, Mo.

Get up a Club for KANSAS FARMER.

Gossip About Stook.

Notice the new breeder's card of A. W. Themanson, Wathena, Kas., who writes about his Poland-Chinas as follows: "My boars were bred by H. M. and W. P. Sisson, Jacob Grassman, of Illinois, and S. E. Shellenberger, of Ohio. The boar that I got of Mr. Shellenberger was sired by his great boar, J. H. Sanders 27219, the sweepstakes boar (bred by exhibitor) at World's Fair, and is out of Graceful F. 68408, that won first in class on aged sow at World's Fair. I have sows that were sired by Give or Take; Gilpin's Tecumseh (a half brother to Geo. Wilkes); Sam Clark, of the King Butler strain; King Klener by Success, the sire of Black U. S.; Commonwealth, that was in T. J. Harris' great herd; one by a son of Short Stop, dam by Dot's Dandy, and others as well bred. My aged herd boar weighs 700 pounds. Some of the sows weigh 400 to 500 pounds. My hobby is to breed for bone and constitution from aged parents, with the fancy points thrown in, if possible. We have good shipping facilities by two railroads. Farm one mile west of town. Visitors always welcome."

It is with pleasure that we make a report of a recent visit of our live stock field man, Mr. Brush, to Clover Hill farm, adjoining the sprightly little city of Cameron, Mo., where he paid his respects to Mr. M. E. Moore, the well and favorably known breeder of Holstein-Friesian cattle and Poland-China swine. The farm is admirably situated and possesses a soil whose elements afford just the needs for blue grass and clover both for pasturage and forage. The herd of cattle now consists of about sixty head, whose ancestry and progeny have one of the best reputations for butter and milk yet recorded in Holstein history. Among the late reinforcements to the herd was several head from the celebrated herd of C. F. Stone, of Kansas, and among them was the first prize three-year-old cow at the World's Fair, Harmenke's Gerben 28956 H.-F.-H. B., with the bull calf Gerben Mechthilde Sir Josephine at her side, that was sired by Empress Josephine 3d's Sir Mechthilde, a son of Empress Josephine 3d, that won second prize at the World's Fair. This remarkable cow, Empress Josephine 3d, was sired by a son of Mechthilde, who has the largest seven-day butter record of any in Holstein history, viz., thirty-nine pounds and ten and one-half ounces, while her granddaughter, Empress Josephine 3d, has the largest one-day's public test record—2.62 pounds of butter fat from sixty-five pounds and one ounce of milk. It is safe to say that no better blood lines nor stronger tendencies towards butter or milk production in the individual can be found anywhere on American soil than commingles in the youngster Gerben Mechthilde Sir Josephine. His dam, Harmenke's Gerben, was bred by Mr. Moore and sold by him in her calf form, and since her very remarkable development he has felt that she ought to be re-instated at Clover Hill farm, and he at last succeeded in getting the consent of Mr. Stone, at a long price based upon her breeding and successful show and producing record, in so doing. The show ring record and the actual test made for both milk and butter from time to time since the herd was founded has made the individual history of Moore's herd a very successful one and placed it among the kings and queens of top Holstein history. Such is its popularity that a brief resume of late sales will give the reader some idea of the hold it has on the dairy public and the guardian of the "family cow." Eighteen head, seventeen of which were females and descendants of Empress, Josephine, Gerben, Parthena and Mechthilde families, representing the largest milk and butter records in the whole dairy world, went to John F. Harney, of Red Lodge, Mont. Among others in Mr. Harney's herd were the individuals that comprised the winning young herd at the State shows in 1898 throughout the entire West. Several bulls have gone to re-inforce Iowa herds as follows: W. H. Moon, Rose Hill, D. E. Morris, Shelby, and P. E. Enix, Albia. Old Missouri comes in for a fair distribution of males—one to J. W. Hollis, of Turney, W. H. Stevens, London, and J. Sigman, Hamilton. W. H. McCall, of Lincoln, Neb., bought the very excellent three-month-old youngster Carlotta 2d's, sired by Sir Parthena and out of Carlotta 2d. All judges who are acquainted with his dam pronounce her "the handsomest cow in America." Her butter record of itself is rather enticing and attractive, it being thirty-one pounds and twelve ounces in seven days, while the sire's dam, Parthena, has a seven-day butter record of thirty-eight pounds and eight and one-half ounces, giving to the calf Carlotta 2d's an average butter record behind him in both lines of thirty-five pounds two and one-fourth ounces in seven days. His grandmother, Parthena, left the farm at \$2,000; Carlotta 2d went in her suckling form for \$1,000, and later on as she developed her owner refused \$1,500 for her. A very excellent and well-bred fellow, Princess Pell Mechthilde's Sir Henry, whose dam was the first prize two-year-old

Everybody's Shoes

should be kept oiled with Vacuum Leather Oil.

It saves money—the shoes last longer; Doctor's bills—wet feet. Harness needs it also, and more of it at a time.

25c. worth is a fair trial—and your money back if you want it—a swob with each can.

For pamphlet, free, "HOW TO TAKE CARE OF LEATHER," send to VACUUM OIL CO., Rochester, N. Y.

cow at the World's Fair, went to the Kansas State Agricultural college farm at Manhattan, and such is his promising future that Kansas State may expect something to her credit as time rolls along. To the reader unacquainted with Holstein history, especially those whose tendencies or modern dairy education is limited to the "little Jersey" or selected scrub, the test records of "white and blacks" comes with some degree of allowance. But a visit to Clover Hill farm and a personal inspection at once convinces the most skeptical that there is something in the Holstein and that a more extended acquaintance with them dispels whatever unfavorable impressions one may have entertained concerning them, and if imbued with the idea of a more profitable milk and butter machine at once concludes to grade up by the use of Holstein blood. These notes are, perhaps, already too long. I will, therefore, briefly state some of the salient features of Mr. Moore's herd of Poland-Chinas, as cattle and hogs naturally go together on the ledger account of the practical modern farmer or dairyman. The foundation blood consisted mainly of Black U. S., Tecumseh and Corwin strains, and the individuals that composed the foundation stock were bought at long prices on the principle of start right and stay right. The presiding officer at the head now is Black U. S. Wilkes, whose sire, Guy Wilkes 2d, sold for \$950. His dam was Black U. S. Blaine and her sire Black U. S., that sold for \$500. Among the sixty head now comprising the herd is a very promising young fellow that is booked to go to C. C. George-son, Kansas State Agricultural college, Manhattan, Kas. Mr. Moore, with his swine herd, proposes to keep up along the front rank and share in common with the corps of successful breeders of swine in Missouri, and if present indications count for anything he is destined to rank well up in the front of the battalion for first honors.

Summer Resorts of the East via Vandalia and Pennsylvania Short Lines.

The short route from St. Louis, and the only one over which fast express trains run to Cresson, Altoona and other retreats in the Alleghenies, to which tourist tickets at reduced rates will be sold during the season. For reaching the Adirondacks, the White mountains, the Catskills and places of summer sojourn in eastern New York, Vermont, New Hampshire and Maine these lines offer exceptional advantages, being the most direct to New York, where connection is made for any of the retreats in the mountains of the East. Newport, Fall River, Narragansett Pier, Nantucket, Martha's Vineyard and the delightful resorts down on Cape Cod are readily reached from New York, from which point passengers have choice of rail route or palatial steamers of the Fall River line. Atlantic City, Cape May, Long Branch, Asbury Park, Ocean Grove and resorts on the New Jersey coast are reached via Philadelphia or New York over divisions of the Pennsylvania system. For details address J. M. Chesbrough, A. G. P. Agent, St. Louis, Mo.

BOOKKEEPING. 10 cts. ONLY. Easy home study. Wonderful book positively self-instructive. 10c. mailed. Advertisements pay us, otherwise actually worth \$5. MACNAB'S PUB. CO., Detroit, Mich.

Agents Wanted

TO SELL CHRISTY KNIVES. A GOOD INCOME STEADILY ASSURED. EXPRESS CHARGES PREPAID ON ORDERS OF \$5 AND OVER. CIRCULARS FREE. CHRISTY KNIFE CO., BOX 3, FREMONT, OHIO.

Agents Wanted

The Mary Jane Dish Washer



Is guaranteed to wash dishes better than by hand and in one-fourth the time. There is no soap, no muss, no broken dishes, no soiling of clothing, no wetting the hands, but clean, nice polished dishes in a fourth of the usual time.

Thousands sold. Suits all. ONLY \$3.00.

Circulars free. Agents wanted. J. K. PURINTON & CO., Des Moines, Iowa.

MILK

and Cream will sour and cause loss unless you use PRESERVATIVE. It's cheap and harmless, keeps milk and cream fresh and sweet five to seven days, without ice. Successfully used for 17 years. Sample Free. Preservative Mfg. Co., 10 Cedar St., New York.

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 Female Pastor.

The pews weren't fillin' at our church—the parson seemed too old—
And, one by one, the brethren were withdrawin' from the fold,
So the elders called a meetin' to find out what to do,
And to "call" some kind o' pastor that would fill up every pew.

The Baptis' house was crowded over Sunday to the door,
(Their shepherd was a handsome chap—a reverend bachelor).
The Methodists seemed doing well—they never ran in debt—
But we were getting worse and worse; and that is why we met.

We asked our parson to resign, because we thought it best
That as he'd preached for sixty years he'd kind o' need a rest;
And then an idee struck us—to you it may look harsh—
We "called" a woman preacher—the Reverend Julia Marsh.

Her age was under twenty-five, and we paid her quite a sum
To warn ungodly sinners to flee the wrath to come;
As purty as a pictur! I really must confess,
Was this fair reverend lady in her neat and comely dress.

I wish you'd seen the crowds that came, and how they waited when
This female saint, with eyes upturned, would sweetly say "Amen!"
The boys all tried to see her home and take her out to dine,
Spring chicken dudes would get around and place themselves in line;

And then when Christmas came along, the presents she would get!
For diamonds and sealskin saccues the boys all got in debt;
The men they joined the "Temperance Class" and I am sure there would
Have bin some jealousy around but "she was doin' good!"

The wimmin folks declared right out that they would back her up
Because their sons and husbands all had quit the sparklin' cup;
Her earrings they was chestnut burs, as prickly as could be,
She said her mother bought 'em just to keep the men off—See?

Well, Lawyer Choate, one even', he took her for a ride
And asked her (in his legal way) if she would be his bride.
His beard was long and silky, and when the sleigh upset
The earrings in the whiskers did sort o' tangled get.

"What will I do!" the parson cried, "let me git out and walk!
If people see us hitched like this 'twill give 'em cause to talk!"
They sought a rival minister, who tied 'em in a knot
And our pastor and the lawyer now in double harness trot.

He shaved his whiskers—sudden-like—the earrings come undone,
And this is how old Lawyer Choate the Reverend Julia won.
The pews are vacant once again—the church is now "For Rent,"
And we think that female parsons ain't worth a blessed cent.

—Howard Saxby, in Cincinnati Times.

"WOMAN'S RIGHTS."

EDITOR HOME CIRCLE:—It was with the most intense interest that I read the two last FARMERS. "Woman's rights" is a question that ever interested me. "Aunt Polly" and Phoebe Parmelee's articles were very good, and I hope we shall hear from them again.

Certainly the women should and will vote. It is only a question of time.

I would like to ask Mrs. Strayer, who so strongly objects to the suffrage movement, if the woman's vote would count for naught, why she is so anxious and sure of having husband and sons vote her way? She says she will cast three votes herself, through the male portion of her family. Now, isn't this a little bit selfish? I am willing to allow my husband to vote as he pleases, though he often differs with me. You will be controlling three votes, when you should, by law, have only one.

