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PRINCEPS 66683, ONE OF THREE HERD BULLS, OWNED BY STEELE BROS., BELVOIR, DOUGLAS COUNTY, KANSAS.

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Cards will be inserted in the Breeders' Directory as follows: Four line card one year, \$18.00; six lines, \$23.00; ten lines, \$30.00; each additional line \$3.00. A copy of the paper will be sent to the advertiser during the continuance of the card.

SWINE.

W. P. GOODE & SONS' HERD OF POLAND-CHINAS, Lexena, Kans.

We are offering boars ready for service at lower prices than ever. Sows and gilts safe in pig also very low. And we own the best bred son of Chief Tecumseh 2d 9115. Will take a few sows at low service fee. Write quick. We will please you sure.

D. TROTT, ABILENE, KAS., famous Duroc-Jerseys and Poland-Chinas.

M. H. ALBERTY, CHEROKEE, KANS., DUROC-Jerseys and Pig Teeth Clippers.

DUROC-JERSEY HOGS—Registered Stock. Send stamp for 64-page catalogue, illustrated. Prices and history.
J. M. STONEBRAKER, Panola, Ill.

J. U. HOWE, Wichita, Kans., Maple Avenue Herd of J. pure-bred Duroc-Jersey hogs. Choice stock for sale. Reasonable prices. Personal inspection and correspondence invited.

KANSAS HERD OF POLAND-CHINA SWINE—Has eight yearling sows. They have had pigs and bred to U. S. Tecumseh (20368), he by old black U. S. Also some fine boars by U. S. Tecumseh ready for service; and one Tecumseh-bred boar. Address F. P. Maguire, Haven, Kans.

SWINE.

Silver Spring Herd Poland-China Hogs. Headed by HADLEY'S MODEL T. Bred sows, gilts and boars of choicest breeding for sale. Address WALTER ROSWURM, Council Grove, Kas.

KAW VALLEY HERD OF POLAND-CHINAS—1899 pigs from the following prize-winning boars: Perfect I Know, Chief I Am, Gem's U. S. Chief and Dick Wainwright. M. F. Tatman, Rossville, Kans.

V. B. HOWEY, TOPEKA, KAS.

Breeder and shipper of thoroughbred Poland-China and Large English Berkshire swine and Silver-Laced Wyandotte chickens.

Standard Herd of Poland-Chinas

Has some fine sows, 1 year old this fall, sired by Tecumseh Chief (he by Chief Tecumseh 2d), and are bred to Look Over Me (he by Look Me Over); also, an extra lot of Spring Gilts, bred the same, and some good Spring Males of the same breeding. Come and see, or write and get prices. Wm. Maguire, Haven, Kas.

H. W. CHENEY, North Topeka, Kas. POLAND-CHINAS

of the fashionable prize-winning Chief I Know strain. Cheney's Chief I Know at head of herd. Pigs for sale. Prices low.

BLUE MOUND HERD BERKSHIRE SWINE.

Herd boars, Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also breed Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.
Allen Thomas, Blue Mound, Linn Co Kas.

SWINE.

CRESCENT HERD POLAND-CHINAS.

Boars and gilts for sale.
S. W. HILL, Hutchinson, Kas.



D. L. BUTTON, North Topeka, Kas., breeder of Improved Chester Whites. Stock for sale. Farm 2 miles northwest of Reform School.



DIVERDALE HERD of R Chester White swine and Light Brahma poultry. J. T. LAWTON, BURTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

VERDIGRIS VALLEY HERD—Large-Boned Poland-Chinas.

Three hundred head, six good spring boars, good bone, large and growthy, very cheap. Six June boars, very heavy bone and fancy, four of them will make herd-headers. Twenty yearling sows and spring gilts, bred, good ones, at from \$12 to \$15. One hundred and fifty of the finest fall pigs we ever produced. For sale cheaper than you ever bought as good pigs before. WAIT & EAST, Altoona, Wilson Co., Kans.

CAP-A-PIE HERD OF Poland-Chinas

Geo. W. Falk, Richmond, Mo., Is still doing business at the old stand, where, for the past fifteen years, he has been breeding and selling a class of hogs that have been winners at the leading State fairs, and have been topping the markets in Chicago and Kansas City—the end of all hogdom. Has constantly on hand boars large enough for service and sows bred and unbred. Write for prices, which are always reasonable.

SWINE.

RIDGEVIEW FARM HERD OF BERKSHIRES

Young boars and gilts bred in the purple for sale at prices that would astonish the natives. We keep nothing but the best. Get our prices and be convinced.
MANWAKING BROS., Lawrence, Kans.

HORSES.

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



SCALES SENT ON TRIAL TO RESPONSIBLE PARTIES
CATALOGUES FREE; DROP US A POSTAL.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

NOVEMBER 1—W. T. Clay, Plattsburg, Mo., Short-horns.

THE MODERN SHEEP.

One hundred and fifty-six pages of sheep literature of the valuable kind which the world has come to know as the Coburn brand, has just been issued from the press of the Kansas State Printer. If this introductory should stop right here, and if it



A SWEEPSTAKES EWE.

could be followed by the announcement that 100,000 copies were available, that liberal supply would soon be exhausted. Unfortunately we can not announce any such numbers and it behooves the reader who wants a copy to send his application by the first mail.

The book, which is entitled "The Modern Sheep," contains some rather startling information. Tables compiled by Secretary Coburn from the sworn returns of assessors, results of a house to house canvass and count, present a most distressful and violent contrast of the dog and sheep in-

over 60 per cent of the mortality of sheep in these counties, in 1898, being chargeable to them.

To each sheep in Lincoln County there were 909 dogs; in Osborne County 726, and in Republic 360. Chase, Lane, Ness, and Seward Counties had 2,181 dogs, but not one sheep, while in an even dozen counties having 5,553,280 acres of land there were 16,746 dogs, but only 80 sheep—an average of one sheep to each 69,416 acres and to each 209 dogs.

Statistics indicate that no disaster ever

"Their propagation, care, and improvement have played a large part in the best husbandry of all lands from time immemorial. Common to every country, they have adapted themselves to every condition. Existing on Greenland's frozen mountains, they are at home on Sahara and the scorched llanos of the Orinoco as well. Hungry, restless and gaunt on Switzerland's bleakest Alps, they represent one extreme of sheep existence; on the plains of Kansas and their affluence of grain and grass attaining a development nowhere else



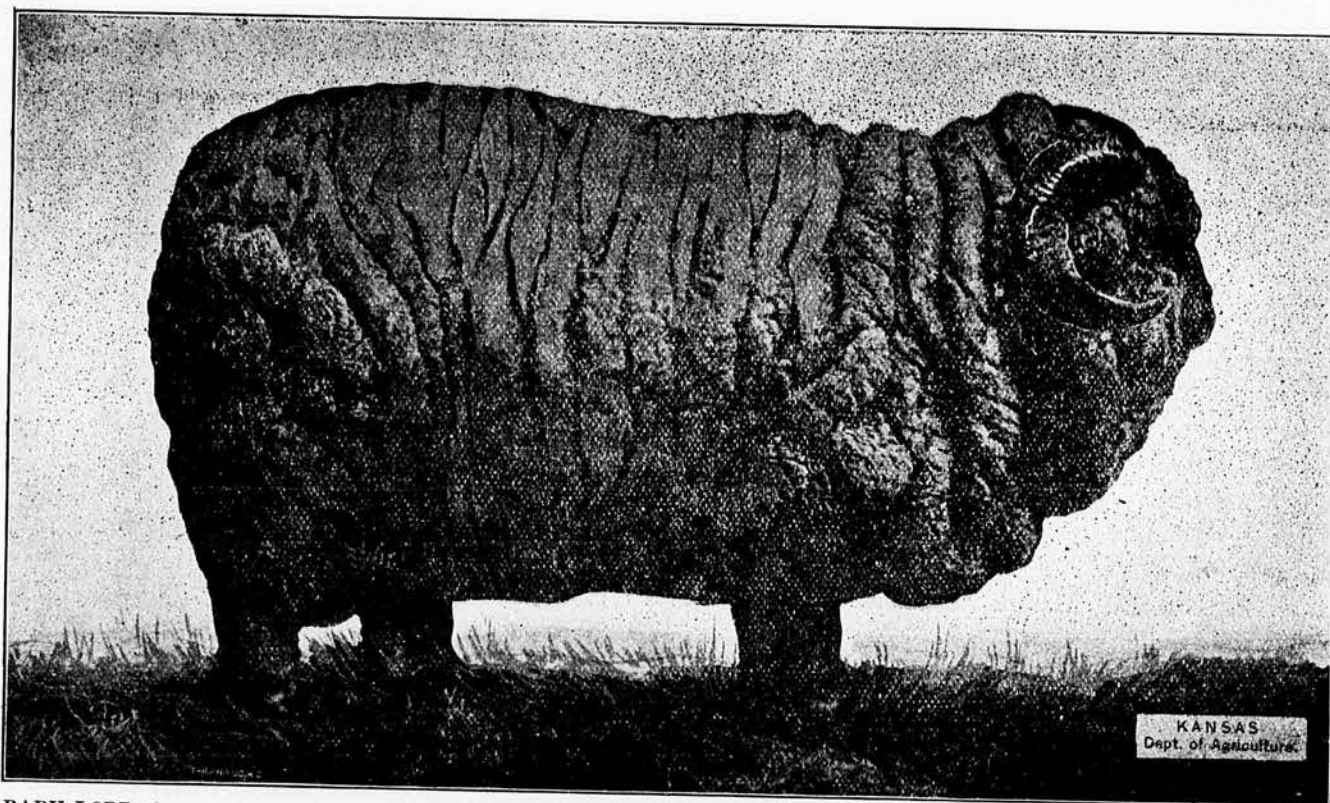
McKINLEY 10.

A Mitchell County, Kansas, Dickinson Delaine Merino. A sweepstakes winner at the Omaha Exposition. Sheared as a yearling, 16 pounds; two-year-old, 22 pounds; three-year-old, 30 pounds. Weight of ram after shearing, 180 pounds.

befalls the dog crop; tariff nor free trade have any visible effect, and it is not subject to any of the vicissitudes and adversities all other crops and industries everywhere encounter.

discovered possible, they represent the other.

"Their flesh is both a staple and a delicacy wherever civilization exists; appetizing and healthful nourishment to the lan-



BABY LORD (from a photograph). A Sedgwick County, Kansas-bred American Merino, whose fleece of 52 pounds, of 12 months and 16 days' growth, surpassed the world's record by 7 1/2 pounds. He sheared as a two-year-old, 37 1/2 pounds; three-year old, 44 1/4; four-year-old, 52.

dustry in Kansas. Considering the innumerable and unmatched natural advantages the State presents for sheep husbandry it is amazing that the sheep should be neglected in any neighborhood while their most treacherous enemies are, not simply tolerated, but harbored and pampered on well-nigh every farm.

It appears, for instance, that in 1897 sheep outnumbered the dogs by 30 per cent, and in 1898 by only 17 per cent, an increase in favor of the dogs of 13 per cent in one year. The increase of dogs in 1898 over the preceding year was 4,689, Shawnee County having the premier place with an increase of 762, or over 20 per cent, while sheep decreased in the State something over 15,000 head.

The counties which in 1898 led in sheep-raising were Reno, Marshall, Butler, Sedgwick, Hodgeman, and Finney; those foremost in dog culture were Sedgwick, Shawnee, Cowley, Leavenworth, Sumner, and Reno, in the order named, Sedgwick holding a strong lead, or about 10 per cent higher than its most ambitious competitor.

The most energetic, industrious dogs in sheep-killing were those of Leavenworth, Cherokee, Linn, Douglas, and Anderson,

Secretary Coburn thinks sheep and dogs alike have their places in a well-balanced agriculture; sheep for wool and meat, and the dogs, preferably, for fertilizer.

The introductory by the secretary is as follows:

"No useful animal of record antedates the sheep. No animal has a wider habitat, or has been from the beginning more an object of solicitous care-taking. Abel, an heir of Eden and son of its first occupants, was a keeper of sheep. Early Jewish history is the story of a shepherd race; their flocks constituted the wealth and largely the cares of the Hebrew patriarchs down through the centuries. Abraham was a great flock owner; Rachel, the mother of Joseph, tended her father's flocks, and Joseph was caring for Jacob's sheep when stolen and sold into Egypt; Job was owner of fourteen thousand sheep; Moses herded the flocks of Jethro, his father-in-law, and David, the greatest king of the Jews, was keeping his father's sheep when called to public life. It was the shepherds watching by night on Judea's plain to whom were first vouchsafed the good tidings of great joy, declaring a Savior born unto the world—the 'Lamb of God,' the 'Good Shepherd.'

guishing invalid and strength-renewing to those whose toil and burden are heaviest. From their wool have been clothed the armies of dominant nations in all times; by spindle, loom, and needle it is fashioned to meet a wider range of requirements for the bodily comfort of humankind than any other fiber, animal or vegetable; infancy and age, the weakest and the strongest, opulence and indigence, rely upon it for comfort, service, adornment, and surest protection from summer's heat and winter's cold. The sheep's skins are through a thousand channels a large factor in manufactures, arts, and commerce.

"In Kansas there are fifty million acres upon every one of which, on an average, a sheep could be maintained at a cost scarcely appreciable, and the acre's value be enhanced rather than diminished each year thereby. This alone could make the commonwealth rich. The opportunities that go unheeded are revealed by taking this in connection with the other fact that the State has scarcely one sheep to each 250 acres of its fruitful area, maintaining the while 176,000 dogs—as a rule the sheep's cruel and ever implacable enemies. Such a condition of affairs in a State which



could care for 50 per cent more sheep than are owned in all of the United States is discreditable but none the less suggestive. Crowded Britain finds profit in an average of 300 to the square mile of its high-priced lands.

"Kansas has no superior as a region for the ready and inexpensive production of wool and mutton. Giving to the world fleeces, which in quality have never been surpassed, and in weight never elsewhere equaled, goes far to demonstrate this.

"When her people rightly realize and utilize the possibilities and the conditions with which nature has endowed and surrounded them, her territory will be the seat of agricultural empire."

The book contains forty illustrations, some of which through the courtesy of the secretary the Kansas Farmer is able to present in this number.

If it was ever doubted that Kansas has the qualifications for a wool-producing State, some examples of wool yields from "The Modern Sheep" will dispel such doubts.

A SEDGWICK COUNTY FLOCK.

A suggestion as to the adaptability of Kansas for wool production is afforded by well-attested records of some of its flocks, which are easily accessible. One of these, consisting of several hundred head of thoroughbred and high-grade Merinos, has had for many years and still has its home in Sedgwick County.

At a public shearing, a four-year-old ram of this flock, weighing 120 pounds after shearing, yielded a fleece of one year and sixteen days' growth, weighing, wholly without artificially weighting or "doctoring," 52 pounds—by 7 1/2 pounds the heaviest authenticated year's growth ever shorn. The same ram, when two and three years old, sheared 37 1/2 and 44 1/4 pounds, respectively, making an average yield of 44 3/5 pounds for each of the three years, or more than any year-old fleece ever previously taken from a sheep. The two heaviest fleeces ever taken from a sheep in two consecutive years were also his.

This animal was born and reared in Kansas, and his sire at one time produced a fleece of 33 pounds and 13 ounces, which weighed 13 pounds 4 ounces of cleansed wool ready for the spindle, or 2 pounds and 2 ounces heavier than any cleansed fleece of which there is record. While the foregoing is a wonderful record for a single sheep, the ram mentioned does not by any means stand alone in the phenomenal yields of wool in Kansas, for to this same Kansas flock to which he belonged stands the credit of producing the heaviest fleece ever shorn from a yearling ram—28 pounds; and also 28 pounds—fourteen months' growth—from a yearling ewe.

In addition to all this, there was sheared from a three-year-old ram a fleece of one year and three days' growth weighing 46 pounds; from a ewe, a fleece weighing 30 pounds; forty-seven two-year-olds averaged 27 1/4 pounds; twenty-seven yearlings made an average of a small fraction less than 18 pounds per fleece; while the entire registered flock of 247 head made the remarkable average of 18 pounds 12 ounces each. Three breeding rams sheared 38 1/2, 41, and 41 1/2 pounds, respectively; a five-year-old ewe, with a sucking lamb, 27 pounds 14 ounces; and a yearling ram, 24 3/4 pounds. Taken all together, this showing is so remarkable as to be well-nigh incredible; but as the shearing was done in public, the weights, as published, can be verified by numerous reputable witnesses.

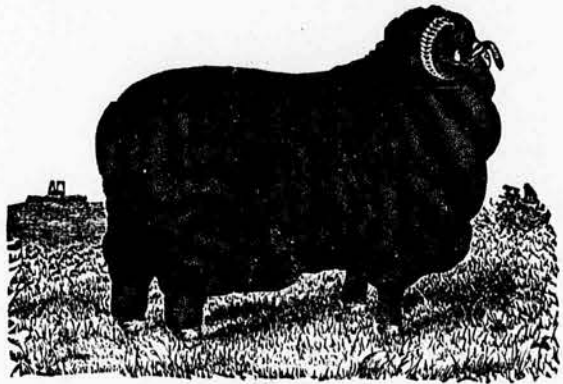
In view of the above facts, it might be interesting to know something of the management of these sheep. Of course, at the outset, they were given the best of care and attention. They were never permitted to go hungry nor want for pure water; they were carefully housed each night during the winter and at all times when the weather was stormy. In the winter these sheep were fed principally on corn, corn fodder, and sheaf oats, along with a light ration of cottonseed meal. The cottonseed meal kept them in a good, healthy condition, and has much the same effect as feeding turnips, beets, and other roots. While it seems to be an excellent food for producing heavy

fleeces, it is not esteemed equal to corn for fattening. For rapid fattening, a ration of corn in the morning and cottonseed meal in the evening were found to give very satisfactory results.

A COFFEY COUNTY FLOCK.

While some other States may excel in the mere matter of numbers, there are none whose flocks of fine-wools are more favor-

size and weight of the sheep themselves. Other premiums won at the Omaha Exposition were 10 sweepstakes, including all the first sweepstakes; in classes, 18 firsts, 16 seconds, 7 thirds, 3 fourths, and 4 fifths, besides a special offered by the American Sheep Breeder for sweepstakes ram and sweepstakes ewe. At a public shearing, six rams from this flock made an average of 31 pounds to the



KING'S CHANCE.

A Kansas-bred Merino sheep with a shearing record never equaled, thus:

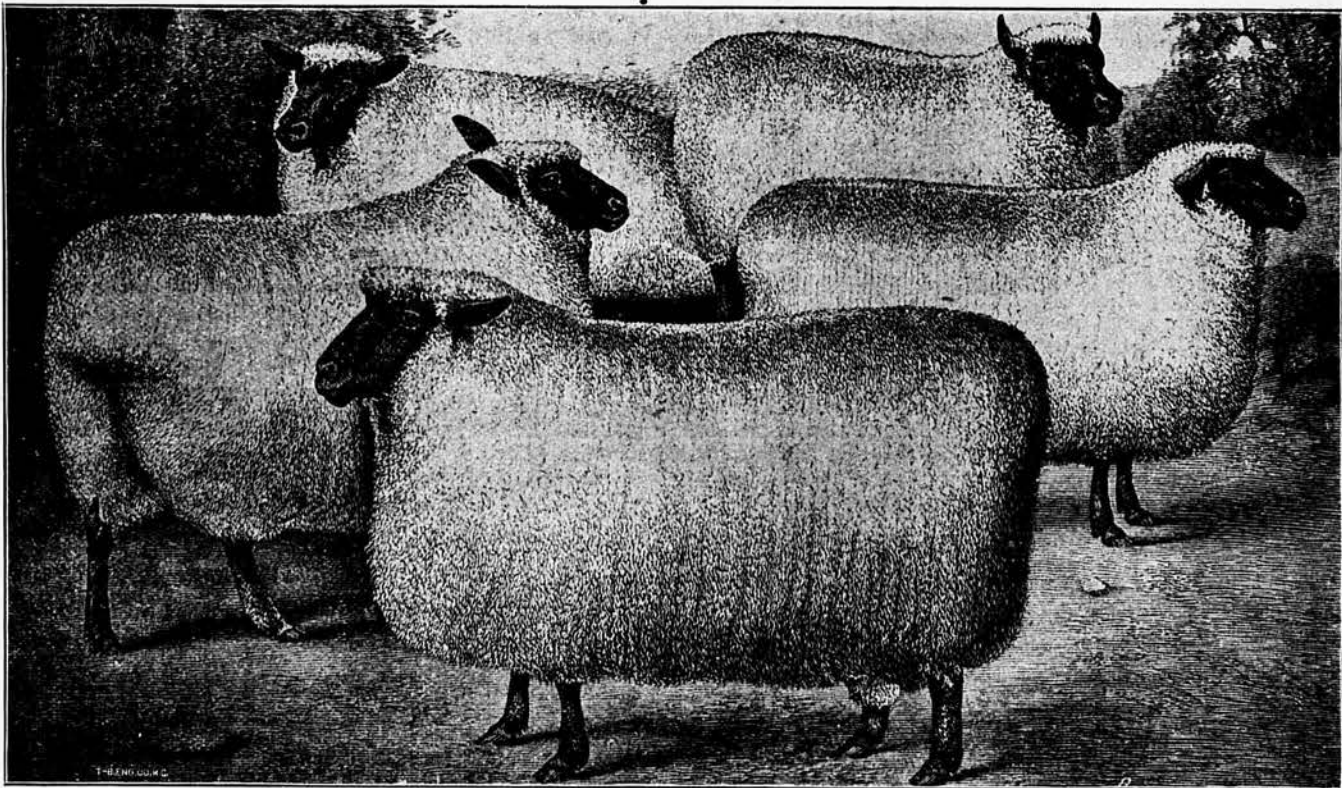
At ten months ten days.....	21	lbs.
" two years	31	"
" three years.....	38	"
" four years.....	44½	"
" five years.....	44½	"
" six years.....	43½	"
" seven years.....	44	"
" eight years.....	35	"
	301½	lbs.

ably known among breeders, wool buyers, and wool manufacturers for large yields and superior quality of product than those reared in Kansas. The wherefore of this is well suggested by the performance of such flocks as the one referred to in the preceding, and another, for example, many years maintained in Coffey County, famed far and wide for heavy fleeces of finest texture and innumerable winnings of prizes over world-defying competition.

The greater number of this flock are the broad-backed, round-ribbed, and heavy-quartered large sheep, yielding a long staple, dense fleeces, and having extra well-covered heads, legs and bellies, necks, flanks, and tails, and generally smooth bodies, although a few wrinkly sheep are bred for show purposes, and to keep up the highest standard of Merino fleece. These wrinkly sheep carry a very long staple, and are of fine form and strong constitution, the stock ram of that type weighing over 200 pounds, and ewes 100 to 150 pounds in fleece.

A ewe in this flock sheared an aggregate of 154¼ pounds of wool in six fleeces, which is believed to be the heaviest yield ever obtained for six consecutive years, in two of which she yielded consecutively the two heaviest fleeces ever taken from a ewe, being 32¼ and 31¾ pounds, respectively. This wonderful ewe also raised a lamb in each of the six years, besides being a winner of first and sweepstakes prizes at numerous leading fairs, and was never defeated. Her weight at last shearing was 150 pounds. At later prominent shows another ewe of this flock won first and sweepstakes prizes, and there are many ewes, ranging from one year upwards, that shear anywhere from 20 to 25 pounds to the fleece. It seems to be a fact, also, that the heaviest eight fleeces, aggregating 301½ pounds, ever sheared from a ram in eight consecutive years, were produced in this flock, making a yearly average of 37.7 pounds. This ram proved to be a great sire, many of his get being first-prize winners at leading State fairs. While yet young and undeveloped he secured second in a flock of ram and three ewes at the Columbian Exposition, and as a yearling won first prize at each of the fairs in Lincoln, Topeka, and Kansas City; in 1894 he was first and sweepstakes, as well as at the head of first-prize flock, and sired most of the prize-winners at the State fairs of Iowa, Minnesota, Wisconsin, and Illinois, and at St. Louis, and was first and sweepstakes winner at the Trans-Mississippi Exposition, at Omaha, in 1898, and also sired most of the winners there, besides yielding a fleece weighing 44 pounds. His sire weighed at three years of age 213 pounds, and sheared 38½ pounds, and has been sweepstakes winner at all the leading fairs from Buffalo west, twenty-two in all. Like the ewes, there are also numerous rams that yield exceptionally heavy fleeces, not to say anything of the unusually large

fleece; six ewes averaged 26¼ pounds; six yearlings averaged 17 pounds, and the entire number sheared yielded an average of 19 pounds of wool each. At a still later public shearing, a five-year-old ram sheared a twelve months' fleece of 42 pounds; five rams averaged a small fraction less than 35 pounds each; a



A GROUP OF OXFORDS.

three-year-old ewe sheared 27 pounds; a yearling ewe, weighing 112 pounds, with a staple of three and a half inches, produced 21 pounds; while the average of the entire twenty-five shorn that day was somewhat over 25 pounds of wool to each sheep. This year (1899) the sheep were sheared rather earlier than usual, and during the lambing season; but in spite of all this, the long, severe winter, and the cool, unfavorable weather prevailing at that time, they made a most excellent showing. For instance, four four-year-old ewes, weighing from 130 to 150 pounds, yielded fleeces of 29½, 23½, 22½, and 21½ pounds, respectively, while the fleeces of seventeen ewes, ranging from one to six years old, averaged 21½ pounds each. Another ewe, eight years old, weighing 150 pounds, staple three inches in length, sheared 22½ pounds. Two three-year-old rams, weighing 190 and 178 pounds, yielded fleeces of 33 and 32½ pounds; four two-year-old rams, weighing 133 to 175 pounds, produced fleeces of 32, 31¼, 27½, and 26¾ pounds; a yearling ram, weighing 108 pounds, clipped 19¼

pounds, and an eight-year-old ram gave 35¼ pounds. At the Indiana State fair, a ram won first prize and headed the sweepstakes-winning flock of ram and six ewes. At the Columbian he was second-prize two-year-old, while two of the judges favored giving him first. Other honors won there were four firsts, eight seconds, four thirds, three fourths, besides fifth and sixth prizes on aged ewes, not to even mention any of the numerous premiums won at different State fairs. In November, ram lambs dropped in March weighed 95 to 112 pounds, while yearling rams ranged from 128 to 160 pounds, and ewes from one to three years old weighed 120 to 140 pounds. All the sheep mentioned in the foregoing, and their sires, were lambed and reared in Kansas, and the fleeces referred to were all shorn in public. At present there are about 900 sheep in the flock, 530 of which are registered. They are pastured and allowed to run only on thick sod or grassed land, all the "rough-

ness" being cut, hauled, and fed in yards or under shelter, thereby lessening the possibility of there being sand or dirt in the fleece. From this one flock rams have been furnished for some years, not only individuals but by the car-load, to flocks in States long recognized as leaders in wool production, for improving the best as well as the more common flocks. Among the States receiving rams from this flock are Vermont, Michigan, Ohio, Pennsylvania, Illinois, Iowa, Wisconsin, Missouri, Texas, Oklahoma, New Mexico, California, Oregon, Montana, Wyoming, North Dakota, South Dakota, Colorado, Nebraska, and Indian Territory. These sheep are well woolled, having that combination of length and density which affords the maximum of scoured product; have size sufficient to make them profitable mutton-producers, and can be maintained in large flocks to better advantage than most, or, in fact, any of the so-called mutton breeds. Read the page advertisement of Drs. Thornton & Minor on page 18.

SHEEP AND DOG CULTURE.

Secretary Coburn, in March Quarterly Report, State Board of Agriculture.