I am glad to be informed of the "anti-suffrage" league, by you. It only shows the healthy growth of the suffrage movement.

Pardon me, but your article seems to bear the "ear-mark" of somebody's pocket-book. Now, honestly, weren't you hired, perhaps with a new bonnet, to write your article of June 6? Did you ever see a man who tried to be "doctor, lawyer, merchant, priest," all at the same time, turn out to be a success? You claim there are enough duties imposed upon women now. Right you are, and just enough more than they are able to carry, to crush many a wife and mother into her grave.

Now, I claim it does not, in the least, destroy the "sanctity" of the home, as so many prate about, to hire the washing, ironing and baking done. The average woman is not physically able to fill the place of laundress, cook, seamstress, and

all the thousand and one places to fill in a home, and the sooner the women find out their particular talent, and improve it, the sooner we will have "equal rights." If a woman can find time to go to church she can find time to vote, for it only takes about one-tenth of the time to vote that it does to hear the average sermon.

Yes, Mrs. Hamilton, if my neighbor was capable of filling County Clerk or County Commissioner's office, I would support her. I have a dear friend who fills the place of District Clerk, while her husband holds the office. Now, Mrs. H., if there is "not a law on our statute books, that not alone one man, nor yet twenty men, have had any influence in framing," don't you think it high time the matter was being discussed, and a remedy was applied?

Your theories are not practical. "Aunt Polly," your argument on "property rights" is correct. Our present laws are unjust, Mrs. Strayer and Mrs. Hamilton notwithstanding. But there are none so blind as those who will not see.

I, for one, will be glad when we can get every garment needed ready-made, and the more we buy the more will be made. If "one New York ladies' tailor" made 2,000 ladies' dresses in one month, and run the force night and day, I shall begin to think things are coming our way.

Yours for suffrage and all true reforms.
MRS. OLIVE ROBY-FERGUSON.
Chicakasha, I. T., June 20, 1894.

Suggestions on the Care of Children.

Now that the weather is so warm, children need more care than at any other time. When I look at my own bright, healthy baby, who is never cross, although this is his second summer and he is cutting teeth, I pity other mothers, whose children are a constant care, and the few suggestions given in this article are written to help them.

If a child is 6 months old or more, you can take off all his clothes during the heat of the day except a napkin, his little dress and shirt and he will not take cold. Put him down on the floor on a quilt and see how much he enjoys playing with his toes. If the evenings and mornings are cool, he should wear a flannel shirt also. Give him a drink of cold water every hour; if he prefers it, a little lemonade made rather sour will be good for him. Neglect to do this, especially if a child is teething, is a positive cruelty.

A bath in tepid water every day is not only necessary to cleanliness, but is greatly enjoyed, and is usually followed by a long, refreshing sleep. Allow him to remain in the water about five minutes, dry him thoroughly with a soft towel, then rub him with the hands until a good reaction is produced.

Of course, the most important thing is feeding the baby. Cow's milk is almost sure to disagree with him, as the cows eat all kinds of weeds and drink water that is far from pure. If a mother cannot nurse her baby she should select a proper infant's food, the best substitute made. Prepare his food regularly, using only a small quantity at a time, and empty and wash the bottle as soon as the meal is over. An infant 2 months old should be fed every two hours during the day, and not quite so often at night. The intervals between meals should be lengthened gradually and the quantity increased until, at 6 months of age, five or six times during the twenty-four hours will be sufficient. Cereals or starchy food should not be used until he has passed his sixth month; then a very little boiled rice, sago, arrow root or tapioca may be given in addition to the infants' food, and will give variety to his diet. But the mother must be careful not to give too much. When he is 10 months old a little ripe fruit may be added if he is not allowed to swallow the seeds or skins. If he is fed in this way his bowels will seldom give any trouble, even while teething in hot weather.

Regularity in all his habits is one of the most important factors in the health of the child. He should be allowed to sleep at regular hours and should have his bath at a certain time each day. He should have his meals with untailing punctuality, unless he is asleep at the time.

Give him plenty of fresh air, but do not set him in a draught. If you follow these simple rules you will be rewarded by seeing your little one grow strong and healthy, and there is nothing in the world so beautiful as a perfectly healthy baby.

CLARA HAMMOND.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and the Topeka Advocate, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and Topeka Weekly Capital, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

EFFECTUAL.—Charles J. Booth, Olive-wood, Cal., says: "I have used Ayer's Pills in my family for several years, and have always found them most effectual in the relief of ailments arising from a disordered stomach, torpid liver, and constipated bowels."

"Bayou Folk."

Years ago, the sweet story of "Evangeline" brought tears to our eyes. The simple virtues of the Arcadians touched a tender spot in our hearts; and to-day our story-writers wander over the same enchanted ground and find equally beautiful and touching themes. Geo. W. Cable fascinated us with "Creole Days," and a later writer, Kate Chopin, has just published through Houghton, Mifflin & Co., a volume of the most exquisite sketches entitled "Bayou Folk." Each sketch, sharp in outline yet drawn with most delicate touch, tells some plaintive or amusing story; and the reader, "smiling, with wet eyes," repeats at the close, with "A Lady of Bayou St. John," the last of the twenty-three tales, "Ah, I have memories, memories."

In the very first story, "A No-Account Creole," we have the well-outlined young man of the world, Offdean, standing in sharp contrast to Placide Santien's truly Arcadian simplicity of thought and action. Placide, who has dwelt in the forests of the Red river, near his old home, though it has passed into the hands of strangers. Placide has loved the equally ingenious Euphrasie, with her wise little head in business matters. Euphrasie finds the handsome, child-hearted fellow lovable, and loves him in a half-motherly, sisterly way, promising to marry him, but when the city man, shrewd and energetic and forceful, meets her, she surrenders unconsciously to his stronger nature. Faithful to Placide she sends Offdean away, hopeless. But Placide overhears and understands. With fiery impetuosity he starts to kill Offdean on his homeward journey to New Orleans. The scene in the wood as Placide overtakes his rival is intensely dramatic. To Placide's threats of instant death Offdean calmly answers: "I thought a creole knew better than that how to love. The way to love a woman is to think first of her happiness. I shall leave this place to-morrow. You will never see me again if I can help it. Isn't that enough for you? I am going to turn here and leave you. Shoot me in the back if you like, but I know you won't," and Offdean held out his hand.

"I don't want to shake han's with you," said Placide, sulkily. "Go 'way from me." Then, as Offdean disappeared, he muttered, reflectively: "He thought a creole knew how to love. Does he reckon he's goin' to learn a creole how to love?"

With Placide's real goodness, despite the fiery passion of the "no-account creole," there is only one possible close to the story, and yet that close is so daintily and deftly told that our sympathies and affection linger with all three of the lovers.

One of the most intensely thrilling of the stories is "Desiree's Baby." The haughty heir of the Aubignys falls in love with Desiree, a little waif found by Monsieur Valmonde at the gateway long years before, and adopted as his own. When Armand proposed marriage, "Monsieur Valmonde grew practical and wanted things well considered, that is, the girl's obscure origin. Armand, an orphan, looked into her eyes and did not care. He was reminded that she was nameless. What did it matter about a name, when he could give her one of the oldest and proudest names in Louisiana?" So they were married, but, alas, Desiree's baby bore only too plainly the marks of the hated African blood. The disappointed Armand drove away from his home with bitter reproaches the unhappy mother and her child. "She disappeared among the reeds and willows that grew thick along the banks of the deep, sluggish bayou; and she did not come back again."

Weeks after, the father and husband sought to destroy all relics of the lost ones. His wife's trousseau, his baby son's layette were given to the flames. "The last thing to go was a tiny bundle of letters, innocent little scribbles that Desiree had sent him during the days of their espousal. There was the remnant of one back in the drawer from which he took them. But it was not Desiree's; it was part of an old letter from his mother to his father. He read it. She was thanking God for the blessing of her husband's love. But above all, she wrote, night and day I thank the good God for having so arranged our lives that our dear Armand will never know that his mother, who adores him, belongs to the race that is cursed with the brand of slavery."

From this tragic scene we turn to the light comedy of "A Turkey Hunt," or the sweet tenderness of "Love on the Bon Dieu," or perhaps the twinkling mischief of "Madame Celestine's Divorce," and turning, realize the exquisite charm of their simplicity, their earnestness, their truthfulness, with unalloyed pleasure.

The book is published by that most reliable publishing house, Houghton, Mifflin & Co., Boston and New York.

It is your duty as well as privilege to look young as long as you can. One way to do so is by dressing your hair with Ayer's Hair Vigor. It causes the hair to retain its color and fullness to a late period of life, and keeps the scalp in good, healthy condition.

IVORY SOAP

99 ¹⁴/₁₀₀ % PURE

FOR THE BABY.

THE PROCTER & GAMBLE CO., CINTI.

Drs. Thornton & Minor,

Bunker building, Kansas City, Mo., the well-known specialists in the treatment of all rectal troubles, have established a principle in connection with their ever-increasing clientele that is well calculated to inspire confidence in their integrity and ability to perform to the last degree that which they promise when assuming to cure their patients, and that is, they decline to accept a fee until they have clearly demonstrated that a cure has been accomplished. Thousands testify to the efficiency of their treatment. Another specialty of their's is diseases of women, and of the skin. Beware of quacks. Ask for their circulars, giving testimonials of leading business men and high officials—they contain special information for the afflicted. Address, DRs. THORNTON & MINOR, Bunker Building, Kansas City, Mo.

To the Seashore at Slight Cost via Vandalia and Pennsylvania Short Lines.

For the National Educational Association meeting low rate excursion tickets to Asbury Park will be sold via Vandalia and Pennsylvania lines July 7, 8 and 9. Atlantic City, Cape May, Long Branch, Ocean Grove and numerous other summer havens along the New Jersey coast are near Asbury Park, to which these lines lead direct from St. Louis. Solid vestibule trains daily from St. Louis to Philadelphia, with convenient connection in Union station for frequent trains for the seashore. Ample time for an extended sojourn. For details address J. M. Chesbrough, Assistant General Passenger Agent, St. Louis, Mo.

RUDY'S PILE SUPPOSITORY is guaranteed to cure Piles and Constipation, or money refunded. Fifty cents per box. Send stamp for circular and Free Sample to MARTIN RUDY, Lancaster, Pa. For sale by all first-class druggists and in Topeka, Kas., by W. R. Kennedy, Druggist, northeast corner Fourth and Kansas Ave.

Nervous

Are you, can't sleep, can't eat, tired, thirsty? Blood poor?

It's a tonic you want—

Hires' Rootbeer.

This sparkling, exhilarating, and refreshing drink, while being far more agreeable in bouquet and flavor than the finest wine or champagne, is at the same time unlike them, being free from alcohol.

A temperance drink for temperance people, delicious and wholesome as well. Purifies the blood, tickles the palate.

Package makes five gallons.

Ask your storekeeper for it.

Take no substitutes.

Send a-cent stamp to Chas. E. Hires Co., Philadelphia, for beautiful picture cards.

CONSUMPTION SURELY CURED.

To THE EDITOR—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption if they will send me their express and post office address. Respectfully,
T. A. Slocum, M.C.,
No. 183 Pearl Street, New York.

The Young Folks.

A Poem With a Point.

Only a pin; yet it calmly lay
On the tufted floor, in the light of day;
And it shone serenely fair and bright,
Reflecting back the noonday light.

Only a boy; yet he saw that pin,
And his face assumed a fiendish grin;
He stooped for awhile, with a look intent,
Till he and the pin alike were bent.

Only a chair; but upon its seat
A well-bent pin found safe retreat;
Nor had the keenest eye discerned
That heavenward its point was turned.

Only a man; but he chanced to drop
Upon that chair, when fizz! bang! pop!
He leaped like a cork from out a bottle,
And opened wide his valve de throttle.

Only a yell; though an honest one,
It lacked the element of fun;
And man and boy and pin and chair
In wild confusion mingled there.

—Exchange.

When We Plant the Tree.

What do we plant when we plant the tree?
We plant the ship which will cross the sea,
We plant the mast to carry the sails;
We plant the planks to withstand the gales—
The keel, the keelson, and beam and knee;
We plant the ship when we plant the tree.

What do we plant when we plant the tree?
We plant the houses for you and me.
We plant the rafters, the shingles, the floors,
We plant the studding, the lath, the doors,
The beams and siding, all parts that be;
We plant the house when we plant the tree.

What do we plant when we plant the tree?
A thousand things that we daily see;
We plant the spire that out-towers the crag,
We plant the staff for our country's flag,
We plant the shade from the hot sun free;
We plant all these when we plant the tree.

—Henry Abbey.

FOURTH OF JULY—ITS DURATION.

American patriots wish to know how long the Fourth of July is, and when and where it begins and ends. Let us see.

Here in Kansas, where we go by Central standard time, the day is twenty-four hours long. In the Atlantic States the day begins an hour earlier, and on the Pacific coast ends two hours later than it does with us. That makes the day twenty-seven hours long. Then we must add four hours for Alaska, making it thirty-one hours. But that is not all. Each new day begins in Bering's strait, on Big Diomedé island, in longitude 169° west. But America has no territory there. The first American land is New Columbia, longitude 177° 10' west to 179° 10' east and latitude 70° 56' to 71° 28' north. It is crossed by the anti-prime meridian (180° west) and its time is six hours slower than Central time. But it is west of the international date-line, where the new day begins; it is, therefore, eighteen hours ahead of Central time, and the Fourth of July begins there when it is 6 a. m. of July 3, Central time.

The sun's declination on July 3, 1894, at noon, Eastern standard time, is 22° 57' north. It shines at midnight of the 3d at Bering strait as far south as 68° 4' north. The sun is four minutes slow on that day; but this only affects places having local sun time when compared with standard time.

New Columbia was first explored by Lieutenant Berry, U. S. N., in 1880, while searching for DeLong's vessel, the Jeannette. On its south side is an harbor, Selfridge bay, but even if the ice permitted, the American tourist could not see the sun from there at midnight, because it is in the shadow of Berry range, a range of hills 1,500 feet high, running east and west, six miles to the north. From the summit of Berry Peak, 2,500 feet high, 179° west longitude, weather being clear, a beautiful view of the sun can be had at midnight of the 3d, when it is noon of the third at London, England, and 6 a. m. of the third in the Mississippi valley. The tourist here would be by far the first American to see the sun on July 4.

Two hours later the sun rises on Bennett, Jeannette and Henrietta islands, DeLong's discoveries north of Siberia, and thus the new day progresses around the earth. At 8:30 p. m. of the 3d, Central time, the 4th begins at Lockwood Point and Cape Robert Lincoln in Hazen Land, with the sun 17° high and only just beginning to rise at midnight. Perhaps Lieutenant Peary and some of his party are there to greet the new-born day.

At 11 p. m., Central time, after the midnight sun has passed Cape Columbia in Grant Land, 70° west longitude, the Fourth begins all over the Atlantic States from Eastport, Me., to Augusta, Ga., and the boys of that region know of it. One hour later (12 p. m., July 3, Central time), the Fourth begins all over the Mississippi valley, from Buffalo, N. Y., to El Paso, Tex. Then, locally, the day lasts twenty-four hours, and two hours after it has ended here it ends on the Pacific coast.

About an hour after midnight at San Francisco, 2:57 a. m., July 5, Central time, the sun sets at Cape Wrangell, Attu island, the westernmost of the Aleutians, longitude 187° 30' west (172° 30' east), latitude 53° north, local time being 8:28 p. m. of the

4th. But the day is not yet ended. At 5:08 a. m. of the 5th, Central time, midnight of the 4th reaches Cape Lisburne, 166° west, 68° 50' north, the sun still shining. At 6:34 a. m., July 5, Central time, midnight of the 4th passes Attu island, the sun still shining on Cape Lisburne, New Columbia, Bennett island, Cape Robert Lincoln, Cape Columbia and Cape Smyth, north of Alaska. The sun does not set on American soil on the Fourth of July.

Thus, the Fourth begins on New Columbia at 6 a. m., July 3, Central time, and ends at Attu island at 6:34, July 5, Central time, thereby lasting forty-eight hours and thirty-four minutes. That ought to satisfy any American boy.

This may seem strange, but is true: The 4th of July begins at New Columbia when it is 11:30 p. m., July 2, at Cape Wrangle, Attu island, and ends at Cape Wrangell when it is 12:30 a. m., July 6, at New Columbia, thus lapping a little over twenty-four hours at each end, and being, apparently, seventy-three hours long.

Now let the boys of America fully enjoy the day they celebrate, and glory in the fact that the sun shines all day and night on American lands on the Fourth of July.

BERNARD B. SMYTH.

Topeka, June, 1894.

The Relation of the Agricultural College to the Farmer.

Graduating thesis, by Delbert L. Timbers, State Agricultural College commencement, 1894.

During the session of Congress in 1858, a bill, familiarly known as the "Morrill act," was brought before that body by Hon. Justin A. Morrill, of Vermont. The bill provided for the setting apart for each State of a certain amount of land to be used for the endowment, support and maintenance of at least one college, where the leading object would be to teach such branches as are related to agriculture and the mechanic arts, together with military science and tactics.

The bill passed both houses with a handsome majority and was then sent to President Buchanan for his signature, but, alas! from his hands it received the death blow. It was sent back with his objections, and the friends of the bill failing to have the required two-thirds vote, were compelled to drop it until some future time should warrant their bringing it up again. Four long years rolled by before that time came. Early in the spring of 1862 it was again brought forward, and this time championed by Senator Wade, of Ohio, and, after much debating and amending, it was passed, and July 2 of the same year it received the sanction of him who was called to steer the ship of state through America's greatest war—President Abraham Lincoln.

Less than half a century ago was erected the first agricultural college on American soil, and to-day every State and Territory in the Union, with the exception of Alaska, have made some provision for this kind of a college. Many of the States have placed it in connection with their universities, while others have made it a separate institution.

The annual income from the endowment fund was found to be too small for accomplishing the best work, so it was supplemented in 1890 by a further enactment allowing to each college \$15,000 for that year and an increase of \$1,000 each year thereafter until said amount shall be \$25,000. This money can be used only for instruction in the mechanic arts and agriculture and the various branches connected with them. No portion of these moneys are to go for the erection of buildings. That part is left for the State to supply.

There is also an annual appropriation by Congress of \$15,000 for the maintenance of one experiment station for each State, together with as many branches as the State sees fit to establish.

Bulletins and annual reports are published by the stations and sent out on application. These give an account of the different experiments carried on. For example, some of the bulletins of our own station deal with "wheat," "corn," "oat smut," "orchard pests," "swine and steer feeding" and "the different diseases of domestic animals," all of which give valuable information to the energetic farmer and fruit-grower.

In this college both practical and theoretical instruction is given in agriculture, horticulture, botany, chemistry, entomology, veterinary science and mechanics, and in addition considerable time is devoted to subjects necessary for a general education. All these tend to fit one for the practical duties of life.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and Topeka Weekly Capital, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and the Topeka Advocate, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

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ABSOLUTELY PURE

George Eliot, the Queen of Fiction.

Graduating thesis by Stella V. Kimball, State Agricultural College commencement, 1894.

The nineteenth century had dawned. The sun of literary progress had risen high above the hills, and its bright rays shone down upon a period that will forever be recalled as an age of novelists. Higher it rises. The noontide of the century is reached, and more powerful than the rays of a midday sun is the influence of the minds and hearts of the great group of novelists who now begin their work.

No one writer has given his name to this period, for the names of Scott, Thackeray, Dickens and Eliot are as closely linked as the chapters of a story. Each was great, but so different were their fields and methods that they cannot be compared. No one who has read "Adam Bede," "Daniel Deronda," or "Mill on the Floss" will deny to Eliot her meed of praise. She delights in scenes of rural life, and especially in profound studies of human character. She has sketched human life more truly than any artist with pen or brush.

Many believe her writings to be influenced by her early surroundings. Picture to yourself a beautiful, old-fashioned brick house with ivy clambering over the walls, situated some little distance from the road, among many trees that offer an inviting shade. The country surrounding is unbroken, the level prairie stretching away to the horizon. No railroads mar the beauty of the scene, and its monotony is broken only by the stage-coach, as twice each day it passes the house. Picture all this, and more, and you will see "Gulf House," where our heroine spent twenty-one years of her early life. Is it wonderful, then, that with such quiet, beautiful surroundings and living almost in solitude, that an impression should be made on her mind that would leave a lasting influence on the life that was to follow? The loss of her mother when she was so young threw the entire care of the household upon her shoulders and caused her early to feel the responsibilities of life, and perhaps, in a great measure, accounts for the depth and earnestness of thought so indelibly stamped upon all her writings.

It seems marvelous that this woman, who in time became the queen of novelists, was at one time opposed to all kinds of fiction, and thought history to be in every way superior to the novel. She could not conceive how a person could be more interested in a fictitious character than in the words and deeds of a real human being. Her novels are works of art, and few have shown greater creative imagination. Whether historical, political or directed against the evils of society, they were written for the good of humanity and have fulfilled their mission.

As a novelist she stands without a superior in the history of literature. As a woman novelist she has demonstrated beyond a question the ability of her sex in the field of fiction, receiving the love and admiration of an appreciative public. Many have censured George Eliot, the woman, but when her great work is examined with unprejudiced eyes, when her noble character is fully understood, admiration cannot be withheld. She has realized her heart's desire. "She has joined the choir invisible of those immortal dead who live again in minds made better by their presence." No words more beautiful than her own can be used in describing the close of her life's work:

"The sun had sunk, but music still was there, And when this ceased, still triumph filled the air."

"Can't Be too Quick!"

BELOIT, Kan., May 14, 1894.
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KANSAS FARMER CO., Topeka, Kas.

Reports indicate that the corn crop is doing finely, even farther west than usual. The late rains found the fields in a high state of cultivation and the corn well rooted and ready to appropriate the full benefits of the now favorable season.

There are complaints from some parts of the State of a wingless grasshopper which is eating more than his share of growing crops. He is very fond of young alfalfa. The Oklahoma Experiment Station reports that he can be destroyed by mixing bran, sugar and arsenic and placing small balls of the poison around the infested patches.

Reports of the wheat harvest are not as universally cheerful as could be wished, and yet from widely separated parts of the State we hear of fair crops. J. S. Justice, of Johnson county, reports an average of fifteen bushels per acre, while L. M. Pickering, of Finney county, reports five to fifteen bushels as the yield from his 1,000 acres.

While everybody is wondering what will be the outcome of the present great railroad strike and trying to settle upon some rational method of making a repetition of the present complications improbable if not impossible, the suggestion of government ownership and operation as the only efficient cure and preventive of such evils as are now experienced is surprisingly prevalent.

In compliance with a resolution of inquiry, the Secretary of Agriculture has sent a statement to the Senate which says that the visible supply of wheat on July 1 was about 55,000,000 bushels, in addition to which there will be approximately 8,000,000 bushels of wheat stocks on the Pacific coast, and an undeterminable quantity that goes by the name of "invisible supply." He gives the acreage of winter wheat for the present year at 23,116,172 acres and of spring wheat at 10,108,592 acres, and the probable production 414,980,987 bushels.