As suggestive of conditions that could very profitably be changed, the following table is presented, showing the undue prominence given to dog culture as compared with sheep culture in Kansas. They are the assessors' returns for March, 1898, and probably are not, in proportion, widely different—to the bad—from those an equally careful count would show in most other states:

COUNTIES.	Sheep.		Dogs—No.	COUNTIES.	Sheep.		Dogs—No.
	No.	Value.			No.	Value.	
The State.....	207,482	\$570,575 50	176,033	Lincoln.....	2	\$5 50	1,819
Allen.....	325	\$893 75	1,617	Linn.....	913	2,510 75	2,073
Anderson.....	1,191	3,275 25	1,926	Logan.....	3,191	8,775 25	2,302
Atchison.....	10	27 50	1,734	Lyon.....	2,671	7,345 25	2,701
Barber.....	500	1,375 00	987	Marion.....	1,029	2,829 75	2,592
Barton.....	35	96 25	2,265	Marshall.....	16,555	45,528 25	3,283
Bourbon.....	475	1,306 25	2,185	McPherson.....	542	1,490 50	2,896
Brown.....	2,672	7,348 00	2,498	Meade.....	3,937	10,826 75	2,277
Butler.....	13,260	36,465 00	2,998	Miami.....	2,109	5,799 75	2,242
Chase.....	1,081	2,079	1,081	Mitchell.....	5,016	13,794 00	2,166
Chautauqua.....	77	211 75	2,079	Montgomery.....	289	794 75	2,819
Cherokee.....	384	1,001 00	2,327	Morris.....	9	24 75	1,561
Cheyenne.....	118	324 50	569	Morton.....	739	2,032 25	57
Clark.....	85	233 75	288	Nemaha.....	1,018	2,799 50	3,103
Clay.....	636	1,749 00	1,899	Neosho.....	77	211 75	2,647
Cloud.....	4,374	12,028 50	2,297	Ness.....	1,096	3,014 00	1,690
Coffey.....	5,004	13,761 00	2,641	Norton.....	2,302	6,330 50	3,039
Comanche.....	1,938	5,329 50	273	Osage.....	3	8 25	2,178
Cowley.....	515	1,416 25	3,897	Ottawa.....	30	82 50	1,937
Crawford.....	922	2,535 50	2,380	Pawnee.....	1,156	3,179 00	809
Decatur.....	32	88 00	1,427	Phillips.....	26	71 50	2,419
Dickinson.....	2,802	7,705 50	2,624	Pottawatomie.....	4,436	12,199 00	2,713
Doniphan.....	1,020	2,805 00	2,409	Pratt.....	2,005	5,513 75	1,102
Douglas.....	901	2,477 75	2,545	Rawlins.....	354	973 50	978
Edwards.....	52	143 00	578	Reno.....	26,717	73,471 75	3,432
Elk.....	1,759	4,837 25	1,890	Republic.....	8	22 00	2,871
Ellis.....	119	327 25	1,270	Rice.....	292	808 00	2,001
Ellsworth.....	631	1,735 25	1,693	Riley.....	5,639	15,507 25	1,624
Finney.....	5,752	15,818 00	412	Rooks.....	1,344	3,696 00	1,457
Ford.....	1,924	5,291 00	716	Rush.....	139	382 25	1,125
Franklin.....	624	1,716 00	2,114	Russell.....	681	1,872 75	1,414
Geary.....	1,714	4,713 50	950	Saline.....	12	33 00	1,978
Gove.....	229	629 75	413	Scott.....	1,698	4,669 50	174
Graham.....	982	2,700 50	1,014	Sedgwick.....	12,022	33,060 50	4,835
Grant.....	12	33 00	92	Seward.....	397	1,091 75	4,354
Gray.....	55	151 25	246	Shawnee.....	1,240	3,410 00	569
Greeley.....	1,614	4,438 50	91	Sheridan.....	299	822 25	536
Greenwood.....	1,044	2,871 00	2,182	Sherman.....	525	1,443 75	2,852
Hamilton.....	590	1,622 50	199	Stafford.....	5,674	15,603 50	1,814
Harper.....	71	195 25	1,332	Stanton.....	1,516	4,169 00	103
Harvey.....	1,356	3,811 50	1,971	Stevens.....	81	222 75	104
Haskell.....	600	1,650 00	119	Sumner.....	757	2,081 75	3,541
Hodgeman.....	9,428	25,927 00	435	Thomas.....	517	1,421 75	689
Jackson.....	1,048	2,882 00	2,122	Trego.....	3,156	8,679 00	434
Jefferson.....	643	1,768 25	2,479	Wabunsee.....	4,100	11,275 00	2,065
Jewell.....	59	162 25	3,048	Wallace.....	4,804	13,211 00	208
Johnson.....	4,330	11,907 50	2,018	Washington.....	3,473	9,550 75	3,208
Kearny.....	3,496	9,614 00	162	Wichita.....	992	2,728 00	199
Kingman.....	1,887	5,189 25	1,735	Wilson.....	30	82 50	1,979
Kiowa.....	6	16 50	445	Woodson.....	1,590	4,372 50	1,353
Labette.....	1,060	2,915 00	2,596	Wyandotte.....	133	365 75	1,701
Lane.....	297	829 75	3,662				
Leavenworth.....	1,770	4,867 50					

Agricultural Matters.

PLANT BREEDING.

(Continued from May 4.)

SELECTION.

Natural selection is the term that Mr. Darwin applied to that process in nature which causes the ill-adapted and weak individuals of a species to perish before having an opportunity to propagate themselves. As no two individuals of a brood have an equal supply of vigor or adaptability, it follows that one individual is "fittest" and the others of the same brood possess the quality in a less degree. If only the "fittest" really survived, there would be but one survivor of every brood; consequently we must look upon the law of natural selection as merely a tendency and not a law to which there are no exceptions. The selecting process is due to a variety of conditions, among which may be mentioned the struggle of individuals of the same and different species with each other for food and position, unfavorable soil or climatic environments, and the destruction of the plants by animals. Man has had a great influence in this process, both consciously and unconsciously.

Natural selection has had much to do with the architecture of the present plant world. It has guided the tendency towards variation in plants in such a manner as to cause them to become fitted to their environments. Whenever a variation occurs that is not for the well-being of the species, natural selection sweeps it out of existence. The principal interest that a plant breeder can have in this law is in the suggestions it offers for artificial selection. Among the sowed crops the law of natural selection very materially aids man in the amelioration of the type. This is due to the fact that the most vigorous plants constantly tend to be a great deal more fruitful than the weakly ones. This insures that in every quantity of wheat there will be a greater number of grains descended from plants of more than average vigor than from plants of less than average vigor. If man could discover a cheap and practical method of selecting the seed from the vigorous plants only, the progress of the variety would be much more rapid than under natural selection. Major Hallett's famous "pedigree wheat" depended for its excellence entirely upon selection.

Selection gives exercise to the highest faculties of man. Darwin says: "Not one man in a thousand has accuracy of eye and judgment sufficient to become an eminent breeder. If gifted with these qualities, and he studies his subject for years and devotes his lifetime to it with indomitable perseverance, he will succeed, and make great improvements; if he wants any of these qualities, he will assuredly fail." If selection is to benefit agriculture, it must be followed up incessantly, for a type that is not in a state of progression is apt to degenerate. It is true that there has been, ever since the remotest beginnings of agriculture, a sort of unconscious selection, as exemplified by the farmer when he takes the largest ears of corn from which to plant his crop merely because largeness happens to suit him, but this practice may lead to good results and it may not. A better method for the selection of seed corn is to go into the field and select the ears that are ripening at the same time, and that have grown upon uniformly perfect plants. Unconscious selection is of great importance, because the variety gradually changes under this process, though the change may not be an improvement.

The really effective part of plant breeding is intelligent selection. Because it is effective, it is laborious, and the advocate of "short cut" methods for doing everything is not likely to make a successful plant breeder. Selection gives the operator the opportunity of exercising his choice. By a proper exercise of this faculty he is enabled to avoid all needless conflict with the hereditary tendencies. In fact, he must work in the same direction with heredity in order to make his labors efficient.

Although selection is of great importance in the development of a type, its office is of still greater importance in preserving that type. After a desirable variety has once been secured, the ease with which it will deteriorate will sustain an inverse ratio to the amount of labor expended in its production. To keep a variety true, the cultivator must practice selection with the same ideals in view that guided the originator in his labors. We must learn that "eternal vigilance" is the price of success in the amelioration of plants.

The influence of selection is cumulative. During the first few years the breeder may not be able to secure any very rapid changes, but the improvement in the plant will grow more rapid with each step of progress.

The selection that man practices may

weaken the constitution of the plant instead of strengthening it. The very quality which he wishes to emphasize may not be compatible with the greatest health of the type. A good example of how selection weakens the constitution is found in the effect of the use of unripe seeds from which to propagate tomatoes and egg plants. Under this treatment the variety gradually grows earlier, but loses its vigor. This fact is due to the law that anything that strikes at the life of the plant is likely to increase its fruitfulness.

Selection is the plant breeder's magic wand. With its aid man has transformed the majority of our cultivated plants from unprofitable wild species to the modern varieties of flowers and fruits that delight the eyes and palates of the human race. Selection in the vegetable kingdom has made the earth a paradise. It is the key that opens the treasures of nature to man.

GEORGE L. CLOTHIER.

Cornell University, May 8, 1899.

Subsoiling.

Editor Kansas Farmer:—One of your readers wants to know if he shall run the subsoiler behind the marker and drop potatoes over the subsoiler track.

Subsoiling is to create a cavity or space for water by the breaking up and rearranging of the soil particles. This cavity of itself will prove an injury to the potatoes, but, when filled with water and the surplus air excluded and the soil packed down again, the changed condition will be of immense benefit to the potatoes. Potatoes, especially early ones, generally ripen before any drought begins, and would make their growth before this spring's subsoiling would get filled up, and the work would not do this crop any good. But, if the subsoil-plow were not run too deep, say three or four inches below the other plow, it might not harm the potatoes, but no great results could be expected unless we should have a flood of water. In that case the land would dry off some quicker. Your reader speaks of marking out with one team and running the subsoiler with another. Get a convex cultivator-shovel made, fasten it to a piece of iron and clamp the iron on the subsoil-plow behind the standard, and set so as to run about four inches above the bottom of the share, and one good large team will subsoil and mark all at once, and do a much better job.

I use this rig to throw out sweet potatoes, and I only have to pick up the clusters afterwards. Of course I have to run a heavy-weighted cutter along both sides of the row first to cut off the runners.

There is no use talking, the effects of subsoiling are marvelous. The present theory that the effects last only three years is a myth. I actually believe it takes three years for it to show its best results, if it is not really a detriment for that time. After that the effects are shown for—I know not how long. Land which I subsoiled six years ago and which has been cropped steadily without rest for twenty-five years, produced, last year, 51 bushels of corn per acre, and has been too wet all fall and winter to get the fodder off. I plowed up another strip this spring that was subsoiled at the same time, and the mechanical condition of the soil was just perfect.

In crossing this strip the plow could be sent in until it buried itself, and it did not pull hard, and there was no sound. The ground looked rich, loose, and mellow. But just as soon as the plow struck the unsubsoiled land it jumped up to a shallow depth and the scraping of the share could be heard for a long distance. It would be folly to re-subsoil that land at present, and it looks as if my land took about three years to get over the subsoiling. Then it gets down to business in an improved form for three years, and indications are that several years more must elapse before it would be wise to again subsoil it. Many have subsoiled and have been disappointed because the immediate results were unsatisfactory. These same men now say that after they subsoiled they did not raise much until the land got over it; then they had good crops, and they will not be caught subsoiling again. Now, it is quite plain to me that, unless the ground can be violently sub-packed with special machinery just after subsoiling, the violent breaking up of the soil and the enormous surplus of air put into it will prove a great injury for about three years, or until this surplus air gets all worked out; then the effects of the subsoiling can be easily seen for years.

The more I see of subsoiling and its effects, the more I see how very ignorant we have all been on the subject, and what fools we have made of ourselves by decrying subsoiling because there was not a marked change for the better at once. Only under the most extraordinary conditions of great floods could any good be expected the first or second year without subsurface packing. Subsoiling has made and is now making me a whole lot of money. At first it disappointed me, but I soon saw the

trouble. Ask almost any man who has subsoiled and he is sure to answer that it did not do him any good until his ground got over it, then he raised good crops again. Of all the follies ever committed, one of the greatest was to tear up the soil for two feet, admit over 200 per cent more air than plant life could possibly stand, then expect it to do wonders. It just simply transforms fertile soil into a desert until all but about three per cent of this air is excluded, which, under normal conditions, takes one or two years.

I regard subsoiling as the acme of scientific farming, but it has already proven too much for most of our learned professors and nearly all of our farmers.

Morantown, Kans. J. C. NORTON.

Roots in Subirrigation Pipes.

Editor Kansas Farmer:—In every convention of farmers in Kansas during the last six or seven years where the subject of subirrigation was introduced, some one has bobbed up to pronounce the plan impracticable because the roots of trees would soon fill up the pipes and prevent the free movement of the water through them; that subirrigation had been tested in California and abandoned for this reason. I could never understand why the roots of trees should enter or how they could grow inside of an empty pipe, occupied by water only a part of the time, unless river water had been used and much sediment deposited inside of the pipes. I have been anxious to get at the facts concerning this California experiment but so far have been unable to find the man who even saw the man who knew the man who made the experiment and pronounced it a failure—and I have about concluded that it is a myth.

Failing to get any light from California, I have been able this spring to get a little out of my own experience. Three years ago I put down some rolled galvanized iron pipes underneath some flower beds. This spring I had occasion to take up one section twelve feet long to change the grade. One end of the pipe came within six inches of a honeysuckle vine six years old. During the three years the pipe was down, the roots of the vine were extended along this pipe its entire length, forming a great mass of fine fibrous roots above and on each side of the pipe and about three inches distant from it, but not a single root was found inside. Why should there be? The plant found the favoring conditions, the right proportion of heat, water, and air three inches from the pipe, and here its roots grew profusely. I wondered why the geraniums in this bed had not done so well last season as in previous years, but I had not reckoned on the number of mouths I was feeding and did not then know the honeysuckle had pre-empted the points of

vantage and was appropriating the choicest morsels—just like a corn crop in a bearing orchard.

Whatever may be the outcome of applying water through underground pipes this season it will at least be a great satisfaction to feel that I shall be no longer haunted by this bugaboo of roots in the pipes.

H. R. HILTON.

Topeka, Kans.

How They Kept the Soil from Blowing Away.

Editor Kansas Farmer:—One of the problems in farming is to handle the soil so that it will not blow during the windy days in the spring. It is a well-recognized fact that the soil that does blow off of a field is the richest part, and so it is all the more desirable to keep it from blowing. Ground plowed when containing an ordinary amount of moisture will not blow, but the plow does not leave the ground in the proper condition. Where the furrows match there will be cracks and holes which allow the air to circulate and dry the soil out. Trash turned under and not packed down remains dry and does not rot. The roller and harrow have been and are still used to overcome these difficulties. The roller packs the ground on top but not below. The harrow simply levels and drags out the trash. The float and disk are also used but are not satisfactory. What is needed is an instrument to settle the soil together below the surface, close all cracks and crevices, pack down the trash plowed under, and leave a good covering of small clods on top to prevent blowing.

The Kansas State Agricultural College has a field that blows very badly, on account of its situation and the character of the soil. Usually every windy day sends great clouds of fine particles off into the adjacent fields. This field was in Kaffir corn last year and has just been plowed. Each day what was plowed was gone over once with a subsurface packer. This instrument does what is needed—settles the soil together below the surface, closes all cracks and crevices, packs down the trash plowed under, and leaves a good covering of small clods on top to prevent blowing. On the last day of last month the wind reached 59 miles per hour and blew away nearly everything that was loose at one about the college, but, to the surprise of those who noticed the fact, the wind had no effect on the field upon which the subsurface packer had been used and "the soil did not blow."

J. G. HANEY.

Kansas State Agricultural College.

There is to be a combination of coffin-makers. This is running the trust movement into the ground.—Buffalo Express.



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GOVERNMENT LIVE STOCK REPORT.

LOSSES OF FARM ANIMALS.