The present labor difficulties were brought about in order to coerce Pullman to do what is generally conceded to be justice to his employees. That rich man is, however, probably suffering less inconvenience than anybody. The railroads, whose only "offense" is that they seek to carry out their long-existing contracts to haul Pullman cars to perform the duty of "common carriers," the employees, whose means of support are cut off, and the whole people, whose business is interrupted and damaged, these are the sufferers from the boycott adopted to coerce Pullman. Cannot the statesmanship of the age, the wisdom and philanthropy of the present time provide means for righting wrongs which will not punish the innocent while the object of all the wrath may go with his riches to some other clime and contemplate the turmoil only as a bit of news which penetrates his vacation retreat?

THE WAR OF WAGES.

The scheming and counter-scheming in the war which is now on between the employing capitalist and the employed laborer leads to continued new developments. While the farmer is least directly and possibly last affected by the results of the contest, his interests suffer with those of other members of the community, and he cannot, as a humanitarian, turn a deaf ear to the mighty sob of distress which comes with ever-increasing volume from the hiring centers.

This war does not slay with the sword. It shoots down only occasionally a few. It is, as it were, a siege, in which each side bends its energies into starving the other into surrender. Scarcely had the great contest in the coal-mining industries been suspended by a patched-up truce, when the railroad strike was precipitated. Some intimations of the plotting on capital's side of this contest may be gleaned from banker Clews' Wall street circular of June 30. He first tells how there was an international scheme on the part of speculators to depress the prices of stocks. He says:

"The 'bears' seem to have got up a concerted movement, including European co-operation, for raiding the market; their main dependence being on the impending Pullman strike, on a perverted construction put upon the banks supplying the Treasury with gold, and on misrepresentations as to the cash resources of the government, coupled with contemplated large sales of stock."

He then tells how the President took a hand in the game of finance "by a series of explanations and denials respecting the condition of the treasury." This is asserted to have had the effect of defeating the plans of the "bears." The course of the game then changed, and some other set of the stock gamblers made winnings. This is noted in the Wall street circular in the following sentence: "Buying orders came from London, which, in pursuance of the scheme, was to be a seller; and here the previous sellers became active in covering their 'shorts,' and some important recoveries in prices were the consequence."

But these winnings and losses are of late, chiefly in favor of one set and against another set of gamblers. Very few outsiders, or, as they were formerly designated, "lambs," now try to beat these professionals at their game. The part taken by the President in the matter is the most important to the general public. If the great office of the chief executive can be kept out of these various and devious deals the plain people will have more respect for it and there will probably be less unpleasant reflections as to the source from which immense campaign funds are procured.

It is scarcely credible that the great strike on the railroads can have been instigated in the interest of the employers. Such, however, is not an unfair inference from Mr. Clews' language. After showing that it is impossible to estimate the extent to which this strike may interfere with the carrying trade, etc., he reflects:

"To those familiar, however, with the interests immediately concerned, it is not likely to appear by any means an unmixed misfortune. It will raise questions and lead to changes which the strikers seem to have little anticipated. The roads have long felt that, under the existing depression of business and the great decline in prices, large reductions in operating expenses had become necessary, not only as a means towards making both ends meet, but also of enabling them to make concessions on freight charges in certain directions. They have hesitated to make those adjustments through a general cutting-down of wages, though they have done all that is possible through a reduction in the numerical strength of their employees. Their hands have now thrown down the gauntlet on one issue, the Pullman strike; the roads seem quite willing to accept the gauge, but on another issue, a general reduction of wages."

"So far as can be foreseen, therefore, the strike begun on Wednesday is likely to run to lengths which will put

it within the power of the railroads to effect a general reduction in wages. The fact that this reduction has not yet been effected has been, for some months past, the chief point of weakness in railroad securities, and has had much to do with the decline in net earnings. The occasion has now come for this adjustment of the carrying interest to the new conditions prevailing in the industrial and commercial interests. The conditions could hardly have been more favorable to the success of the roads in this struggle. The strikers have against them the justice of the case, the verdict of public opinion, the essential weakness of any mere strike on grounds of craft 'sympathy,' and the extraordinary number of unemployed who stand ready to take their place. The strike, therefore, can hardly fail to end in a reduction of wages that, directly or indirectly, will run through our railroad system at large. The transient inconveniences resulting from the interruption of traffic will be a small matter compared with the benefits to be derived from placing this immense national interest upon a sounder and more normal financial basis. When this has been accomplished, little will remain to be done in respect to the remodification of the scale of general wages."

The war now on is two-fold. It is one of wages on the one hand, but it is one of employment at any wages on the other. It has often been noticed by observers of the woes of Ireland that a shrewd management has for centuries kept the Irish fighting each other. So also the corporation side of the present conflict appears to be entering upon a similar campaign with wage-earners and to be full of hope as to the ultimate, and to expect the almost immediate success of the plan. Unemployed and almost starving people in this land of abundant undeveloped but appropriated resources are to be brought to take the places of those who are unwilling to a reduction of wages. A great and general strike is hailed as the opportunity for the substitution. The interest of the farmer and of the remnant in other occupations who still work for themselves will appear on mature consideration to be more than that of the casual spectator who cannot be affected by the result. But the lesson to every owner of a farm is to stick to it. The position of those who work for themselves, even though the returns may be small, is so far superior to that of those who may at any turn of the wheel or upon the whim of a boss be thrown into the army of the unemployed that the craze to get into town should give way to a general desire for the country and to till one's own land.

WHY THE LABOR FIGHT IS BITTER.

At frequent intervals humanity is shocked and its sympathies are wrung by reports, official or otherwise, of the "sweating system." This system is more prevalent in the manufacture of ready-made clothing than in any other department of industry. Briefly told, those who are engaged in this line of manufacture are in the habit of letting out the making of garments at the lowest rates at which they can procure the service. In theory, this is strictly in accord with the maxims upon which industrial system is conducted or has, until quite recently, been conducted in all departments. In this line of work competition is limited only by the line which divides between starvation and mere existence, if indeed it stops there. The work is done on contract and the price paid is reckoned by the piece or by the dozen. Among the thousands who are out of work in our cities this work is much sought after. A few cents a dozen for making boys' pants gives promise of at least something with which to appease the present fierce demands of hunger, something with which the mother may buy food for her little ones. Taking advantage of this situation, the contractor finds it possible to continue the reduction of the price paid, for if those who last week did the work will not this week accept a reduction, there are thousands who will take the work at any price. The result is that the work is done at rates which make necessary

the lowest possible standard of living, densely crowded quarters and the breaking down of all impulses above the one to scramble for subsistence. Those who have investigated the subject, officially and otherwise, report that the system results in the lowest possible degradation and the most abject misery, with licentiousness and crime.

In this industry every semblance of organization and effort to sustain wages has disappeared and its workers are too poor to unite or resist the forces which are bearing them down to continually lower depths of want and wretchedness.

Readers of the *FARMER*, most of whom are far removed from the scenes of this woe, may not be able, without an imaginary or real tour into the places where it is as regular as the brightness of the midday sun over the fields, to appreciate the terror with which laborers in other industries seek to avoid a like fate.

The farmer who has by labor, careful management and frugality become the possessor of a well-improved, fertile and well-stocked farm, is tenacious of his right to manage it. His judgment, care and labor, and his management of such help as he has from time to time hired, have together brought this farm into its present condition, and in it are the savings of a lifetime. If it be suggested to him that he ought not to raise hogs, because of the order of some man in Topeka or Kansas City or Chicago forbidding his hired hands from feeding or having anything to do with hogs, on account of some circumstance with which he has had nothing to do, he will be very likely to discharge the entire force and go into the labor markets and hire other hands.

This is much similar to the situation as to the present railroad strike, which is disastrously affecting the industries of the entire country. The facts, briefly stated, are that last fall the Pullman Car Co., car-builders, near Chicago, stated to its employees that on account of the panic many orders had been cancelled and in order to carry on the shops on such work as could be obtained a temporary reduction of wages would be necessary. This was agreed to by the employees. Later, and at the time when it had been expected that the restoration of the old wages would take place, the Pullman company still insisted that it was building cars at a loss and could not advance wages. The employees, who live in houses owned by the company, insisted that their house rent should at least be reduced to correspond with their present scale of wages. This proposition was declined and a strike ensued.

The Pullman employes then appealed to the American Railway Union, whose membership appears to extend to all branches of the railway service in all parts of the country, for assistance in the contest. The head of this Union, whose office is in Chicago, thereupon ordered a boycott of all Pullman cars. Obedience to this order resulted in the determination of the railroad managers to carry Pullman cars and the equally stubborn determination of the employes to obey the order of President Debs of the American Railway Union and to stand by their brethren, the Pullman employes, in their cause. The entire railway traffic of the country is, at this moment, completely demoralized, and no one can at this writing see the end. The situation is well summarized in the following heading from a Monday morning paper:

TIE-UP IS COMPLETE.

GREAT RAILWAY SYSTEMS UNABLE TO TRANSACT BUSINESS.

MANY TRAINS ABANDONED.

WESTERN DIVISIONS OF THE UNION PACIFIC NOW INVOLVED.

FEDERAL TROOPS CALLED OUT.

FIGHT A BITTER ONE—SUCCESS OF ONE MEANS RUIN OF THE OTHER.

Six years ago the 15th of next September, Benjamin Harrison, at Indianapolis, gave utterance to the following remarkable sentiment:

"I do not believe that a republic can live and prosper whose wage-earners do not receive enough to make life

comfortable; who do not have some upward avenue of hope before them. When the wage-earners of this land lose hope, when the star goes out—after that, anarchy or a czar!"

In their experience of the past, laborers in the industries in which the services of large numbers are required have found it barely possible to maintain their cause in the contest with the powerful corporations which employ them. They have at various times attempted federation in some form and they have been on some occasions almost able to control the situation. But in every case there has been either surrender or compromise. The present union has apparently learned from all the experiences of the past. Every member seems to be driven by an unseen goad. It is, however, the fear of descending to a condition like that of the garment-makers, and the belief that only by such desperate fights as that they are now waging can be avoided that hopeless and helpless condition of misery that nerves these men and makes their families willing to suffer while the fight is in progress in the interest of a disconnected branch of labor. It is felt that to lose this contest is to clear the track for a rapid descent without breaks.

On the other hand, the owners of property have always controlled it. Our laws and institutions exist largely for the purpose of maintaining this right. Custom, the public convenience and the interests of capital, as well as the laws, are on the side of the managers. It is asserted that to fail in this contest, which has now become national, means such an overthrow as will make complete industrial reorganization necessary. The fight is therefore bitter.

IT LIVES IN MEMORY.

Photography is a power in this world. Even the "kodak fiend," of whom we hear so much that is detrimental, carries around with him a weapon that strikes terror into the hearts of "the people we talk about." He is a reproducer of situations, a faithful painter of the good and the evil. He does a great deal of harm and he does a great deal more of good.

You see a beautiful sunset, you gaze in awe at a majestic snow-capped mountain, and the first thought that comes over you is this: Would that I could carry away with me a reproduction of those wonderful master strokes of nature.

The traveler in foreign lands never fails to get photographs of things that have impressed him most strongly. His memory, unless he be a great genius, cannot retain all that his eye has seen. He wants something to remind him of it. The brain is a great storehouse, but there is a limit to its capacity.

The poet Schiller says: "The world is small; when one man pushes to the front, another is forced to make way for him."

So it is with the human brain. One thought crowds out another, and in this practical age, when the average man concentrates his mind on practical things, the art of money-making especially, he has no place left in his head for the lodgment of memories of the beauties of art or nature.

Here is where photography comes in as a valuable assistant. Ask the average traveler to describe the interior of St. Peter's, at Rome, or to go into details regarding the wonders of the Vatican, and he will at once bring forth his collection of views, and with their assistance he will tell you all about it.

The White City has vanished, never to return. The human mind cannot retain all that the eye has seen of that wonderful collection of the world's treasures of art.

There was seen, on the comparatively small space of land along the shores of Lake Michigan, a complete history of the development of the human brain, a resume of the growth of civilization.

Who is there so indifferent that he does not wish to preserve forever to be transmitted to coming generations, the memory of that great White City, which was built as if by magic and disappeared even more suddenly than

it came, into the dim past, never to return?

The more one ponders over it the more inclined he is to call blessings down upon the man who invented photography, the art preservative.

This art has kept abreast of the times—in fact, it has forged ahead—so that to-day the experienced artist can give an exact reproduction of the White City, and work into his photographs the very soul of his subject.

W. H. Jackson is an artist of recognized ability the world over, and the pictures he has made for the World's Fair Art Folio are among his masterpieces. He has brought out every detail, so that a person looking at the pictures can recall everything he saw and imagine himself once more strolling about on the Exposition grounds, and there are brought back to him all the pleasant incidents of his visit to the White City.

One of the most remarkable evidences of Mr. Jackson's ability is the picture in Part 1, of MacMonnies' Fountain, from the Grand Plaza. To the left in the foreground is the great gondola Columbia and about it the fountains, playing so naturally that one can almost say they are playing on forever.

These fountains are simply beautiful. No mere words of praise can do justice to the wonderful achievements of the photographer.

They are silent witnesses of his power. Once more we cry out in wonder and admiration: Bless the man who invented photography.

Part 2 is fully as fine in every particular as the first part. The general view from the lake gives an excellent idea of the magnitude of the White City as it looms up above the waters with its white domes against the sky.

The photographer has chosen his positions with great care, so as to bring out all the beauties of his subjects, as shown by the picture of the Agricultural building from the Colonnade. The statues on this structure are remarkably distinct in outline.

The fire boat in front of the Agricultural building is another evidence of the wonders of instantaneous photography.

Edwin Booth, who, by the way, was a very reserved and diffident man, was finally induced to talk into a phonograph during his last grand tour in the East. After his first initiation into the mysteries of this little voice-preserver he took a great interest in it, and was once heard to remark that he would give all he possessed if he could once more hear the voice of his father in "Richard III."

As the phonograph preserves to us the voices of dear ones who will soon be gone, so does the photograph keep vividly before our eyes the faces of the dead friends.

And the White City is dead; the carpenter, assisted by the flames, has annihilated it; but it rises again like the famous phoenix, thanks to the camera of one of the greatest artists of the age.

The White City Art Folios have been a success from the start, showing conclusively that the people have demanded them.

The KANSAS FARMER has succeeded in making arrangements whereby its readers may obtain this work for a small cost. See large advertisement elsewhere in this issue for terms.

In answer to many inquiries from those who have received one number of "Picturesque America," would say, that any subscriber who has sent us \$1 for subscription will receive three other numbers of the work from us upon receipt of one more dollar for a year's subscription for any one whose name you choose to send. By a little work in any locality several subscriptions can be obtained, and for each one, accompanied by a whole dollar, the sender will be entitled to receive from us three numbers of "Picturesque America." In sending to us always report what number or numbers you already have, and the numbers you claim.

The Kansas Weekly Capital publishes more Kansas news than any other weekly paper. A free sample copy will be sent on application to THE TOPEKA CAPITAL CO., Topeka, Kas.

THE LOW PRICE OF WHEAT.

The causes of the low prices of wheat now prevailing have been a subject of diligent inquiry as well as of bold assertion, without serious inquiry as to causes. The usual off-hand assertion is that overproduction is responsible. In a recent editorial the Pittsburg, (Pa.) Leader says:

"Few authorities worth quoting pin their faith to the overproduction theory after looking up statistics, and frequently prefer charging the trouble to a sympathy with silver values or depression in values generally. Mr. John Hood, whose opinion on grain values is always deserving of respect, furnishes an extensive line of data to disprove the overproduction theory, and who may, later on, be depended on for not only a theory, but a remedy, talked extensively on the subject to-day. He says:

"The farmers have suffered the most for several years; but the last year manufacturers, business men and wage-workers have had their full share of calamitous times. As bread is the staff of life, we may as well concede that the farmer is the stay of this government, and the support of us all, and whatever tends to lower the value of their farm and products, and injures their comforts, will eventually spread and add to the discomfort of every honest man in the land. The last year has been the record-breaker in the low price of wheat, which has been on the down grade since 1872, except when a very short crop or manipulation by speculators turned prices upward, only to fall again."

"At this juncture Mr. Hood introduced an array of figures, compiled for use in his address at the recent annual meeting of the grain and flour exchange, as follows: In 1872, \$1.49; in 1882, \$1.19; in 1892, 80 cents; in 1894, 58 to 65 cents.

"Continuing, Mr. Hood said: 'It has been asserted frequently and believed by many that the decline has been caused by improved machinery and the opening up of new territory, increased acreage and overproduction far beyond the increase of population, but this is not borne out by the reports on the crop since 1878, as follows:

Year.	Bushels.
1878.....	430,100,000
1879.....	448,700,000
1880.....	498,500,000
1881.....	880,300,000
1882.....	504,200,000
1883.....	431,000,000
1884.....	512,000,000
1885.....	857,100,000
1886.....	457,200,000
1887.....	456,800,000
1888.....	414,800,000
1889.....	490,500,000
1890.....	369,000,000
1891.....	611,700,000
1892.....	515,900,000
1893.....	396,100,000

"Thus," he adds, "we see that last year's crop was the smallest in sixteen years, except 1881-1885, and over 200,000,000 bushels short of 1891, and yet it sold at the lowest figures that have ruled in this country for many years. The estimate of the world's wheat crop for some years back is as follows:

1886—2,113,000,000 bushels.
1887—2,266,000,000 bushels.
1888—2,221,000,000 bushels.
1891—2,205,000,000 bushels.
1892—2,217,000,000 bushels.
1893—2,252,000,000 bushels.

"The world's crop shows a slight increase, but not equal to the increase in population. India is said to be our heaviest competitor in the wheat markets of the world. The crop there in 1893 was 266,900,000 bushels, while the average crop the last seven years there was about 250,000,000 bushels annually, or about one bushel per capita of the population, while it requires nearly five bushels per capita to seed and feed America. Therefore, the assertion of overproduction in wheat in America or in the world cannot be proven from crop reports as being the cause of low prices of wheat.

"This country produces about half the corn product of the world, and yet average exports of corn the last five years are less than 5 per cent. of the crops, and the exports of oats about 1 per cent., while the average exports of wheat, including flour, during the same period was over 30 per cent., or about 150,000,000 bushels annually. Therefore, the price of corn and oats is governed by the supply and demand in America, while the price of wheat is governed by prices in London on the

single gold basis of value, and whatever that implies in that market. That is where the disputations come in relative to cause of the decline in wheat."

The United States and the Road Inquiry.

EDITOR KANSAS FARMER:—Among the early fruits of the inquiry directed by Congress to be made through the Department of Agriculture into the "Systems of road management in the United States" and the "Best methods of road-making," is the welcome knowledge that in many sections of the country decided progress has already been made in the construction of improved highways, that this result has been reached in more ways than one, and that in whatever way it may have been reached it has been found eminently satisfactory and profitable to all concerned.

It is, therefore, no longer necessary to discuss the abstract questions of the necessity and economy of good roads nor to attempt to devise new ways of obtaining them. The practical experience of one community in making, using and paying for a new and superior road is worth more to others in like circumstances and conditions than any amount of argument or theory; and the greatest service the department can render the public in this regard is to furnish the facts in each important case of road improvement, and to compare the respective advantages and disadvantages of the methods followed in different portions of the Union. Modifications of these methods or even new methods may be developed by further experience, but for the present a clear knowledge of what has been done and is being done is the one thing needful.

It has been suggested by friends of the road movement that such information can be much more promptly and widely disseminated through the newspapers interested in the work than through the usual methods of government publication; recognizing this fact, the department will avail itself of all such facilities as may be accorded by the press for the purpose, and will furnish a series of articles of the character indicated to all papers publishing this announcement and forwarding a copy of the paper containing the same to this office.

ROY STONE,
Special Agent and Engineer in Charge of Road Inquiry.
Washington, D. C., June 1, 1894.

Weekly Weather-Crop Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending July 2, 1894, T. B. Jennings, observer:

A warm week, the temperature being constantly above normal, with a very large per cent. of sunshine.

The rainfall has not been as well distributed as during the past two weeks, the eastern half generally receiving a large excess, while over much of the western half none occurred. In Woodson, on the 25th, 7.10 inches of rain fell, 5.50 inches falling in one hour and forty minutes, accompanied with destructive hail. Several severe hail storms occurred in many parts of the eastern division on the 25th, one of them cutting a swath two miles wide in Osage county.

A fine growing week over the larger part of the State.

The wheat is nearly all harvested and the oat harvest will become general this week.

Corn has made a remarkable growth and presents a much better appearance than usual at this time of year. It is generally tasselling out and much of it has begun to silk, yet outside of the rain district it is needing rain.

Gardens, pastures and meadows have continued to improve, and the week insures a much better hay crop than anticipated.

Potatoes generally are very good, though the crop has been greatly diminished in portions of the west by the Colorado beetle.

Apples promise a good crop, and the early varieties are being marketed. In Barber peaches are plentiful at 50 and 60 cents per bushel. In the west the high temperature and dry weather of the week have not been beneficial.

Excursion to Asbury Park, N. J.

The Baltimore & Ohio Railroad company will sell excursion tickets to Asbury Park, N. J., and return from all points on its lines, July 7, 8 and 9, good returning until July 16, with privilege of extension until September 1, provided the return portion of the ticket is deposited with the joint agent at Asbury Park on or before July 13. Tickets will be valid for passage via New York and will be issued for the outward journey via Baltimore & Ohio railroad and Washington and for return journey via any of the other through lines.

The round trip rate from Chicago will be \$23 and correspondingly low from all other points on the Baltimore & Ohio system.

Tickets will be sold at all principal offices throughout the West and Northwest. For information in detail address L. S. Allen, A. G. P. A., B. & O. R. R., Grand Central Depot, Chicago, Ill.

Horticulture.

Strawberry Culture in Kansas.

Excerpt from graduating thesis, delivered at 1894 commencement Kansas State Agricultural college, by W. H. Moore, Manhattan, Kas.

The best soil for strawberries is a strong loam with a cool, well-drained subsoil. This should be plowed deep and thoroughly pulverized, levelled and rolled.

Whether the varieties set out should be fancy or common, should be decided after considering the market, locality of the soil and the fertilization. Great care should be exercised in selecting plants that will fertilize each other, because some varieties have perfect flowers and some have not. It is at this point that many farmers make mistakes.

Farmers who raise berries for their own use, or for a special market, should raise the largest and best. They should have a fine color, as, for example, the Crescent, which is a large scarlet berry with bright sepals around the fruit stems, the green contrasting so finely with the brilliant scarlet that it makes a beautiful colored picture, which pleases the eye of customers. But they get tired even of this. Then give them a change. Take the Haverland. To some its pine-apple flavor is very delightful. When they get tired of this a change, as from sweet to tart, will be found satisfactory.

Of the seventy-one varieties raised by the experiment station, only a few have been very successful. Among those which are now the most profitable are the Bubach, Captain Jack, Haverland, Shuster's Gem and Warfield.