The estimated percentage of mortality among farm animals, swine excepted, was higher during the twelve months ending March 31, 1899, than for many years past. The total loss from exposure and disease was over 7,500,000 head, of which swine constituted 41.9 per cent, sheep 29.2 per cent, cattle 24.7 per cent, and horses 4.2 per cent. The losses of swine and horses were practically all from disease, but in the case of cattle and sheep the loss from disease was considerably less than that from exposure. On the basis of the average values, as ascertained on January 1 last, the estimated loss from exposure aggregated about \$26,000,000 and that from disease about \$49,000,000, or a total of \$75,000,000, five-sixths of which may be said to be theoretically preventable.

HORSES.

The estimated percentage of loss, 2.3, is slightly higher than in any previous year for which figures are available, and exceeds by 0.5 the mean of the averages of the ten years ending with 1898. Applying the average percentage to the total number of horses on January 1, 1899—the only numerical basis that is available—the aggregate loss for the whole country appears to be 319,250. This number was considerably exceeded in 1894 and 1895, but at that time the number of horses on farms was more than 2,000,000 in excess of what it is now. The lowest ratio of loss in any single State or Territory, 0.8 per cent, is reported from Arizona, and the highest, 6.2 per cent, from Louisiana, where conditions, never too conducive to health, were aggravated by weather of unusual severity and a scarcity of feed. The loss in New York, 3 per cent, was, like that of the country at large, higher than in any previous year for which figures are available, and was 1.1 in excess of the ten-year average. The same percentage of loss is reported from Illinois, where it is likewise the highest on record, exceeding by 1.2 points the average of the preceding ten years.

Of the ten States containing 500,000 horses or upward, only two report a condition of normal healthfulness and average flesh more than 5 per cent below the normal. The two States are Texas, with a condition of 88, and Nebraska, with one of 79. Four other States report a condition 10 per cent or more below the normal, namely: Arkansas, 89; California, 85; Oregon, 84; and Oklahoma, 82. In Iowa, Vermont, Connecticut, and Mississippi a condition of 100 is reported, and in several other States, including New York, Pennsylvania, Ohio, and Illinois, where farm animals are well cared for, the condition reported is not more than 1 or 2 per cent below the normal.

The general condition of the country at large is that of 5.6 per cent below normal healthfulness and average flesh.

CATTLE.

The estimated percentage of loss from winter exposure is 2.2, which is 0.6 points above the average for the last nine years, and is the highest percentage since 1890, when it was 2.3. It is a significant fact that, except in the States and Territories of the far West, where the range system still obtains, the highest percentages of loss from winter exposure are reported from the South; and the lowest from the extreme North, where the most rigorous winter weather conditions prevail. This is, of course, due to the fact that where intense cold and continued snow are the normal winter conditions, cattle are properly sheltered and provided with an abundance of nutritious forage; whereas, in the regions in which the winter climate is generally mild, less attention is paid both to food and shelter, with the result that the occasional occurrence of a severe winter is inevitably accompanied by a high percentage of loss. In New Hampshire, Massachusetts, and Rhode Island the deaths from exposure are too few to be reported; in Maine and Vermont they are estimated at 2 to every 1,000 head; in Connecticut at 3 to every 1,000; in New York, Pennsylvania, and Michigan at 5; in Minnesota at 6, in Ohio at 7, in North Dakota and Iowa at 8, and in Wisconsin and Indiana at 9, to every 1,000. In New Jersey, Delaware, and Illinois the number is estimated at 10 per 1,000, or 1 per cent, and from this average there is a gradual increase southward to the Gulf of Mexico and westward to the Rocky Mountains, with a few exceptions that call for no special mention. The highest percentage of loss in the entire country, 7.9, is reported from Louisiana, Arizona being second, with 5.9. The averages are also high on the Pacific coast, where they range from 3.6 per cent in Oregon to 4 per cent in California.

The following table shows the estimated percentage of loss from winter exposure for each year ending March 31, 1890 to 1898, inclusive, with the average for the entire period.

The estimated percentage of loss from

disease is 2.0, which is 0.3 points above the average for the last nine years, and has been exceeded, and that but slightly, only once during that period. The lowest State averages are reported from Wyoming and Idaho, where only 9 head of cattle in every 1,000 have died from disease. Next in order are North Dakota and Washington with 11, Minnesota with 12, Ohio with 13, Michigan, Wisconsin, and Nevada with 14, and Maine, Maryland, Missouri, and Montana with 15, in every 1,000, or 1.5 per cent. Of the States containing 1,000,000 head of cattle or upward, and not already mentioned, Kansas reports a loss per 1,000 of 17, Indiana 18, Iowa 20, New York, Illinois, and Colorado 21, and Pennsylvania, Texas, and Nebraska 22. The highest ratio of loss from disease, as from exposure, is reported from Louisiana, where it amounts to 47 per thousand. This, however, is closely followed by Oklahoma with 45 per thousand. The relative losses in the Gulf States are among the highest in the country, as are also those in the Southwest and in Oregon and California. In almost every case where the loss from disease was much above the normal, the severity of the winter is given as the principal cause. In Tennessee, feeding on damaged corn is mentioned by a number of correspondents as having been a cause of death in their respective localities.

The losses of cattle from all causes during the year ending March 31, 1899, 1,865,176, have been exceeded only three times during the last fifteen years, and on all these occasions the total number of cattle on farms was greater by several millions than it is at present.

From Illinois and Iowa, and also from New Hampshire, Vermont, and Connecticut, a condition of full normal healthfulness and flesh is reported, while in Maine the condition is placed at one point above the normal. Of the States other than Illinois and Iowa containing 1,000,000 head of cattle or upward, New York reports a condition of 99, Indiana of 98, Pennsylvania and Ohio of 97, Wisconsin and Minnesota of 96, Missouri and Kansas of 94, Colorado of 91, Texas of 83, and Nebraska of 81. With regard to the last-mentioned State, it should be borne in mind that there are large numbers of horses and cattle in those more or less unsettled regions where the influence of the free range system still survives, and where no adequate provision is made for the protection of farm animals even from the most severe storms of winter. In the longer settled sections of the State the conditions will compare favorably with those of any other agricultural region of equal extent.

The lowest reports of conditions, aside from Texas and Nebraska, are Tennessee, 89, Alabama, 88, Arizona, 86, Louisiana, 84, and Florida and Oklahoma, 75. The average for the country at large is 7.5 per cent below that of normal healthfulness and average flesh.

SHEEP.

The estimated percentage of loss from winter exposure is 3.5, which is one point above the average for the last nine years, and is the highest since 1890, when it was 5.1. As has been shown to be the case as to cattle, except in the States and Territories of the far West, where the immense flocks and herds have only natural shelter, and frequently but little of that, the highest percentages of loss from winter exposure are reported from the South and the lowest from the extreme North. In Connecticut, the losses did not exceed 1 per 1,000, in Rhode Island, 2, in Massachusetts, 3, in New Hampshire and Oklahoma, 5, in Vermont and New York, 7, and in New Jersey, 9, per 1,000. Very significantly, the next States in rank are Minnesota and North Dakota, where, notwithstanding the severity of the normal winter conditions, the losses were only 11 per 1,000, or less than one-third the average for the United States as a whole. Among other reasonably low averages may be mentioned Delaware and Wisconsin with 12, Michigan with 13, Pennsylvania and Iowa with 14, and Ohio and Illinois with 15, per 1,000. The highest percentage of loss, 80 per 1,000, is found, as in the case of horses and cattle, in Louisiana. The next highest is Wyoming with 75, and this is followed by Idaho and California with 52 and 50, respectively, Tennessee with 46, and Oregon, Arizona, and Alabama with 45, per 1,000. Montana, with the largest number of sheep of any State in the Union, reports a loss of 29 per 1,000, and New Mexico, with the next largest number, a loss of 43 per 1,000.

The estimated percentage of loss from disease is 2.1, which is 0.3 points below the average for the last nine years. While, in the case of cattle, a certain limited correspondence has been found to exist between the losses from exposure and those from disease, indicative of the fact that certain forms of disease are themselves traceable to exposure, in the case of sheep the losses from disease were, in the main, highest in the States in which the losses from exposure were the lowest, and lowest where those from exposure were the highest. In the New England States the loss per thousand

ranged from 13 in Massachusetts to 34 in Vermont. In the States and Territories of the far West, exclusive of the Pacific coast, it ranged from 4 in Oklahoma, 6 in Nevada, and 10 in North Dakota, Wyoming, and Idaho to 18 in Colorado and 21 in Utah. In the South the loss per thousand ranged from 22 in Texas to 41 in Louisiana and 42 in Kentucky. Of the wool-growing States not already mentioned, Ohio reports a loss per thousand of 28, Montana of 18, New Mexico of 16, Oregon of 30, and California and Michigan of 25.

Applying the percentages of loss to the estimated total number of sheep on January 1—the only numerical basis available—there would appear to have been a total loss from exposure and disease of 2,208,958. This number has been exceeded but twice in the last ten years, namely, in 1894-95, when it amounted to 2,344,676, and in 1889-90, when it reached the large total of 3,309,276, nearly two-thirds of which was reported from six States.

Of the twelve States containing 1,000,000 head of sheep or upward, Utah reports a condition of healthfulness and flesh represented by 98 per cent of the normal; Ohio by 95 per cent, Montana, New Mexico, and Arizona by 94 per cent, Michigan and Oregon by 93 per cent, Wyoming and Idaho by 92 per cent, Colorado by 90 per cent, Texas by 88 per cent, and California by 80 per cent. Among the conditions worthy of note from States containing less than 1,000,000 head of sheep are the following: South Dakota, Vermont, Massachusetts, and Connecticut, 100; North Dakota, New York, New Hampshire, 99, and the less favorable conditions of 87 from West Virginia and Kentucky, 83 from Arkansas, 80 from Georgia and Florida, and 66 from Louisiana.

The average condition for the entire country is 7.6 per cent below that of normal healthfulness and average flesh.

SWINE.

The estimated percentage of loss from disease is 8.2 as compared with a ten-year average of 8.4 and a fifteen-year average of 9.1. The percentage of loss in the case of swine is subject to considerable fluctuation, owing to the variation in the extent and severity of the visitations of hog cholera. During the last fifteen years it has been as high as 13, 12.7, and 14.4 per cent, in 1886, 1896, and 1897, respectively, and as low as 5.4 and 4.9 per cent in 1892 and 1894, respectively. In 1897 the loss in Iowa amounted to 32.9 per cent, or practically one-third of the entire number, and in several other States it ranged from 21 to 27.5 per cent. This, however, has been no uncommon occurrence during recent years. In the year now under consideration, namely, that ending March 31, 1899, the percentage of loss ranged from 0.2, or 2 per thousand, in New Mexico and Arizona to 17.4 per cent in Iowa. In the States other than Iowa containing 1,000,000 swine or upward, arranged according to the relative importance of the industry within their borders, the percentage of loss was as follows: In Missouri 9, in Texas 3.9, in Georgia 9, in Illinois 10.4, in Mississippi 7.9, in Alabama 7.3, in Kansas 6.5, in Tennessee 9.6, in North Carolina 6.1, in Kentucky 8.5, in Nebraska 9.8, in Indiana 11.5, in Arkansas 10.8, in Pennsylvania 3.2, and in South Carolina 8.2. With few exceptions the States containing the largest number of swine had the highest percentages of loss, and those containing the lowest number the lowest percentages. The five States in which the loss exceeded 10 per cent contained on January 1, 8,833,395 hogs; the thirteen States in which the loss was below 2 per cent contained a total of only 880,355. This bears out the well-known fact that the greater the number of swine in a given area the more serious will be the ravages of any outbreak of contagious disease, on account both of the more rapid spread of contagion and the difficulty of isolating infected animals. Stated numerically, the total loss, estimated at 3,173,862, falls considerably below that reported for eleven years out of the last fifteen, the only years when a smaller numerical loss was reported being 1889, 1892, 1893, and 1894. It is worthy of note that the loss in Iowa, both in 1896 and again in 1897, exceeded 1,000,000 head, and that the average annual loss in that State during the last ten years has been over 586,000.

Of the seventeen States containing 1,000,000 swine or upward, Mississippi reports a condition of healthfulness and flesh representing 99 per cent of the normal; Pennsylvania, 98; South Carolina, 95; Texas, 94; North Carolina and Alabama, 92; Tennessee and Ohio, 91; Illinois, 90; Kentucky and Missouri, 89; Indiana and Kansas, 88; Iowa, 85; Nebraska, 77; Arkansas, 71, and Georgia, 70. Fifteen States report a condition ranging from normal to 2 per cent below, but the total number of their swine on January 1, last, was less than 1,100,000.

The average condition for the country at large is 11.5 per cent below the standard of normal healthfulness and average flesh.

Breeding Sows.—The number of breeding sows is estimated at 5.2 per cent less than

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Many cases of poor health come from want of watchfulness. But if you keep your blood pure no thief can steal your health.

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last year. A small increase is reported from five States, a decrease of from 1 to 5 per cent from twenty-seven States, a decrease of from 6 to 10 per cent in thirteen States, and a decrease of over 10 per cent from three States. The States in which there appears to be some small increase—not exceeding 1 per cent—are New Hampshire, Mississippi, South Dakota, Montana, and Oklahoma. Among those reporting a decrease, with the estimated extent of the shrinkage in each case, are: New York, Pennsylvania, and Georgia, 1 per cent; South Carolina, Florida, Texas, and Iowa, 2 per cent; Alabama, Michigan, and Washington, 3 per cent; Virginia, North Carolina, and Oregon, 4 per cent; West Virginia and Illinois, 5 per cent; Maryland, Tennessee, Indiana, Wisconsin, and North Dakota, 6 per cent; Minnesota, 8 per cent; Kentucky, Ohio, and Nebraska, 9 per cent; Louisiana and Arkansas, 10 per cent; Missouri and Kansas, 11 per cent, and California, 22 per cent.

A MONSTER MEETING

Of the Modern Woodmen of America, in the New Convention Hall, Kansas City.

The Head Camp Meeting of the Modern Woodmen of America, during the week beginning June 6, at Kansas City, Mo., promises to be one of the largest attended meetings ever held in the West. The Kansas City committee on arrangements have secured the new Convention Hall with a capacity of twenty thousand people for its sessions. One hundred thousand visitors are expected. Thirty-five bands and seventy-five Forester teams (uniform rank) with fully fifteen thousand marching men will be seen in line Thursday morning, June 8, in the great parade. Band and Forester team contests will extend through the week. The prizes are the largest ever offered. For Forester teams: First prize, \$500; second prize, \$200; third prize, \$100; fourth prize, \$75; fifth, \$50. Local Kansas City teams are excluded. Band prizes: First prize, \$150; second prize, \$100; third prize, \$50. All delegation bands admitted. Special railroad rates to this meeting.

J. H. LYON,

Western Passenger Agent, Missouri Pacific Railway, Kansas City, Mo.

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Insecticides.

From the stenographic report of discussion by Kansas State Horticultural Society.