The Bubach has hardy plants, gives a heavy yield of large, showy berries, which are quite firm, but not of fine flavor. It has a long bearing season.

Captain Jack has moderately vigorous plants. The fruit is produced in abundance, is below the medium size, but noted for its firmness.

Haverland is quite vigorous, injured but little by rust. The berries are large, deep red color, moderately firm, of good flavor and fairly productive.

Shuster's Gem has vigorous plants, very large berries of bright red color and good flavor, attractive in appearance and has long season, but berries are too soft to ship.

Warfield has remarkably vigorous plants, berries good size, of deep red color, flesh moderately firm, of rather sour and not especially fine flavor, but it is one of the most productive, and the season is long.

The plants should be young, healthy and well-rooted. The best time for setting out is during the month of April. The roots should be spread and the moist soil carefully placed around them and firmly pressed down. They must not be set so deep that the crown will be covered with soil the first time it rains.

The narrow matted row is perhaps the best method for farm growers, because they can be cultivated with a one-horse cultivator and thus save a large amount of hoeing.

Farmers are not supposed to raise garden products for sale, still if the yield is large they can have an abundance for their family and dispose of the over-supply for a paying price, and this adds very materially to the income of the farm and especially to the supply of ready money.

About Ants.

EDITOR KANSAS FARMER:—In many farms and gardens the red ant is found to be an aggravating, and destructive pest. Their hills, shingled with coarse sand and surrounded by a space denuded of every vestige of vegetation, are familiar to every one. A vast amount of labor has been spent in vain efforts to dislodge or destroy them. Pour kerosene on the hill then fire it, pour scalding water on them, stir their hills up with water into a bed of mud, and they still survive in apparently undiminished numbers. Plow them up and they simply show an increased degree of hilarious activity. Take a spade and scatter their hill to the four winds of heaven and you have presently three or four hills instead of one, and

you will be very fortunate if some enterprising ant does not help you to discover several hills on your cutaneous system, which, though small in size, will be mastodontic in feeling, and will tend wonderfully to develop your lingual capacities.

Some sink a bottle in the hill for a trap, having the top level with the surface, but the ants quickly "catch on" to the scheme, and it never proves a complete success. There is a newly-discovered insecticide, *i. e.*, sulphide of carbon, sold also under the name of "Fuma," which will probably be found successful in destroying ants. It is a liquid which, being poured into the runways of the ants or of burrowing animals, as gophers or prairie dogs, becomes diffused as a poisonous gas, which quickly destroys life. As generally sold in drug stores, the expense of this liquid makes it impracticable, but if several combine and buy at wholesale it comes cheap enough. I have frequently exterminated colonies of ants by digging the entire hill, ants and soil, into pails, carrying them off and throwing them into a stream. This operation must be repeated once or twice to insure success, as some will always remain after the first ones are taken.

I have seen ants recommended as beneficial to orchards. This may be true of old orchards, but I have known them to denude young six-foot trees completely of leaves and kill them.

It is not generally known that ants have an insect enemy which preys upon them and which might possibly be cultivated to advantage for that purpose. It is the larva of a large fly, the *Myrmeleon*, with bright eyes and beautiful lace-like wings. The larva is called the ant-lion. This funny little fellow is flat, about the size of a man's thumbnail, and with a pair of ferocious jaws or nippers. He digs a funnel-shaped trap, about two inches across, and covers the slopes with fine loose sand. At the apex of this inverted funnel or pitfall the animal lies buried, the jaws only protruding. Patiently, like a spider, he awaits his prey. When an ant steps on the side of the trap his feet sink in the sand, which yields beneath him, and he finds himself going down. The more fiercely he struggles the faster his descent into this maelstrom of sand, till within reach of the fatal jaws, when he is quickly snapped up and devoured. A writer in an Eastern periodical describes the ant-lion as the larva of the lace-wing *Chrysopa oculata*, but this is a mistake.

Allison, Kas. JNO. J. CASS.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and the Topeka Weekly Capital, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

SPECIAL FOR JULY.—For new subscribers, both the KANSAS FARMER and the Topeka Advocate, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

A New Method of Budding.

The Horticulturist of the Texas Experiment Station reports a method of winter budding. Whether this will prove equally successful in this latitude can be determined only by experiment. He says:

"By a method we have used here during the past year we were enabled to bud trees and cuttings successfully during the winter when the sap is said to be dormant. The method is simply to cut a slice of bark down the stock, leaving it still attached to the stock at the lower end to help hold the bud. Part of the loose slip is then cut off and the bud fitted over the cut place with the lower end being held firmly by the part of the slip left. A piece of raffia is then tied around the bud to hold it firmly. On last January the 15th we budded fifty young seedling peach trees by the above method. On January 24 they were examined and were found to have 'knit' firmly to the stock. Of the fifty buds attached only one failed to make a shoot in the spring and it was accidentally killed. By this method one year's growth is gained over the old method. We also budded trees and kept them in sphagnum moss like regular grafted trees are kept."

Aim always to grow a tree with a shapely head.

Protection Against Grasshoppers.

Very often considerable damage and much annoyance is caused by native grasshoppers. The sixth annual report of the Texas Experiment Station contains the following:

"I have found no trouble in killing grasshoppers with the following mixture:

"To six pounds of wheat bran add one pound of sugar or molasses and one pound of white arsenic; use enough of water to make a thick dough and put down in three rows, six feet apart, ahead of hoppers, a tablespoonful of poison every six feet. This should begin, say, at 5 p. m., and at 5 a. m. put another three rows in the same manner, and pick up in the afternoon of the second day the first poison that was put down. Wet this, rework, and it is as good as any.

"I have also been successful in the application of one pound of white arsenic, dry, per acre. This was applied with the Roach poisoning machine, at a rate of about forty acres per day, using it only very early in the morning and late in the evening. As much as two pounds of white arsenic per acre did not injure the cotton, when applied dry.

"For the protection of peach trees and other fruits, I find that kerosene emulsion, consisting of one part oil and twelve parts water, is an unqualified success."

The following is given as a successful preventive of borers and also guard against damage to fruit trees by mice and rabbits: Remove the soil around the tree to a depth of about two inches; remove all borers and paint the tree with white lead with a little arsenic stirred into it. Put back the earth. Repeat every two years. The total cost is given as about 1½ cents per tree

Notes for July.

This month will finish up the harvesting.

Stack all of the grain as soon as possible after harvest.

If wheat is to be sown this fall commence to break stubble early.

Be sure that the granary is thoroughly cleaned out before putting in new grain.

It is only in exceptional cases that it will be best to cultivate in the orchard later than this.

It is rarely advisable to burn anything that can be plowed under to a good advantage.

Do not be in too much of a hurry to turn the stock in on meadows. Let the grass get a good start.

Deep and thorough plowing with a thorough fining is the best preparation to give for fall wheat.

Newly-set trees or plants should be mulched now as soon as the other work of the farm will permit.

It is important now to see that the stock have an abundant supply of water where they can help themselves.

During the next two months one of the important items in keeping the stock thrifty is to keep them comfortable.

See that the stock, and especially the milch cows and work teams, are properly protected from the torments of flies.

Harvest the onions whenever the tops die down. There is no advantage in leaving them after they are ripe.

It will be better to commence feeding the stock a soiling crop early rather than to allow them to commence running down.

In commencing to plow stubble it is nearly always best to have at least two shares to each plow. It will save time in keeping them sharp.

Evaporated fruit brings a better price, requires less time, is cleaner, presents a nicer appearance, and the work can be done with less risk of loss than sun-drying.

Especially when sheep are kept on the farm it will pay to either sow rye among the standing corn or to plow a

patch especially for this crop. It is hard to excel as a crop to sow for winter pasturage.

Prepare a patch of ground thoroughly and sow to turnips. If reasonably rich new ground is best.

No fruit should be allowed to go to waste. If it cannot be used in any other way to a good advantage, turn in the hogs and sheep and let them eat what would otherwise be wasted.

It is poor economy to allow the stock to graze the grass in the pasture down so close at this time that the plants are killed out. Better commence feeding a little early and save the pastures.

Summer pruning can be done to the best advantage by pinching or rubbing off young growth that has started out where it is not wanted, and if properly done will avoid severe pruning later on.

A safe rule with all farm products is to market whenever a price can be realized that will return a fair per cent. of profit. Storing with the intention of holding until a rise in market makes the farmer a speculator.

When the threshing is done have sufficient help to stack the straw so that it will keep in a good condition. What is not needed for feeding can always be used to a good advantage for bedding. Even Western farmers must be looking after the manure crop.

Eldon, Mo. N. J. SHEPHERD.

With but little care and no trouble the beard and mustache can be kept a uniform brown or black color by using Buckingham's Dye for the Whiskers.

"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.

Seashore Excursion Over Vandalia and Pennsylvania Short Lines.

Low rate round trip tickets to Asbury Park will be sold via Vandalia and Pennsylvania Short Lines July 7, 8 and 9, account National Educational Association meeting. Asbury Park adjoins Ocean Grove, Long Branch, Cape May, Atlantic City, Elberon, Sea Isle Park, Barnegat and other delightful watering places on the New Jersey coast, to all of which the Vandalia and Pennsylvania lines lead direct from St. Louis. Solid vestibule trains daily from St. Louis to Philadelphia, where connection is made with frequent trains for the seashore. Tickets may be obtained at principal ticket offices of leading railways in the West and Southwest. Return limit on excursion tickets will be ample for side trips. For any desired information, address J. M. Chesbrough, Assistant General Passenger Agent, St. Louis, Mo.

CORRUGATED IRON ROOFING. We are selling at \$1.50 Per Square. First class condition, put up in 25 to 30 square lots. Also Lumber and Building Material Cheap. Send bill for estimate at once. CHICAGO HOUSE WRECKING CO., 3005-33 S. Halsted St. (6 Blks. North of Union St. Yds.) CHICAGO, ILL.

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Davis International Cream Separator, Hand or Power. Every farmer that has cows should have one. It saves half the labor, makes one-third more butter. Separator Butter brings one-third more money. Send for circulars.

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In writing to advertisers please state that you saw their advertisement in the KANSAS FARMER.

In the Dairy.

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

Paraffine in "Oleo."

Mr. B. F. Van Valkenburgh, Assistant Commissioner of Agriculture for the State of New York, and a member of the firm of Van Valkenburgh & Stout, of New York city, said, in an interview with a representative of the *American Creamery*: "In investigating 'oleo' I now have the sworn statements of some of the best chemists in the country, which show that paraffine is used in its manufacture in quantities ranging from 5 to 11 1/2 per cent., demonstrating conclusively that any one testifying as to its wholesomeness, is either ignorant or intentionally makes a false statement. Mr. Van Valkenburgh has, in proof of this, sworn statements from the following prominent chemists: J. F. Geisler, 6 Harrison street; E. G. Love, 122 Bowery, and C. M. Stillwell, of Stillwell & Glidden."

"What brand of 'oleo' contains this adulterant?"

"I cannot tell. I find it in samples found in the market in the regular course of investigation by the department; but as brands are usually scraped off by the dealer, to avoid detection, we cannot tell what manufacturer, or how many, are using paraffine in their goods."

The above is on a line with a statement to the same effect made by Mr. Van Valkenburgh at the meeting of the N. D. U., in Chicago. The presence of paraffine in oleomargarine utterly precludes its claim to wholesomeness, for the reason that the human stomach could just about as easily digest gravel as it could paraffine.

One of Nebraska's Senators Champions the Fraud.

The following correspondence appeared recently in *Howard's Dairyman*, and speaks for itself:

MR. EDITOR:—I enclose herewith a copy of a letter written by me to Hon. Chas. F. Manderson, in relation to bill No. 2,006, introduced in the United States Senate by him, and his reply to the same.

Should this bill become a law it will nullify nearly every State law that has been passed to regulate and control the sale of oleomargarine.

The intention of the measure is to protect the retail dealer against prosecution under State laws, by making one-pound packages original packages, instead of ten pounds, as under the present law. Should this bill become a law it would be almost impossible to detect the retail dealer in the act of selling these fraudulent goods and for butter.

The dairymen, creamerymen and all others who are interested in the sale of pure dairy products should arouse themselves, and petition their Senators and members of Congress to vote against this bill.

The argument used, that oleomargarine is of great benefit to farmers who raise cattle for beef, is not worth considering, as every one is well aware that beef was never lower than for several years past, and that the amount of beef fat that enters into the goods does not affect the price of cattle to any appreciable extent.

B. F. VAN VALKENBURGH,
206 Greenwich St., New York City.

NEW YORK, May 18, 1894.

Hon. Chas. F. Manderson, United States Senate:

DEAR SIR:—I see stated in *The Recorder*, of New York, under date of May 17, 1894, that you have introduced a bill in the United States Senate to amend the revenue law relating to oleomargarine. If such amendment is as stated in said paper it is purely in the interest of the oleomargarine dealers and will unquestionably be of great damage to the dairy interest of the United States.

It is a great surprise to me that any representative of a dairy State could by any manner be influenced to introduce such a bill, which is purely in the interest of an article that not one citizen in one thousand will knowingly consume as an article of food. The

evident intention of the bill is to assist the dealers in oleomargarine in their persistent efforts to palm their goods off to the consumer as and for butter, as ninety-nine out of every one hundred pounds has been heretofore. No sane man will believe that the intention of the bill is to protect the consumer against fraud but it is very evident that its intention is to protect the middleman in the perpetration of a fraud upon the consumer. In nearly every case where the dealer in this State has been found with oleomargarine in his possession it has been in tubs marked in the name of some well-known brand of butter and with the United States stamp carefully scraped off, and being sold as and for butter, and I assure you after ten years' experience in prosecuting violators of the law that, except it be restaurant keepers, boarding-house keepers and retail dealers, I have yet to learn of the first person that ever knowingly purchases one pound of oleomargarine for their own use. I will further state for your information that we frequently find oleomargarine in this market that contains from 5 to 11 per cent. of paraffine, and this is the so-called wholesome product that you are asking the dairyman of your State to compete with. I do not think the dairymen of your State will favor any law that will encourage the sale of oleomargarine, and do not think you would favor the measure if you fully understood the extent to which said bill, if it becomes a law, will assist in the fraudulent sale of oleomargarine.

B. F. VAN VALKENBURGH,
Assistant Commissioner of Agriculture,
State of New York.

UNITED STATES SENATE,
WASHINGTON, D. C., May 24, 1894.

Mr. B. F. Van Valkenburgh, Assistant Commissioner of Agriculture, No. 206 Greenwich street, New York city:

DEAR SIR:—Your favor of the 21st inst. is received. I send you a copy of the bill introduced by me, and also the statement which accompanied it, showing the reasons for its introduction and the abundant reasons why it should become a law.

Your letter is evidently dictated by prejudice or ignorance. The oleomargarine or butterine that is prepared by the great packing houses of the country is a better and purer product than the average butter that is sold even in the State of New York. You say that you know no person who uses oleomargarine knowingly. I know many thousands who use it knowingly, and I include myself among the number. I have seen it made in the great packing houses of South Omaha, and I am entirely familiar with the methods by which much of the butter of the country is produced. In comparison as to fraud between butter and oleomargarine, butter would take the palm.

This bill is to prevent stale and rancid butter, not fit to be used as axle grease, from being sold in tubs branded as oleomargarine, as the latter compound. It proposes to still further guard the public against buying one compound for another. Good butter is a desirable article of food, and oleomargarine is equally as desirable, and each should be sold upon its merits without fraud or concealment. If instead of oleomargarine being put in packages and sold out of the package, it should be placed in one-pound lumps and every lump branded and stamped, not only upon the oleomargarine but upon the band surrounding it, as such, certainly butter men who desire to sell a good and pure article ought not to complain.

You certainly have not kept pace, even if you are the Assistant Commissioner of Agriculture, with the development of the last few years, where in your own State many of the most prominent scientists and chemists have declared that oleomargarine, as prepared and sold by the packing houses, is a more healthful article than the average butter.

There is nothing that has more greatly benefited the farmers of the West than the use of parts of the beef to make the oleo or butter oil, that with butter, cream and cottonseed oil goes to the making of oleomargarine. The time has gone by when legislation upon this subject should be dictated, either by local selfish interests or by ignorance and misrepresentation.

CHAS. F. MANDERSON.

The Poultry Yard.

Was It Vermin?

EDITOR KANSAS FARMER:—Referring to the article of Mr. J. W. Wale, in the issue of this paper of June 20, I wish to offer the following:

In the first place, I must compliment Mr. Wale upon his broad and comprehensive view of the question; but there are some points where we are still in the dark. In the first place, Mr. Wale states that he has seen "thousands of such cases, and in ninety-nine out of a hundred it is the result of lice." If vermin kills the mother hen, why does it leave the brood in a healthy condition, for the same are running about the yard now hale and hearty? I am still at a loss to understand how lice will pick out a certain fowl and cause its death, and leave the rest of your barn-yard apparently unaffected and in healthy condition.

It may be that the constitution of a certain hen is more exposed to these ailments, or less able to endure them, just as one fowl may take disease and another not; it may also be that vermin works on its prey a long time before its victim succumbs. When a man takes such extraordinary pains to have clean quarters, and uses every precaution to guard off disease and vermin, he is a little loth to believe that vermin is the sole cause of death. I throw the question open for discussion: If lice kills one hen, why not another?

Let us encourage the coming poultry show to be held at Kansas City this winter all we can. It will give poultry the place in the public mind it justly deserves.

D. M. TODD.
Kansas City, Mo.

SPECIAL FOR JULY.—For new subscribers, both the *KANSAS FARMER* and the *Topeka Advocate*, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

SPECIAL FOR JULY.—For new subscribers, both the *KANSAS FARMER* and *Topeka Weekly Capital*, to January 1, 1895, for 50 cents, club-raiser to keep half the money.

Wholesale Duck-Raising.

Stephen Beale, in a recent *Cultivator and Country Gentleman*, gives an account of some duck-raisers in England who kill ducks by the thousands. Some of the raisers have but a small plot of land. An instance: One cottager with not more than a quarter of an acre of land kills from 1,800 to 1,900 birds a year. Mr. Beale says: Almost without exception the smaller breeders keep no ducks, or at any rate very few, purchasing eggs from the farmers all around the district, who find this a profitable part of their live stock. Contracts are usually made between the "duckers" and farmers for a supply of eggs right through the winter, and the average price is from 3s. to 3s. 6d. per dozen, but during periods of scarcity 10s. or 12s. per dozen is often paid, and we were informed by one breeder that he has paid as high as 15s. per dozen. The eggs are set almost entirely under hens, and when the ducklings come out they are allowed to remain with the hen for about a week, kept in small coops. Then they are removed, placed in roomy sheds, which are usually divided into compartments. In one place a single shed had upwards of 2,000 ducklings in it, divided into flocks of about twenty-five each by L-shaped boards, so as to prevent over-crowding. As they grow these places are increased in size, and then they are put out into open runs with sheds attached, from 100 to 200 in a flock. The ducks are allowed out when younger three times a day for feeding, at 7 a. m., 12:30 and 5 p. m., then put back and penned off in the manner stated. They are not given any water for swimming as a rule, but there are exceptions to this arrangement. Water for drinking is given in troughs, which are half filled with a special gravel brought from Long Marston, in Buckinghamshire, and which seems to have some special qualities to recommend it. It is inexpensive, costing 1s. 6d. per load, without cartage.

The food is, of course, varied a little in accordance with the individual ideas of the breeders, but as a rule, the first consists of hard-boiled eggs chopped

fine and mixed with bread crumbs, but some of the breeders use at this period, in addition, toast soaked in water. After three or four days of this feeding they are put upon rice, which is properly boiled, and for this purpose Burmah rice is preferred, and it has more feeding in it. Next they are given rice and toppings, which latter is a local name for fine sharps or middlings. During the latter stages of the process they are fed upon barley meal and toppings, and finally upon barley meal and fine graves or tallow scrap cake, though on one farm we saw that horse flesh and mutton were used for the same purpose. It is customary to give boiled nettles mixed with the food at various stages of their growth, this having been found most helpful in keeping the blood cool.

As might be expected in such wholesale conditions, deaths are by no means infrequent, and there is in this respect a good deal of difference in accordance with the seasons; but we were informed by one who feeds very largely that upon an average he was enabled to market 85 per cent. of the ducklings hatched, which seems to be an excellent proportion.

The birds grow very rapidly, and what are known as ducklings, that is, birds killed before they have cast their first feathers, are ready for market in about from seven to eight weeks, when they weigh from four to five pounds. There is, however, a number kept until fourteen or fifteen weeks, when it is no uncommon thing for them to scale nearly twice that weight. The season lasts from February to July, that is, when game is out of season, and a visit to the district after June would show that it was almost entirely denuded of ducks, save those retained for breeding purposes. The prices obtained vary in accordance with the season, and the following are average prices for well-grown birds: January, 10s. per couple; February, 16s.; March, 14s.; April, 12s.; May, 8s., and June, 7s. The kind of fowl bred here, without exception, is that known as the Aylesbury, no other equaling it for rapid growth and flesh properties.

Poultry Notes.

Ducks grow faster than chickens and are not so liable to be infested with vermin.

In damp weather, if the poultry house seems moist, put a pail of unslaked lime on the floor and dust air-slaked lime about. It will absorb moisture as a sponge does water.

Do not force your poultry to shift for themselves and roost in sheds or barns, getting a living as they can. Give them a warm house and plenty to eat, as they are the most profitable stock on the farm.

Poultry that is to be used on the table is much better if confined for a few days and fed corn or corn meal and water alone. On this diet fat is taken on rapidly and the flesh becomes sweet, juicy and tender.

The egg market never gets overstocked for long at a time, and good, fresh, clean stock never wants for a buyer. There is room in this business for farmers who complain of overproduction in other lines.

A box about fifteen inches square and six inches deep makes a good nest. A frame, having no bottom or top, and placed on the ground, with cut straw for a nest, is excellent. The main point is to look out for lice.

Roots (turnips, mangels, potatoes, etc.) run through a cutter, boiled and thickened with corn meal and bran, make a dish fit for the king's flock. It will make the hens sing and lay when eggs are scarce and high in price.

Beets may be safely sown early. A dozen rows in the garden will keep the yarded flock supplied with green food all summer, and perhaps furnish a juicy meal for the cows once or twice besides. No vegetables equal the sugar beet for fowls. Begin to thin them early.

Better learn by others' mistakes than teach by your own.—*Curtis Fagets.*

There is no richer possession than the memory of a good mother.—*Ram's Horn.*

The Family Doctor.

Conducted by HENRY W. ROBY, M. D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

Answers to Correspondents.

(NUMBER 29.)

DOCTOR ROBY:—Our boy of 5 is troubled with bed-wetting. He had a hard fall before he was 2, falling six feet into the cellar. We have thought this trouble caused by that. He has always been a very rugged, healthy child, but since this trouble began he seems somewhat peevish and lacks energy. Has had some trouble with his stomach. Our doctor here calls it irritation of the stomach. He had thorough treatment for that and has no return in the last eight months. At times his appetite is poor. Please answer through the FARMER. Lone Elm, Kas. Mrs. E. FERGUS.