Mr. Wellhouse—I have no paper on "Insecticides," and I haven't much to say on the subject. We have done very little during the past year. We sprayed our trees some. We spray just previous to the blooming time. We did some good in eradicating the cankerworm, but I am afraid we didn't do much towards killing the bud moth. The crop of apples was very light, and we didn't consider it worth while to spray for the traveling moth. Of course we are in favor of spraying when it is necessary, but I think we ought to be very careful to know that it is necessary to spray whenever we do so. A neighbor of ours in Johnson County sprayed a year or two ago and I asked him about how his apples were, and he said they were about the same when he sprayed as when he didn't spray, and that he didn't believe that spraying did any good. I asked him about his method of spraying, and he said that he used a preparation of borax. The fact of the matter was, that it was a dry season and he could not expect anything else. We determine exactly what we are spraying for. I think some of us do more injury than good; we kill and injure insects that are our friends, and it may be that by poisoning the insects we keep the birds away. Of course it is necessary to spray under some circumstances, such as the existence of cankerworms, because they injure the fruit. We ought to be careful in distributing the mixture. For instance, in Australia rabbits were introduced and they became a complete nuisance. There was nothing to keep them down, and they multiplied until there were millions of them. It is so in the insect world; every insect has its parasite, and as the insect multiplies so will the parasite multiply to destroy the insect. In spraying, we want to know what we are spraying for and not destroy the parasites instead of the insect.

Query—Have you ever known of the birds dying from eating insect poison?

Mr. Wellhouse—I have never known of them dying, but they might leave the orchard because they didn't like the diet of poisoned worms.

Query—Have you ever found them leaving the orchard on that account?

Mr. Wellhouse—I have imagined at times they did.

Query—At what time would you spray?

Mr. Wellhouse—That depends entirely upon what you are spraying for.

Query—The cutting moth?

Mr. Wellhouse—The best time to spray is as soon as the petals are falling. I don't remember of ever spraying when the blossoms were on the trees.

Query—What effect would spraying have after the blossoms were closed up?

Mr. Wellhouse—Well, I have sprayed ten days after the blossoms have closed and think it has been beneficial. We have kept the moth down so that it has never done any serious damage.

Query—Have you noticed any difference between one, two, and three sprayings, as the case may be?

Mr. Wellhouse—Well, we imagined that two sprayings did more good than one. Of course, we could not keep a close check upon this, and I would not like to say positively whether it did or not.

Query—Is it not an important thing to get the poison in before the bloom closes?

Mr. Wellhouse—It would seem so. The cutting and the traveling moth lay the eggs on the leaf as well as in the caliph.

Mr. Van Deman—Right there is a point that we really ought to be schooled upon. That is, with regard to where the codling moth feeds. We used to think that the eggs were laid in a case, and hatched out there, and that the little worms ate their first bites at that place, but now it is said by those who have made a careful examination, that they are hatched upon the outside and sometimes upon the leaves. It is, perhaps, not certainly known that they do not sometimes eat outside of the case. They do crawl inside of the caliph after it has closed up, after which they crawl between the parts of the caliph, and from there eat their way into the apple, and, if

the poison inside of the caliph. I have it, so that in any case it is all right to have the poison in side of the caliph. I have heard scientists talk about this matter, and they are quite certain that arsenic, or whatever else is used, should be within the caliph; and it is quite reasonable to believe that the poison outside of the caliph will also kill some, and that is a good reason for the second or third spraying.

Mr. Van Arsdale—I believe it is true that they hatch about the time the trees are blooming; for instance, the Janet and Romanite. My spraying is done at different times. I have had less trouble from the codling moth on the Janet than any other; whether it was owing to the time, I do not understand. I spray my trees when they are just coming out, and I think that is the most successful way. I believe that spraying helps the tree no matter whether you kill any moths or not. I would spray if I knew I was not killing any moths. I believe that it is a good thing for the trees, and if I get a good, healthy growth even if I don't kill any moths I think I am doing well. Some say that it will keep the apple on longer, but I don't know about that. What may be good for me may not be good with another man. It is like a man who has a new variety of apples; his soil may be just exactly suited to it, while his neighbor may try it and pronounce it an absolute failure.

Mr. Easminger—I want to say that I think there is a great deal more benefit derived from gathering up the fallen apples about the 15th day of August than in any other way, in which we can destroy these insects. I allow the hogs to run in my orchard, and if they don't eat them all I pick them up myself. I believe that is the best way to clear out insects.

Mr. Williams—I have had some little experience in raising apples on a limited scale. I have never received any benefit from spraying, and I have tried to follow the rules laid down by men who have had experience in that matter. When I was farming I had apples in my orchard that were bothered with the moth, but I had one apple that was never bothered—the Lowell apple. If any one else has had this observation, I would like to know it.

Belvoir Herefords.

This week we present a first-page illustration of the herd bull, Princeps 66683, one of the three herd bulls owned by Steele Bros., Belvoir, Douglas County, Kansas. This bull is by Lamplighter 51843, out of Pretty Lady 3d 27451 by North Pole. He is assisted by Ben Butler 54079, bred by the Kansas Hereford Cattle Co., sired by Wilton Duke 11851 by Lord Wilton 40575, dam Victress 27303 by Anxiety 4th, and by McKinley 68926 by Duke 5th and out of Baby Girl 33923. These three herd bulls are each represented by their produce in the herd, and honors seem to be pretty evenly divided among them as to ability to transmit their good qualities. Steele Bros.' females are equally good, or even better, than their herd bulls, and with this condition existing grand results only could be expected. The breeding of a few of the great broad-backed, motherly, deep-milking females was noted, viz.: Bright Jewel 47404 by Pride of the Clan 38050, and out of Anxiety Duchess by Anxiety 4th; Coronet 6th 47408 by Plutarch 14410, dam Coronet by Anxiety 4th; Clover Blossom 47406 by Plutarch, dam Manselette 2d 17300 by North Pole 8946; Good Girl 48028 by Fortune 2080, dam Fancy 7th by Corsair; Lady Wilton 4th 47422 by Wilton Duke 11851, dam Dainty 3d 17224 by Beau Monde 9903; Lily F. 58951, a full sister to the noted Sunny Slope sire, Archibald V. She was sired by Archibald 1st 3925, and her dam was Lily 4th 39552 by Leo De Cote 25325. These are sufficient to show the character of the breeding running through the herd. In all, they have ten granddaughters of Lord Wilton, sired by his noted sons, Wilton Duke, Sir Evelyn, and Lord Bevier. The Messrs. Steele are now making prices on ten splendid yearling bulls, sired by Princeps and Ben Butler, also on a few choice young females.

Gossip About Stock.

J. W. Sheldon, of Topeka, shipped a well-bred Shorthorn bull this week to W. A. Wheeler, Axtell, Kans. He also recently purchased a young herd bull from T. K. Tomson & Sons, Dover, Kans.

J. S. Machir, of Linwood, Kans., breeder of very representative Poland-China swine, was visited last week by a Farmer representative, who found as fine a lot of brood sows and young pigs as anyone would desire. Stock of serviceable age has all been sold.

There has been quite a demand for Shropshire sheep, but most Western breeders have none to spare. However, this week the Farmer is enabled to present an offering of full-blood Shropshires from Senator Harris' Linwood farm, that will make the buyers good money. After the Linwood Shorthorns were sold Colonel Harris



A wreck at sea is not the only place where a life line is of importance.

There is a life line for the sick, as well as for the drowning man. It is Dr. Pierce's Golden Medical Discovery. It is not a cure-all, but it is a scientific medicine that goes to the fountain head of a number of serious and fatal diseases. When a man gets seriously sick, he can generally be cured by the right course of treatment. The treatment that cures many obstinate chronic diseases consists of pure air, good food, rational exercise, and the use of a remedy that will strengthen the weak stomach, correct the impaired digestion, invigorate the liver and promote the assimilation of the live-giving elements of the food. The "Golden Medical Discovery" accomplishes all these things.

"A young man lay pale and motionless upon (what neighbors called) his dying bed. Disease of the lungs, liver complaint, kidney trouble, and pleurisy were fast hastening him to the grave. The doctors had given him up to die. The neighbors said, 'he cannot live.' 'Oh, I would not care to die,' he said, 'were it not for leaving my dear wife and little child, but I know that I must die.' A brother had presented him with three bottles of medicine, but he had no faith in 'patent medicines'; but after the doctors had given him up to die and he had banished every hope of recovery, he said to his wife, 'dear wife, I am going to die, there can be no harm now in taking that medicine. I will begin its use at once.' He did begin to use it and at first he grew worse, but soon there came a change. Slowly but surely he got better. To-day that man is strong and healthy and he owes his life to that medicine. What was the medicine? It was Dr. Pierce's Golden Medical Discovery, and I, Luther Martin, am the cured man. Dr. Pierce, I thank you from the very depth of my heart, for rescuing me from the grave." The foregoing is from Luther Martin, Esq., a prominent citizen of Lubec, Wood Co., W. Va.

decided to utilize the wealth of blue-grass by stocking up with good sheep. He engaged Philo D. Jewett, an experienced flock-master, to select and care for the sheep. He has now a grand flock of Shropshires, but, owing to other arrangements, the entire flock is now offered for sale in lots to suit the purchaser.

"That Stock Breeders' book is a success" is what Secretary of Agriculture Coburn says in a note to H. A. Heath, secretary of the Breeders' Association. "I realize the amount of work and worry it has cost you first and last, and hope you may in some way be recompensed—in satisfaction, if not more substantially."

Geo. Channon, Hope, Kans, owner of the Lockridge Stock Farm herd of Shorthorns, now offers for ready sale 25 head of pure-bred Shorthorn bulls, from 6 to 13 months old, mostly sired by that famous Scotch-herd bull, Glendower. These bulls are finely bred and splendid individuals. This is the best Kansas opportunity for securing such a lot of bulls.

J. H. Taylor, owner Prospect Park herd of Poland-Chinas, Rhinehart, Kans., writes: "Old Chief We Know pigs are coming along in good shape. Over 100 on hand now. A few fall males still on hand at \$10. Wheat prospects average from 50 to 70 per cent. Dry weather is retarding growth and will likely make short straw. Lots of alfalfa seed is being sown; also Kaffir corn, which is rather unusual here."

The Chicago correspondent of the National Stockman and Farmer, in writing of the Western horse industry, says that during several years the farmers abandoned horse breeding and turned their attention to raising and feeding cattle and sheep, but with the improvement in prices they are once more breeding draft horses and drivers. The climate and grasses are well adapted to horses, and some prime horses are marketed here from the West. Kansas sends us some nice horses, and a bay Shire team of Kansas drafters that weighed 4,000 pounds, 6 years old, sold here the other day for \$530. In most parts of Kansas horses of all classes are scarce, and what few there are in the hands of breeders are held at prices that leave little profit to professional shippers.

Mr. T. F. B. Sotham, of Chillicothe, Mo., accepted the offer of Mr. Elton T. Beckwith, of Westcliffe, Col., for the Corrector bull, Hector, the Chesterfield heifer, Cora C. 78634, and the Kremlin heifer, Gipsy Girl 3d 78631. This is a remarkable trio for the foundation of a choice high-bred herd of Herefords. The bull, Hector, was Lot 1 of Mr. Sotham's recent catalogue, but was kept at home because out of condition for sale. The main inducement outside of the very handsome price paid, which led Mr. Sotham to accept Mr. Beckwith's

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F. E. NIPPS, Agent, Topeka, Kans.

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RAPE IS THE BEST FORAGE PLANT. It furnishes succulent food from May to December. No equal for summer and autumn SHEEP FOOD. Equally good for cattle, calves and pigs. Beats clover and alfalfa by scientific test. Grows 20 to 40 Tons Green Feed to Acre—no green food approaches it for fattening. Salzer's Dwarf Essex, best, 100 lbs. \$7.00; 10 lbs. \$1.15; 15 to 99 lbs. 8 cents per lb.; for less than 100 lbs. add 25 cts. cartage if sent by freight. Send 6 cents for pamphlet on Rape. Seed Dep. Amer'n Sheep Breeder, 124 Michigan St. Chicago.

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HAIR SWITCH 65 CENTS. WE SELL HUMAN HAIR SWITCHES to match any hair at from 65c to \$3.25, the equal of switches that retail at \$2.00 to \$5.00. OUR OFFER: Cut this ad out and send to us. Enclose a good sized sample of the exact shade wanted, and cut it out as near the roots as possible, inclose our special price quoted and 5 cents extra to pay postage, and we will make the switch to match your hair exact, and send to you by mail, postpaid, and if you are not perfectly satisfied, return it and we will immediately refund your money. Our Special Offer Prices as follows: 2-oz. switch, 20-in. long, long stem, \$5.00; short stem, \$4.00; 2-oz. 22-in. long, short stem, \$1.25; 3-oz. 22-in. long, short stem, \$1.50; 3-oz. 24-in. long, short stem, \$2.25; 3 1/2-oz. 26-in. long, short stem, \$3.25. WE GUARANTEE OUR WORK the highest grade on the market. Order at once and get these special prices. Your money returned if you are not pleased. Write for Free Catalogue of Hair Goods. Address, ROBERTS SPECIALTY CO., 114 Dearborn St., Chicago.

offer was the fact that at Mr. Sotham's sale at Denver, 1883, Mr. Beckwith's father, the late Mr. George Beckwith, was the prime factor in the success of that sale. This was the first sale of pure-bred cattle ever held west of the Missouri River. The late Mr. Beckwith purchased all the "tops" of that sale, paying \$655 for Baron Up-ingham, one of the largest and best bulls that ever passed through Mr. Sotham's hands.

Breeders of Galloway cattle are very much encouraged with the reception of their favorite breed. One of the best breeders in the West, Mr. J. M. Lowe, of Kansas City, places his advertisement in the Farmer. In an address before the Missouri Breeders' Association he said: "I warn you that not every black mule is a Galloway, although all Galloways are black muleys. And right here Galloway breeders have been their own worst enemies. A small fraction of Galloway blood may produce two of its characteristics, namely, absence of horns and uniformity of color—distinct advantages, but neither of which is good to eat, whereas the remaining three-fourths of the animal fit for beef may be the toughest kind of a Western steer. He is not a Galloway at all, but is a black muley Western steer. Some breeders have been slow to learn that they can not take a grade Galloway and mix him with a lot of scrub Western cows and expect to register the produce in the Galloway herd book. No other breed of cattle has suffered so much from injudicious handling as the Galloway. The very fact that the Galloway stamps his characteristics wherever he goes makes it easy to produce the counterfeit, and ought to have taught his friends to sell none but pure-bloods for breeding purposes. But the temptation was too great. Jacob's experiment produced many kinds of cattle, but it did not improve the quality. And like his, such practices as have been indulged by Galloway breeders might win a woman, but it will never win any breeder an enviable place among the benefactors of the human family."