There are many good remedies for bed-wetting in children. Belladonna, nux vomica, cina, santonine, phosphorous, cantharis, plantago, nitrum—any of these in sufficiently small doses not to cause aggravation of the trouble, are likely to cure. From one-tenth of a drop to a drop will be sufficient for a dose, and that should be given at bed-time. There is not much probability that the fall is the cause of the trouble, for thousands of children who have had no serious fall, are alike afflicted. It is quite probable that the habit in many children is but the result of infantile feeding. Many children are nursed at various hours in the night when they ought to be sleeping, and that is kept up until they are from 1 to 3 years old, thus begetting the habit of waking at odd times in the night and setting the nutritive and eliminative processes going when they should be quiet and restful. It is a physiological fact that the oftener people eat or drink, the oftener they must empty the bowels and bladder, and is quite certain that unfortunate habits are thus engendered in infancy, which are at times hard to abate.

FAMILY DOCTOR:—Our little boy, 7 years old, had a breaking out and itching on his body last fall and winter, which does not bother him much now, but his lips are very sore. He keeps licking them, especially his upper lip. They are red and raw—look as though they were scalded. He is thin in flesh and don't look well. I gave him what I call a patent medicine, which would cure the sore mouth, but when I'd stop the medicine in a few days it would come on him again, and now the medicine does not have any effect on him any more. His curls have never been out. Does long hair have any effect on a child? I had him in your office last fall when he had breaking out and what you called granular eyelids. He is not bothered much that way now. It seems to go from one misery to another. Please tell us what ails the child, through KANSAS FARMER. L. E. Z. Hiawatha, Kas.

The general term of mal-nutrition would come as near fitting the case as any name I know of. But that does not inform you as to what really is wrong with the child, and naming a disorder never cures it, and very often it furnishes no criterion even for treatment. A breaking out about the lips is but a sign of some deeper internal disorder of the nutritive function. There is probably something wrong in the kind, quality or quantity of food, or the frequency of feeding which is responsible for the trouble. Only all the facts in the daily life of the child would give a safe basis for a prescription. Try a little—a very little—sulphur, night and morning, so little that you are inclined to laugh at it for its littleness. But those are the best kind of doses for mal-nutrition of any kind. Then change the child's food. If he eats a large proportion of meat, make it a small part of his food. If a large proportion of bread or potatoes and other starchy food, reduce the proportion very much. If he eats between meals, stop it. If he drinks at meals, see that he drinks only before and not for two hours afterwards.

MR. HENRY ROBY, M. D.:—My mother is suffering a good deal with cramps in the calf of the leg. Can we do anything for it? Please answer in the FARMER. Ashland, Kas. G. DANTEL. Give drop doses of gelsemium, twice a day.

TO OUR READERS:—The Family Doctor has been off on a trip to Colorado, attending a national medical convention, and some letters of inquiry are just now reached and answered on our return home. This will explain the delay to some correspondents who might feel ignored or unfairly dealt with by the long silence, and it is possible some letters were lost in the forwarding and returning of mail.

A Great Step Forward.

Last month the American Institute of Homeopathy, the oldest national medical body in America, took a great step forward in the matter of medical education. For years and years the allopathic school has iterated and reiterated the charge that homoeopathic doctors were not well edu-

cated physicians, and that they fell far short of the high standard of literary and medical education of their old-school brethren.

Until recently most of the medical colleges in the country graduated students on one, two or three years of lectures, as best suited their taste and pockets. But the old-school colleges were as rash and hasty in graduating their classes as any other school, and had really nothing to boast of in matters of education. Then, to silence the unjust cavil, the Boston University School of Medicine (homoeopathic) took the stand for advanced education and established a four-years' course of study for its students, and the old-school men then had to admit that homoeopathy was for once in the lead and was distancing them in thorough and high requirements for graduation, and thereupon a very few of the old-school colleges reluctantly followed the pace that homoeopathy had set them and they also established four-years' courses. And now, that it may still lead the whole world in high standards of medical education, the American Institute of Homeopathy has decided by a very large majority—almost a unanimous vote—to require of all the homoeopathic colleges in the United States to establish next year and maintain four-year graded courses of instruction in order to graduation. This action will compel the old school to follow the lead of their competitors for public favor or to bear the stigma they sought so many years to place upon their enterprising rivals. And out of it all will come some good to the public.

Publishers' Paragraphs.

Parties having wool to sell should not fail to write to Silberman Bros., 208 Michigan street, Chicago, for their price current and wool circular.

If you are interested in fence-making write for a free copy of the "Coiled Spring Hustler," published by the Page Woven Wire Fence Co., Adrian, Mich.

The Kansas Farmer Company has received one of those splendid buggies advertised by Thos. D. Hubbard, Kimball, Kas., and we have to say that it is a great bargain for the money and is as represented in every particular.

We call attention to the new advertisement of W. L. Douglas' \$3 shoe, which appears in our issue to-day. We have every assurance from the manufacturer that the recent improvements in style and quality will give more satisfaction than ever to the wearers of these popular shoes.

The "5 World Beaters" Sickles brand harness, are having a good sale, notwithstanding the fact that business in this line has been quiet. Complimentary letters, praising the goods, are being received daily from dealers handling the harness, claiming they are the best value ever offered to the consumer.

The literature upon Kossuth which has been prompted by his death has already become quite formidable in its proportions. But nothing has appeared of so much interest to American readers as the notable paper by Hon. Geo. S. Boutwell in the July number of the *New England Magazine*, on "Kossuth in New England." Mr. Boutwell was Governor of Massachusetts at the exciting time of Kossuth's visit, and saw much of the great Hungarian. His article is not simply a chapter of reminiscences, however, but a careful discussion of Kossuth's aims and ideas, and an attempt to estimate his place in history. With its wealth of curious illustrations, it will appeal strongly to everybody who remembers the stirring days of Kossuth's visit.

The Eli Hay Press.

Every farmer that makes hay or shipper who bales it, is interested in saving and economizing his time and labor, consequently should be posting up as to how best "Git thar Eli." From all the indications obtainable, the grass crop west of Ohio is short, hence the chances are that hay will be in good demand and bring remunerative prices this coming winter. The late excessive rains throughout Kansas and Nebraska means that the hay shortage will to a great extent come off the prairies of Kansas and Nebraska. By writing the Collins Plow Co., Quincy, Ill., the reader will receive by return mail one of the best illustrated catalogues on hay presses that has yet been issued by any manufacturing firm anywhere. A more extended description and illustration of the Eli Hay Press will appear in the KANSAS FARMER a little later on, but will not be as full and satisfactory as the free catalogue sent out by the Collins Company.

Railroad Fares Reduced.

The Nickel Plate road has made material reductions in the fares to many points on that line, including Fort Wayne, Cleveland, Painesville, Ashtabula, Erie and many other Eastern points. Ticket office, 199 Clark street; depot, Twelfth street viaduct and Clark street, Chicago.

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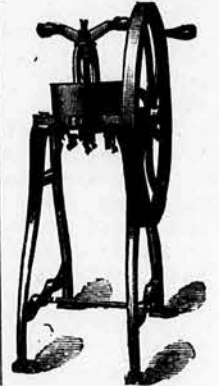
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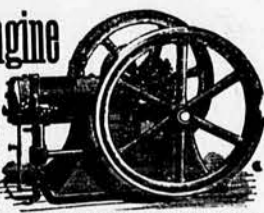
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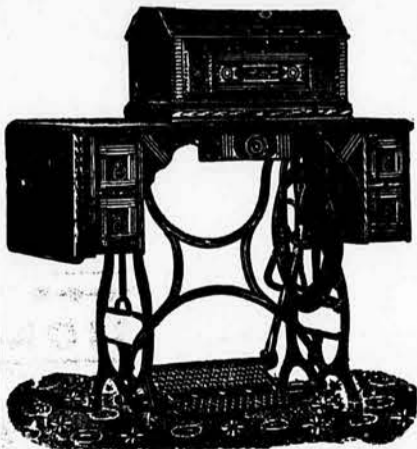
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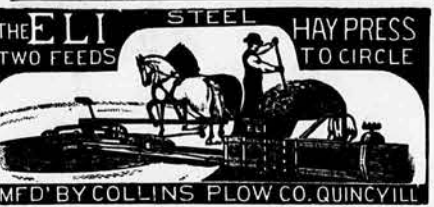
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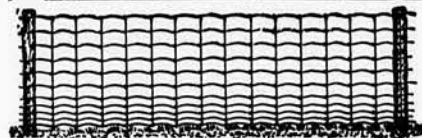
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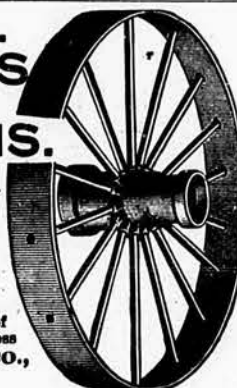
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THE STRAY LIST.

FOR WEEK ENDING JUNE 20, 1894.

Cowley county—J. H. Fishback, clerk. MARE—Taken up by A. A. Knox, in Bolton tp., June 3, 1894, one black mare, fifteen hands high, 4 years old, three white feet, mark on left ankle.

Cherokee county—P. M. Humphrey, clerk. HORSE—Taken up by H. F. Rains, in Pleasant View tp., one roan horse, fourteen and a half hands high, shod all around, left front foot and right hind foot white, forefoot cut off, 4 years old; valued at \$25.

Pottawatomie county—Frank Davis, clerk. TWO HORSES—Taken up by John Ekart, in Pottawatomie tp., P. O. Myers Valley, May 21, 1894, two bay horses, 3 and 4 years old, no marks or brands; valued at \$55.

Kingman county—W. J. Madole, clerk. PONY—Taken up by H. B. Pullam, in Richland tp., June 1, 1894, one bay horse pony, weight about 900 pounds, collar mark on shoulder; valued at \$10.

FOR WEEK ENDING JUNE 27, 1894. Marshall county—E. E. Woodman, clerk. MARE—Taken up by V. D. Crawford, in Noble tp., P. O. Vermillion, one dark sorrel mare, supposed to be 2 years old, no marks or brands; valued at \$12.

FOR WEEK ENDING JULY 4, 1894. Brown county—J. V. McNamar, clerk. MARE—Taken up by G. E. Joss in Walnut tp., June 10, 1894, one black mare, 10 or 12 years old, left hind foot white, slit in right ear, saddle marks.

Phillips county—I. D. Thornton, clerk. MARE—Taken up by Eli Holt, in Walnut tp., P. O. Woodruff, June 8, 1894, one blue-roan mare pony, 2 years old; valued at \$5.

COLT—By same, one black horse colt, 1 year old, muzzle on; valued at \$8. HORSE—By same, one light gray mare, 7 years old, weight about 1,000 pounds, large wire cut on right forearm; valued at \$20.

HORSE—By same, one dark gray horse, about 4 years old, weight 800 pounds, white hind feet; valued at \$15. HORSE—By same, one dark bay horse, about 6 years old, four white feet, star in forehead and strip on nose, weight about 1,000 pounds; valued at \$20.

Scott county—Jos. Griffith, clerk. PONY—Taken up by Eugene Walkthorn, in Valley tp., June 2, 1894, one bay mare pony, three white feet and star in forehead, branded SD; valued at \$10.

Osage county—E. C. Murphy, clerk. HORSE—Taken up by Samuel Benton, in Barclay tp., June 15, 1894, one sorrel horse colt, 4 or 5 years old, has white spot in forehead, wire cut on right front foot just above the hoof. HORSE—By same, one chestnut sorrel mare pony, about 8 years old, has white face and a little white on right hind foot.

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