Drs. Thornton & Minor are reliable specialists, and deserve patronage.

National Educational Association Meeting.

For the meeting of the National Educational Association at Los Angeles, Cal., July 11-14, 1899, the Union Pacific will make the greatly reduced rate of one fare, plus \$2.00, for the round trip.

The excellent service given by the Union Pacific was commented on by all who had the pleasure of using it to the convention at Washington in 1898. This year our educational friends meet in Los Angeles, and members of the Association and others from points East should by all means take the Union Pacific.

The service of the Union Pacific via Omaha or Kansas City is unexcelled and consists of Palace Sleeping-Cars, Buffet Smoking and Library-Cars, Dining-Cars, meals a-la-carte, Free Reclining-Chair Cars and Ordinary Sleeping-Cars.

The Union Pacific is the Route for summer travel.

We wish to call the attention of the readers of the Kansas Farmer to our page advertisement in this issue. It contains many testimonials from former patients. Drs. Thornton & Minor, 100 West Ninth St., Kansas City, Mo.

Excursion to Buffalo

leaving Chicago via Nickel Plate Road June 12 and 13. Tickets good to return to and including June 17, 1899, at one fare for the round trip. The dining car service is unsurpassed. City ticket office, 111 Adams St., Chicago. (4)

First of the Season.

Excursion to Buffalo via the Nickel Plate Road at one fare for the round trip. Do not miss this opportunity of visiting Buffalo and Niagara Falls at a very reasonable expense. City ticket office, 111 Adams St., depot Van Buren Street Passenger Station, Chicago, on the Loop.

Excursion Rates to Western Canada

And particulars how to secure 160 acres of the best wheat-growing land on the continent, can be secured on application to the Superintendent of Immigration, Ottawa, Canada, or to the undersigned.

Specially conducted excursions will leave St. Paul, Minn., on the first and third Wednesdays in each month, and specially low rates on all lines of railway are being quoted for excursion leaving St. Paul on April 5 for Manitoba, Assiniboia, Alberta and Saskatchewan.

J. S. CRAWFORD,

214 West Ninth St., Kansas City, Mo.,
Government Agent.

Special Want Column.

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

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

CREAMERY OUTFIT FOR SALE.—Will sell at sacrifice, fine creamery outfit. Acme Alpha De Laval Separator, nearly new. W. S. Marlin, Receiver, Eureka, Kans.

FOR SALE.—Or trade for cattle, an imported registered Hackney stallion, as owner is going abroad. Pedigree running back nearly 200 years. Gentle and a splendid animal in every respect. Address Kansas Farmer Co., Topeka, Kans.

AGENTS WANTED.—In your county, for the only pump governor on the market. Every user of wind-mill or hand-working pump buys the "Yankee" at sight. Six dollars a day, steady work, exclusive territory guaranteed, experience unnecessary. None but hustlers need apply. Address H. Fleming, Lawrence, Kans.

BREEDERS' ANNUAL REPORT FOR 1899.—The great Kansas Live Stock Manual and proceedings of the Ninth Annual Convention of the Kansas Improved Stock Breeders' Association, contains 125 pages; price 25 cents. Address H. A. Heath, Secretary, Topeka, Kans.

2,000 BUSHELS SEED SWEET POTATOES FOR SALE. Nine best kinds. Write N. H. Pixley Wamego, Kans.

FOR SALE.—Imported English Coach stallion and Galloway bulls. W. Guy McCandless, Cottonwood Falls, Chase Co., Kans.

FOR SALE.—\$3.00 per acre for improved 160-acre farm 1½ miles north of Bushong Station, Lyon Co., Kans. Address, J. B. McAfee, Topeka, Kans.

WANTED TO EXCHANGE.—The pure-bred Cruickshank bull, My Lord 115563, bred by Col. Harris; sire Imp. Spartan Hero 77383; dam Imp. Lady of the Meadow (Vol. 30, p. 615), for a pure-bred Cruickshank bull—can't use him any longer in my herd. H. W. McAfee, Topeka, Kans.

EGGS FROM PURE-BRED WHITE AND BARRED PLYMOUTH ROCKS, \$1 per 15. S. F. Glass, Marion, Kans.

FOR SALE.—100 cars cottonseed meal. Also corn and feed. Address Western Grain and Storage Co., Wichita, Kas.

SHORT-HORNS FOR SALE.—Forty-six cows and heifers, Cruickshank, Young Marys, Rose of Sharon and others; an extra pair, Negroes, bred by that great Cruickshank, Royal Prince 100646. Six bulls ready for service, sired by Young Mary bull, Glendon 113371. Theodore Saxon, 222 West Eighth St., Topeka, Kans.

WANTED.—Every breeder in Kansas to become a member of the Kansas Improved Stock Breeders' Association. Send membership fee of \$1.00 to H. A. Heath, Secretary, Topeka, Kans., and you will receive the Breeders' Annual Report for 1899.

CHOICE EGGS FOR HATCHING FROM HIGH-SCORING EGGS. Buff Orpingtons, Buff Leghorns and B. P. Rocks. Eggs \$1 per 15, \$4 per 100. Give them a trial, they are sure to please. Mrs. E. E. Bernard & Son, Dunlap, Kans.

FOR SALE.—Planet Jr. Fire Fly Horse Hoe, \$3.00; Planet Jr. Fire Fly Horse Hoe, with wheel, \$3.50. Also, Nos. 4, 7, 8 and 9 Horse Hoes, 12-tooth Harrows, Hand Cultivators, and other Planet Jr. tools all were or write for catalogue. Trumbull & Co., 1426-1428 St. Louis avenue, Kansas City, Mo.

WANTED.—To lease or buy a cattle ranch, from 1,000 to 1,500 acres; southern Kansas preferred. Must have living water. Address, J. H. Wallace, 2408 E. Eleventh Street, Kansas City, Mo.

WRITE TO ALEX RICHTER.—Hollywood, Kas how to sub-irrigate a garden, etc., and cost of same. Send him the size or dimensions of your garden, and he will give full information.

SHEEP.—Six hundred stock sheep and lambs for sale. H. W. Otken, Grinnell, Gove County, Kans.

BERDEEN-ANGUS BULLS.—Twelve extra individuals of serviceable ages; registered. Wm. B. Sutton & Son, Russell, Kas.

BERKSHIRE SOWS BRED.—To farrow in May. Choice of individuality and breeding, eligible to registry, at \$20. Also two fine boars ready for service. Rutger Farms, Russell, Kans.

HEREFORD BULLS FOR SALE.—Four pure-bred and five high-grades; well marked. W. E. Spears Richmond, Kans.

FOR EXCHANGE.—A. J. C. C. Jerseys and registered Poland-China pigs, for well-bred trotting, saddle or coach horses. Address W. T. Ballagh, Nevada, Mo.

A LARGE BLACK KENTUCKY JACK will make the season of 1899 at my farm five miles south of Topeka on the Burlingame road; mares kept until bred. W. W. Clark, Topeka, Kans.

HEREFORD BULLS FOR SALE.—One carload of very high-grades, some unregistered, from 10 to 14 months old; also 12 head of registered bulls, same age as above, all in good condition or fat. John Drennan, Blue Rapids, Kans.

BLACK LANGSHANS EXCLUSIVELY.—Eggs for hatching \$1 per 15. Mrs. T. E. Whitlow, Morantown, Kans.

POLAND-CHINAS.—No better anywhere. Five dollars each. Write for breeding. Hemenway, Hope, Kans.

FOR SALE.—Pure-bred Polands and Berkshires from weanlings up, at very low prices. O. P. Updegraff, North Topeka, Kas.

BLOSSOM HOUSE.—Opposite Union depot, Kansas City, Mo., is the best place for the money, for meals or clean and comfortable lodging, when in Kansas City. We always stop at the Blossom and get our money's worth.

LIGHT BRAHMA COCKERELS FOR SALE.—GOOD birds, nearly solid black wings. Mrs. Emma Brosius, Quinton Heights, Kans.

EGGS FOR HATCHING.—White Leghorns exclusively. One dollar per fifteen. E. F. Ney, Bonner Springs, Kans.

FOR SALE.—Hereford bulls. Two full-blood yearlings and 15 high-grade yearlings; also 10 high-grade Shorthorn yearling bulls. Address Hugh A. Hodgins, Topeka, Kans.

FOR SALE.—Poland-Chinas and Duroc-Jerseys, all sizes. Barred Plymouth Rocks and Single Comb Brown Leghorns. Eggs \$1 per 15. Write D. Trott, Abilene, Kans.

FOR SALE.—Good hedge posts, in ear lots. E. W. Melville, Eudora, Kans.

IF you have timothy, clover, prairie, alfalfa, or millet hay to market, correspond with J. W. Lowe & Co., 1313 W. Eleventh street, Kansas City, Mo. Liberal advances on shipments.

THE COAL BLACK STALLION

Orphan Knight

18696.

Record: { 2:19½ Pacing,
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The handsomest Stallion in Kansas. Winner of fourteen ribbons in the show ring.

Fastest Stallion in Kansas, with a record at both trotting and pacing.

Fee for this year only

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CHAS. W. TANNER, Mgr.,
Fair Grounds,
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FULL-BLOOD SHROPSHIRE SHEEP

Senator Harris has decided to close out the Linwood Farm flock of Shropshire sheep, consisting of 120 breeding ewes and their 170 lambs; 42 yearling ewes, and 55 yearling bucks, which will be sold at private sale during the next sixty days. The most desirable flock in Kansas. For further information call at Linwood Farm, or

Address **PHILO D. JEWETT, Mgr., Linwood, Kans.**

WE PAY YOU

50 cents a Hundred for NAMES, on certain conditions, on our special blanks. We want Boys and Girls everywhere to help advertise our unique **SHORTHAND** self-instructor—just the thing for everybody—from the first grade school

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THE SHAWNEE FIRE INSURANCE COMPANY,

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Insures Against Fire, Lightning, Windstorms, Cyclones and Tornadoes.

The only company in Kansas with a paid-up capital of \$100,000. It writes more business in Kansas than any other company. It has paid losses amounting to \$493,266.63. Call on your home agent or write the company.

DO YOU WANT A FARM

OR A RANCH? 7,000,000 acres Ranch land—1,000,000 acres Farm land, located in NEBRASKA, KANSAS, COLORADO, WYOMING and UTAH. For sale by the **UNION PACIFIC RAILROAD COMPANY** at greatly reduced prices on ten years' time and only 6 percent interest. **LIBERAL DISCOUNT FOR CASH.** Please refer to this paper when answering advt. **B. A. McALLISTER, Land Commissioner, U. P. R. CO., Omaha, Neb.**

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IS THE ORIGINAL AND SUCCESSFUL PREVENTIVE REMEDY FOR

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Write for particulars, official endorsements of our Vaccine and testimonials from thousands of stockmen who have used Pasteur Vaccine upon nearly one million head in the United States during the last three and a half years and prevented losses from Black Leg. "Single" Vaccine and "Double" Vaccine, as preferred.

PASTEUR VACCINE CO., 52 Fifth Ave., CHICAGO.

FOR SALE.—Imported and full-blood Percheron, Clydesdale and Coach stallions. Good individuals, colors and ages. For further information address W. H. McMillen, Manager, Box 204, Topeka, Kans.

HIGH-CLASS LIGHT BRAHMA EGGS \$1.50 per setting from yard 1; \$1.00 per setting from yards 2 and 3; \$2.50 per 45. A few good hens and pullets for sale, \$1.00 each—six for \$5.00. Stock is all first-class. Mrs. N. Van Buskirk, Blue Mound, Kans.

675-ACRE FARM FOR SALE.—Only ten miles from the State capital; improved; has never-failing water. \$15.00 per acre if taken soon. Address J. Ferguson, Station B., Topeka, Kans.

FOR SALE.—Soy beans at \$3 per bushel. Address H. L. Brinkerhoff, Eureka, Kans.

FOR SALE.—Russian artichokes for hogs. Yield enormously. Fifty cents per bushel, sacked and put on cars here. Order at once. F. W. Truesdell, Lyons, Rice County, Kans.

TO EXCHANGE.—A daughter of Hadley Jr., dam by Klever's Model, for ten bushels of alfalfa seed on track. F. W. Baker, Council Grove, Kans.

THE STRAY LIST.

FOR WEEK ENDING MAY 4, 1899.

Pratt County—John Mawdsley, Clerk.

HORSE.—Taken up by L. D. Humble, in Paxton tp., March 14, 1899, one black horse, about 4 years old, small star in forehead and small white spot on left side; valued at \$20.

Montgomery County—D. S. James, Clerk.

COW.—Taken up by W. I. Long, in Fawn Creek tp. (P. O. Tyro), April 5, 1899, one red cow, 4 or 5 years old, small brand "Y" on right side, crop off each ear.

STEER.—By same, one red steer, 1 year old, small.

CALF.—By same, one red steer calf; total value, \$15.

FOR WEEK ENDING MAY 18, 1899.

Cloud County—A. R. Moore, Clerk.

MULE.—Taken up by Louis Christie, in Summit tp., four miles east of Scottsville, April 15, 1899, one brown mare mule, about 8 years old, and weighing about 700 pounds, shod in front, stiff or stringhalted in hind legs, tip of right ear split; valued at \$15.

Lincoln County—J. S. Stover, Clerk.

MULE.—Taken up by Louis McKinney, in Battle Creek tp., (P. O. Yorktown), May 1, 1899, one brown mare mule, with dark stripes over shoulders, 2 years old; valued at \$25.

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The Home Circle.

OF THE GOLDEN AGE.

From all known life apart,
A youth prayed, sick at heart:

"Recall for me, recall
The time more true and ample;
The world whereon I trample,
How tortuous and small!
Behold, I tire of all.

"Once, gods in jeweled mail
Through greenwood ways invited;
There now the moon is blighted,
And mosses long and pale
On lifeless cedars trail."

Then they who lent him ear
Whispered a word austere:

"Child, keep this good unrest!
But give to thine own story
Simplicity with glory;
To greatness, dispossessed,
Dominion of thy breast.

"In abstinence, in pride,
Thou, who from Folly's boldest
Thy sacred eye withholdest,
Another morn shalt ride
At Agamemnon's side.
—The Cosmopolitan.

THE WAR OF THE CLOTHES-LINES AND HOW IT ENDED.

Too much co-operation among near neighbors is a dangerous thing. So Mrs. Murray and Mrs. O'Neil learned to their sorrow.

And yet, what else could they have done? It is a serious matter to be a washerwoman, and live in the fourth story of a tenement. When each moved in she was shown her clothes-line, running over a pulley fastened outside her window and across the alley to another pulley in an opposite window.

Each room had two windows, and Mrs. Murray was told that the north clothes-line was hers, while Mrs. O'Neil was put in possession of the line connecting the windows to the south. One morning Mrs. Murray leaned from her window, as she was hanging out a part of her last washing, and called to her neighbor over the way, who was doing the same:

"Mornin' to ye. Me own name's Mis' Murray."

"An' mornin' to ye, I'm sure; an' I'm sure; an' I'm Mis' O'Neil."

"Glad to make your acquaintance, Mis' O'Neil. D'ye know, Mis' O'Neil, iver since I moved in I've been wantin' to use the half of your clothes-line that you can't use?"

"Why, an' me the same, Mis' Murray, for I've often a big wash that I can't begin to dhry on me one line; an' the clothes get sour a-hangin' indoor."

"Well, then, Mis' O'Neil, if you're agreed, you let me know when you're ready to start out clothes on your line, and I'll start at the same time on the other half of it, and you may do the same with mine, so we'll make each line carry double."

Twice a day since then, and often three times a day would sound across the alley a "Re-e-ady, Mis' Murray," or a "Re-e-ady, Mis' O'Neil," and then, in the midst of puffing clouds of steam, our laundrywomen would fill one clothes-line, Mrs. Murray sending her clothes to Mrs. O'Neil whilst Mrs. O'Neil on the return half of the same line was sending hers to Mrs. Murray. Next the other clothes-line would be filled, and the flapping garments would gather in what sunshine and pure air they could from Skin Alley, until the next wash was ready.

This arrangement soon ripened into a friendship, and many were the hearty bits of cheer, the secret confidences, and the merry whiffs of Irish banter, sent to and fro along the clothes-lines. But, alas! were there ever two neighboring families bound together by a clothes-line, or some less material tie, that never found the line somewhat strained, the bond tense and ready to break? Co-operation will be free from peril—in the millenium.

One morning Mrs. Murray observed that her neighbor was rather reserved, and said very little, being intent on getting her clothes on the line with the greatest possible expedition. When she looked more carefully at those clothes, Mrs. Murray gave a start and her brow clouded darkly.

There was no doubt about it, her neighbor's washing was that of Mrs. Bently, Mrs. Murray's best customer. Ah, here came the handkerchiefs, big B's in the corners. And no one could ever mistake that pillow sham. As the clothes jerked nearer Mrs. Murray she took up a handkerchief, examined it, and glanced sharply at her neighbor. But Mrs. O'Neil turned away. Thereat Mrs. Murray shut her window with a bang.

That Mrs. Bently had a right to change her washerwoman, that Mrs. O'Neil would never have sought the job, but that the job must have sought her, all this Mrs. Murray never stopped to consider. "The mean, sneakin' underhand sarpint!" she kept saying to herself, in her anger rubbing a big hole in the very center of Pearl Madison's best handkerchief.

Now, it happened that day that Mrs. Murray wanted the clothes-lines unusually early in the afternoon. Probably her wrath had assisted her muscles. And when she was ready to take in the dry clothes from the lines Mrs. O'Neil was not. Indeed, Mrs. Murray, peering with blazing eyes into the dirty windows opposite could see nothing of her neighbor. "Gone a-gaddin'. I'm not a-goin' to wait on the likes o' her."

With nerves trembling with excitement and passion, Mrs. Murray began to pull in her clothes, viciously jerking the line through the pulleys, and, of course, knocking off, as the line went through, all of Mrs. O'Neil's washing. Down fluttered the Bently's clothes into the unimaginable filth of Skin Alley. Dainty linen lay in reeking pools, decked garbage barrels, waved from dirty window shutters where it caught half way down, or flapped along the greasy fire escapes.

Just as Mrs. Murray had secured her last garment, Mrs. O'Neil returned and saw at a glance what had happened. I shall not attempt to record the conversation which followed. Each woman was a mistress of the art vituperative, and every window within hearing distance soon held one or more eager auditor "listening at Mis' Murray an' Mis' O'Neil havin' it out." It was indeed fortunate that fifteen feet of four-story alley intervened between the contestants.

From that day as may well be imagined there was no more partnership in the clothes-lines. Each woman was seriously inconvenienced but each would sooner lose her stout right arm than propose co-operation again. Such would have been the condition of affairs to this day had it not been for Josie Murray.

And who was Josie Murray? do you ask. She was Mrs. Murray's niece on a visit from the country; as pretty and lovable a piece of pink and white as you can well imagine.

Now Mrs. O'Neil had a little daughter who was a cripple. She went stumping around on crutches or sat pale and with her eyes shut in a padded chair. Her name was Mary. "Good's a ghost," Mrs. Murray often said of her.

Josie had not been in the tenement five minutes before she spied her poor neighbor and her warm, Irish heart went out in sympathy to the cripple. But Mrs. Murray would permit no advances, telling Josie with many embellishments the history of the clothes-lines. Nevertheless Josie pondered sorrowfully and long over the pallid face opposite and at last hit on a plan of operation about which she discreetly said nothing. First, with her stubby pencil she painfully printed this letter:

"Dear Mary, I'm sorry for you and I want you to hav mi dol haf the time so I send her to you her nam iz Margeret and you ma hav her evry afternoon from Josie."

Then, choosing a time when both her aunt and Mrs. O'Neil were out, she fastened Marguerite, dressed in her finest, to the end of Mrs. O'Neil's clothes-line.

About two o'clock Mrs. O'Neil began to remove the clothes from the line to put out a second set. She was doing the work mechanically, and did not notice the doll till she took hold of it.

"Saints preserve us!" she exclaimed, almost dropping the doll as she removed the clothes-pins. "What under the canopy's this?" She read the note. She looked at the opposite window and saw a pink and white face all smiles, with two blue eyes dancing with delight. Josie nodded gaily, and what could Mrs. O'Neil do but nod back?

For the rest of Josie's visit the doll made regular trips back and forth on the clothes-line. It was the first toy Mary had ever had, and the pleasure she took in it was something wonderful and pathetic. The little cripple sang to it, and danced it and hugged it, and went through all manner of plays with it, now for the first time getting a glimpse of the happy childhood that she had never had. And Josie stood at her window and watched it all rejoicingly, while even Mrs. Murray cast a pleased glance over the way now and then, when Mrs. O'Neil was out.

But the days quickly passed, and Josie must go back to the farm. She trembled with joy at the thought of father and mother and the children and all the dear farm animals, each one of the latter being known to her by its own name; but—what about the doll? This is what—written more slowly than the first note and kept over night, before Josie could quite make up her mind to send it:—

"Dear Mary I am goin bac hom and I wan you to hav Margareet bekas you ar sic and liv in the sittly good bi my deer Mary from Josie."

This note was carefully pinned to the beloved doll, and all the doll's clothes, except those it wore, were rolled into a neat bundle. The line chanced to be unoccupied, so over went the gift, Josie crying out, as it reached the other side, "Mary! Mary!

Here's Marguerite, come to stay. Good-bye, Marguerite, dear. Be a good girl."

Well, that morning there was a flutter of happy industry across the way, for Mrs. O'Neil had two jobs to manage, her unfailing washing, and something else; something over which Mary was as merry as she. About noon, just as Josie was kissing her aunt good-bye, while her big brother Ned, who had come for her, stood waiting for her with her little valise, bob! bob! bob! over on Mrs. O'Neil's clothes-line came a covered basket, while Mary called shrilly from her window. And in the basket was a big apple turnover, and a marvellous cake, with white frosting on top, and with red frosting trimmings, while in the center waved a plume of green tissue paper. And on the cover of the basket was a slip of paper with these words:

"The turnover iz for Josies lunch and the cak for Mis' Murray from Mis' O'Neil."

That was at noon, and after Josie had smiled and waved her thanks across the alley, and kissed her hand to her poor crippled friend, and kissed her hand to Marguerite, and kissed her aunt a score of times, and Ned had at last forced her to go lest they should miss the train—after all this, Mrs. Murray sat down to her lonely dinner and ate it very thoughtfully.

The thoughtfulness continued as she washed the dishes, and even as she took the steaming clothes from the boiler and vigorously rubbed them in the suds and ran them through the wringer. And the result of all the thought was that, at 2 o'clock when her clothes were ready to hang out, and her neighbor's, as she could see, were also done, Mrs. Murray stuck her head out of the window, and with an Irish twinkle in her black eyes called stoutly, as of old:

"Re-e-ady, Mis' O'Neil!"

Then the opposite window was raised and the answer pealed out:

"Re-e-ady, Mis' Murray!"

And the war of the clothes-lines was ended.—Interior.

The Oregon at the Ladrone Islands.

When the whale-boat party left the Oregon to go ashore on our newest Pacific Ocean possession, the Island of Guam, it was discovered that landing in the port of San Luis d'Apra is decidedly inconvenient, especially as there are no buoys to mark the intricate passages between the coral reefs, which in many spots are so shoal as to forbid the use of a steam cutter. However, the whale-boat finally reached a tiny pier at Punta Piti, on the road to Agana, the capital.

The little hamlet of Piti boasts a custom-house, a glaring white building, visible for miles out to sea. From this point to Agana is five miles, the road being of earth laid on volcanic rock, perfectly level and in splendid condition. For almost the entire five miles the inshore side of the road is lined by a continuous row of houses surrounded by tropic growth, amid which towers many a palm and mango tree; here and there are patches of banana and sugar-cane. Through the gently waving trees on the seaward side one catches glimpses of a dazzling beach; beyond, calm blue water; and, far out, white tossing breakers, rolling over the barrier reef.

The demands of the stewards of Uncle Sam's colliers and men-of-war have made serious inroads on the poultry population of the island; in fact, there is some danger of its becoming extinct. However, the number of small pigs is amazing; they are of the razor-back family, of a dusty yellow color, often decorated with black spots, a small body and a tremendous head.

The costume of the Guam woman is doubtless copied from the Philippines. It consists only of a red or black skirt, into which is tucked an undervest and a very low decollete chemisette, reaching to the waist, with wonderfully wide short sleeves. At times a panyuelo, or neckerchief, held by a brooch, is worn. Sometimes the skirt is a light matting of cocoa palm leaves, but more frequently of penya cloth, woven from the fibers of the pineapple plant. Their hair was combed straight back, and worn in a tight roll. The men of the town are chiefly noticeable for their shirts; these have stiff starched bosoms and the tails are left flowing outside the trousers. This gives many a man who has never hurried in his life a very much rushed appearance. However, apart from the fact that the custom in this climate is sensible, and fully warranted by the increased comfort and coolness it brings, one can not help thinking that it was a scheming tailor after all who first set the style of wearing the tails tucked in. Think how many pairs of trousers now in the rag-bag could be resumed if shirts were only worn a la Guam.—A. A. Ackerman, Lieut. U. S. N., in Collier's Weekly.

If you want to be well informed, take a paper. Even a paper of pins will give you points.—Youth's Companion.

A Tremendous Institution.

Every one knows that the Waldorf-Astoria is a bewilderingly big institution, its thousands of guests and attaches forming a principality. Few people, however, have an adequate conception of the extent of the beef and sugar and the flour, the wine and cigars, the fuel, light and water, the knives and forks and towels and soap and other commodities used daily in carrying on the largest hotel the world has known.

For example, there are 35,000 electric lights in the hotel. The electric plant represents a capacity of 2,500 horse power. By way of contrast it might be mentioned that the extreme capacity of the electric light and power plant of the city of Trenton, N. J., represents 800 horse power, less than a third of that of this big New York hotel.

The Waldorf-Astoria's water bill for 1898 was \$37,000.

Twenty-four thousand towels and 15,000 napkins are constantly in circulation in the hotel.

Its ice-making machines turn out 150 tons daily.

The stock of wines kept on hand is valued at \$150,000.

Cigars to the value of \$250,000 are kept in the humidors.

There are 8,400 table-knives, 6,000 table-spoons, 2,400 dessert-spoons, 6,000 tea-spoons, 4,200 after-dinner spoons, 4,800 dessert-knives, 3,000 oyster-forks, and 9,000 table-forks in use in the dining-rooms.

When special events like the horse show pack the hotel, or blizzards drive the rich from their frozen mansions to crowd the city's hotels, the quantity of supplies consumed at the Waldorf is something incredible.

The quietest period this year was the week ended January 22. During that week the aristocratic guests of the Waldorf relieved their appetites with:

125 barrels of oysters.
2,100 pounds of cheese.
25,000 clams.
2,500 pounds of coffee.
5,000 pounds of butter.
30,000 quarts of milk.
6,000 quarts of cream.
42,000 eggs.
38,600 pounds of beef.
2,160 sweetbreads.
6,600 pounds of fish.
4,300 pounds of provisions (hams, etc.)
2,000 pounds of hothouse tomatoes.
650 pounds of mushrooms.
2,220 squabs.
1,575 pounds of ducks.
4,800 pounds of fowls.
45 boxes of lemons.
60 boxes of oranges.
12 bunches of bananas.
65 boxes of grape fruit.
160 barrels of flour.
18,000 hothouse salads.
326 bags of potatoes.
12,000 bunches of celery.
28 barrels of sugar.

During that week 7,500 pounds of soap was used. Over 190 tons of coal per day was burned, or, to be exact, 1,336 tons during the week. In addition, 600 bushels of charcoal was consumed.

The Waldorf-Astoria is a \$15,000,000 enterprise. The house has 1,395 bedrooms and 800 bathrooms. Each floor has its own clerk, bellboy, and porters. Each floor also has its own telephone, parlors, assembly halls, etc.

In the dining-rooms 2,500 people may be seated at one time. On an average, 6,000 people dine daily at the hotel. The edifice is so vast and its life so tumultuous that guides are employed by the hotel to show visitors about.—New York Journal.

Medicus—The only thing new in diseases this season, as far as we have been able to ascertain, are neu-ralgia and pneumonia.

Borum—No, you are not likely to take cold by ventilating your theories, but there is some danger of your making other people hot.

"Of course it is improper to smack your lips at the dinner table. It is also unwise to smack any other fellow's lips there."

"You have evidently been misinformed. Mock turtle soup is not made from tortoise shell cats—or it shouldn't be, at least."—Chicago Evening News.

Superintendent of Reservoir.

Emporia, Kans., May 9, 1899.—G. A. Griffith, superintendent of reservoir, this city, has had rheumatism, stomach trouble and a tired feeling. He tried various remedies without benefit, until he began taking Hood's Sarsaparilla, which gave him relief.

Mothers! Mothers!! Mothers!!!

MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS BY MILLIONS OF MOTHERS for their CHILDREN while TREETHING, with PERFECT SUCCESS. IT SOOTHES the CHILD, SOFTENS the GUMS, ALLAYS all PAIN; CURES WIND COLIC, and is the best remedy for DIARRHŒA. Sold by druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

The Young Folks.

EQUATIONS.

You so sure the world is full of laughter,
Not a place in it for any sorrow,
Sunshine with no shadow to come after—
Wait, O mad one, wait until to-morrow!

You so sure the world is full of weeping,
Only gloom in all the colors seven,
Every wind across a new grave creeping—
Think, O sad one, yesterday was Heaven!

Young and strong I went along the high-
way,
Seeking joy from happy sky to sky;
I met Sorrow coming down a byway—
What had she to do with such as I?

Sorrow, with a slow, detaining gesture,
Waited for me on the widening way,
Threw aside her shrouding veil and vest-
ure—
Joy had turned to Sorrow's self that day!

If some Great Giver give me life,
And give me love, and give me double,
Shall I not also at His hand
Take trouble?

And if through awful gloom I see
The lightnings of His great will thrusting,
Shall I not, dying at His hand,
Die trusting?
—Harriet Prescott Spofford.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 60.

THE SCHLOSS.

From the royal arsenal to the royal castle is but a short distance; the way is across the "Schloss Bruecke" (Castle Bridge), to the Lustgarten, upon the south side of which rises the huge pile of masonry known as the "Schloss." It is an imposing yet dingy appearing building, very regular in shape, some of whose walls were built nearly six hundred years ago.

It is 650 feet in length, by 380 feet in width, enclosing two large and two small inner courts, and rises to the height of 100 feet; while one dome on the west side pierces the clouds 230 feet from the ground. Its appearance would indicate its age and one would conclude that it needs a coat of paint; but the Emperor greatly admires the present color as it attests the great antiquity of his royal house and is a monumental witness to the long line of illustrious rulers who have owned it.

It dates back to the time of the Kur-fuersts of Brandenburg, when Frederick Irontheeth, the second Elector (Kurfuerst) took occasion to quarrel somewhat with the citizens of Berlin, which was then a small city almost entirely confined to the small island formed by the branching of the Spree. How long this little island was inhabited as a city is not definitely known, but there are records existing attesting the fact of its existence prior to 1120.

Frederick, the gentleman above referred to, finding himself somewhat crowded as to his household arrangements, took the occasion of a quarrel between some of the great citizens to quarrel with them in turn, and while they oppressed each other, he oppressed both parties until he had crowded enough off the little island and had appropriated the space for his own purposes. In order to retain what he had seized, he began to enlarge his house by building a strong castle in 1442.

This new building had thick walls and high towers, none of which are standing as originally erected. He made the Schloss strong and massive and one of the towers was constructed with a winding stairway without steps, so that heavy cannon could be transported to the top and from that elevated position he could hurl red-hot chain-shot and other interesting objects upon the heads of any who might object to his personal enterprise. This tower was called "Wendelstein" (Windingstone), and with another portion of the castle called "Green Hat," is incorporated in the modern Schloss.

The castle as completed by Mr. Irontheeth remained the residence of the Electors of Brandenburg until Joachim II., "the Hector of Germany," concluded to enlarge it in 1538 and his portion of construction was called "Zweite Haus;" the "Dritte Haus" was built under the electorate of Johann George, and the "Duchess's House" was also built in the same reign for the occupancy of the Elector's sisters.

The successors of Johann Georg, up to 1620, made various alterations and additions, and a fire in 1605 made reconstruction necessary, and then the Alabaster Hall and wing toward the main branch of the river were built.

By the time of the death of "The Great Elector" in 1688, Berlin had only 20,000 inhabitants, but had spread out from the island on all sides, across the river Spree. When Frederick, the twelfth Elector of Brandenburg, son of Frederick William, the "Great Elector," had crowned himself at Koenigsburg and thus became Frederick I., King of Prussia, he concluded the old Schloss must be remodelled and plenty

of magnificence exhibited in its reconstruction; but he died before the work was completed and his son, King Frederick William I., continued the work, and in his reign the famous "Weiss Saal" was erected and a balcony of solid silver was made for the "Ritter Saal," which was (and is) the throne room.

In 1840, Frederick William IV. expended over a million thalers in putting the finishing touches, as he thought, to the monstrous pile begun in 1442.

Since 1850, the Schloss has practically been disused as a royal dwelling, until William II., the present Emperor, concluded it was none too good for his family, and began rebuilding and refurnishing, making it the royal residence during the winter months of each year.

Having given a short history of the building itself, it might be well to look inside a minute or so. As we go through the huge gateway we see on the side of the Lustgarten two bronze horses with their bronze grooms; these were the gift of Czar Nicholas; the Berliners have nicknamed them "Gehemmer Fortschritt" (Progress Checked) and "Befoerderter Rueckschritt" (Retgression Encouraged).

There are 700 or more rooms in this castle, so I was told, and I believe it, for it is certainly a larger dwelling than any I ever saw in Kansas. But of this large number only twenty-five or so are shown to the miscellaneous visitor; I suppose, though, if General Funston or General Miles were to call, a few more would be opened for their inspection. The private apartments of the imperial family are on the first floor facing the Lustgarten, and of course cannot be visited by curious ones. A great number of rooms are never opened from one end of the year to the other; some contain mementoes of state secrets and of family secrets, I have no doubt, but with that we have no business.

The entrance tickets are easily obtained from the castellan in the court, for which one pays the magnificent sum of fifty pfennigs (12½ cents); this money is said to be used for charity. Parties of visitors are shown through the palace every half hour, as is the custom usually in all show places of royalty; and it has also usually been my fortune to arrive a couple of minutes after a party has started on its pilgrimage and thus have twenty-five or more minutes to wait. I have always employed my time in questioning the guard on duty in the waiting-room and learn from him many things which guide books do not contain. I found the old man on duty at this time was not one of the regular soldier guards but more of a house servant, and he was fortunately very loquacious and willing to answer all my questions with plenty of details. As I was a foreigner he told me many things of family history and possibly much that was not exactly reliable. Had I heard of the "White Lady of Hohenzollern?" I said, unfortunately I had not been fully acquainted with the party in question; then he would tell me all about her. After I describe the interior I will relate his information so kindly given.

We ascended the "Windingstone" until we came to the second "etage;" here the state rooms which are shown begin. First, we were all requested to put on, over our shoes, the large felt slippers without heels, which are supplied in most palaces in order that the finely polished floors may not be marred by plebeian soles.

The first three apartments are guard and ante-rooms, the principal attractions of which are life-size portraits of Frederick the Great, his mother and sisters, with a few of his cousins and aunts, though I did not take a complete inventory. Then follows the "King's room," with the paintings of all the Prussian monarchs and their consorts, to Emperor Frederick III., the father of the present Emperor. A few more rooms were passed through whose principal attractions were velvet walls, many paintings and beautiful frescoes. There were "Charles I of England" with Henrietta Marie, his wife, by Van Dyke; the "Marriage of St. Catherine;" "Napoleon Crossing the Great St. Bernard," and others of considerable note, worthy of long examination.

We next visited the "Ritter Saal" (Knight's room), the old throne room. The red velvet throne which is transported to the "Weiss Saal" on special occasions, is one of the principal attractions. It is quite an easy chair, but the springs are not of modern construction, and the seat is not so comfortable as a lazy chair in America; altogether it is scarcely "up to date," and I did not sit in it very long.

In this room is the silver balcony of Frederick William I, the man who owned the big coffin. In this balcony the orchestra is located when a banquet is given in the Ritter Saal. The third attraction is the royal sideboard, and it is simply covered with solid silver and gold plate on shelves built to the ceiling. The fourth at-

traction is the chandelier which was purchased by Frederick William III from the city of Worms, because it was the one under which Dr. Martin Luther stood when he said many things which then displeased the Emperor of Germany, but which things the Emperor of Germany now thinks were exactly correct, and he considers himself honored by standing under its light. But opinions often change; you, no doubt, have noticed that.

The "Weiss Saal" is the most magnificent room in the palace; it is 150 feet long, 50 feet wide and 40 feet high; all the decorations are in white and the furnishings of the room originally cost \$600,000. Here are twelve statues of the old Brandenburg Electors and eight allegorical figures representing the Prussian provinces. The first session of the Prussian "landtag" was held in this hall, April, 1847, and here the "Old Emperor" received the congratulations of his friends on the occasion of his golden wedding. The opening sessions of the Reichstag and Landtag are held in this hall, for here only can the Emperor see them as law-making organizations. Here the present Emperor took his oath of office; he has never been crowned, but if he were to be this would be the place.

An amusing incident occurred as we were passing through the gallery of the "White Room." There are many elegant portraits of royal people, and the guide was very fluent in his speech concerning the same, until we came to a group of fine paintings representing Queen Victoria, the "Prince Consort" and the Prince of Wales; the guide became impressed with the fact that time flies and he hastened by these, merely jerking his thumb over his shoulder at them and saying: "Queen of England," and then began a lengthy description of some German Prince. An Englishman in our crowd said it was a "bloody shame;" and we all turned back and made a profound bow to the good old lady.

But I can not give a description of the hundreds of other interesting objects we saw. As we came down the "Wendelstein" I noticed on the different landings the door plates with the names of Countess von W., the Princess Y, and the Duchess Z. I asked the guide about it and he said they indicated the private rooms of the Empress "ladies in waiting" or "maids of honor."

As we entered the lower court I saw my old friend the loquacious guard, which reminded me of his story concerning the "white lady," though I hadn't really forgotten her; in fact, looked nervously around in several of the rooms, fearing she might take a notion to interview us.

The superstitious beliefs of the middle ages, which die so hard in modern Europe, have tenanted this old palace with a phantom. The "White Lady of Hohenzollern" is supposed to appear whenever any calamity is about to befall a member of the royal family. The common people thoroughly believe in this apparition, and no doubt many of the "well-informed" do so also. I had asked the gray-headed guard: "Who is the White Lady?" "Come here, fraulein, and I will tell you who she is," and the old man looked really frightened while he told me the following tale:

She was a widow and is now the ghost of the beautiful Countess of Orlamunda. She lived quietly in her castle at Plassenberg, not far from Bayreuth, until she met the young and handsome Knight, the Burgrave Albrecht of Nuremburg, at a court ball. She fell violently in love with the gentleman who was an ancestor of the Hohenzollern family. The gentleman also seemed to greatly admire the Countess. "But why didn't he marry her?" I ventured to ask. "Well, fraulein, that is just what the Countess wanted to know, and when she asked him about it, he said he never could marry so long as four eyes existed." The old man went on to say that the poor deluded Countess thought the Burgrave referred to her two dear little children. Here a great big tear rolled down the furrowed cheek of my old gossip, but he continued to relate that one night she murdered the two children with one of her golden hairpins. The Burgrave then made her more miserably wretched by telling her that she had entirely misunderstood his remark, for it was his own wife and mother-in-law that he had been thinking about. Well, the poor Countess felt dreadfully bad about it and wept, and wept and wept all the rest of her days. She made daily pilgrimages on her knees to the graves of her children; but finding no rest, she journeyed to Rome, where she received absolution from the Pope, on condition that she should build a cloister for the shelter of religious sisterhood. She built the Convent of Hummelsthor in Gruendlack, and herself became the Abbess, living here for the remainder of her life, but still loving the Burgrave and watching over the destinies of his house. After her death, she still watched, in spirit, and whenever one of the descendants of Burgrave Albrecht in royal line, is about

to exit this life she is apt to take the notion to show herself to certain ones as a "sign."

"Did you ever see the White Lady?" I asked. "No, fraulein, but Hans Mueller's father, who was a servant here for fifty-two years, saw her just the night before the death of 'His Blessed Majesty, William the Great.' Oh, it was terrible; she appeared in the long corridor near the Emperor's study just as the clock in the tower struck the hour of midnight. She was dressed in pure white, her hair falling loosely and she kept rubbing her robe, for there were two drops of blood on it from her two murdered children. Hans was so terrified that he fell fainting."

"Who else has seen her?" "Oh, many people; only three months after that, when Emperor Frederick III died—just the night before, at midnight—the Countess von Schwerin was sent for by another court lady. As she stepped into the corridor the 'White Lady' rushed past her and the poor Countess fainted, of course. Oh, fraulein, I could tell you of many more, for never has a royal Hohenzollern died but the 'White Lady' has previously announced it by her appearance."

I have since read a story of King Frederick I, which relates that he sat one night in 1713, in his apartments, when suddenly with a great noise the glass door of his room was burst in pieces, and bleeding, with hair flowing down her shoulders, the "White Lady" rushed in. But this time it was certainly not the royal ghost, but the mad Queen of Frederick, who had broken out of her own room, where she had been confined as an insane prisoner. The old King believed that he had seen the traditional warning apparition of his race and laid down and died in that belief.

Do I believe in the "White Lady?" No.

"Does the professor really expect to discover the north pole?"

"No; he merely expects to be known as the man who failed to discover it in 1898."

—Puck.

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KANSAS FARMER

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H. A. HEATH, Advertising Manager.

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Display advertising, 15 cents per line, agate (fourteen lines to the inch).

Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.Annual cards in the *Breeders' Directory*, containing listing of four lines or less, for \$16.00 per year, including a copy of *KANSAS FARMER* free.Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

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

All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.Address all orders—
KANSAS FARMER CO., Topeka, Kans.

It is now suggested that General Brooke may use force to bring the Cubans into line. There are some indications that Uncle Sam may yet have on his hands in Cuba a job similar to the unsatisfactory one in the Philippines.

The Kansas School Book Commission is considering the adoption of Prof. Edward B. Voorhies' book, entitled "First Principles of Agriculture," as a text book for Kansas schools. Professor Voorhies is a New Jersey professor of agriculture.

The Government crop report is taken to indicate for 1899 a yield of 320,000,000 bushels of winter wheat. It is yet too early to even guess at the yield of spring wheat. Last year's yield of winter wheat was officially estimated at 379,807,000 bushels.

The Cincinnati Price Current's Statistical Annual for 1899 is just out. It deals in provision and grain trade statistics, live stock and beef trade exhibits, crop statistics, etc. It is a valuable compilation by the editor of the leading journal of the United States devoted to statistics of farm products. Price 25 cents.

The Philipinos speak rather cheerfully of continuing the war until they shall have conquered the United States. Do they realize that this is a task which no people or country has yet accomplished? But we have heretofore attended to business nearer home, and our former conflicts have been in several respects different from this one.

The Interstate Commerce Commission is just now wrestling with the question of export rates on flour. It is claimed by the millers that flour ought to be carried at as low a price per hundredweight as wheat. This is contrary to a doctrine of the railroads that freight charges should be proportioned, in a measure, to the value of the goods carried. Farmers generally are willing that grain rates shall be lower than flour rates.

The secretary of state, Hon. George Clark, has given notice to the effect that a frost is likely to prevent the maturing of large crops of useless printed matter for which the State of Kansas has annually had to pay during the years that have passed. He further says that the excellent and valuable reports of the Kansas Department of Agriculture shall be provided with as much liberality as the law allows. His opinion that the farmers of this agricultural State should be provided with Secretary Coburn's reports is one likely to increase the prosperity of the State.

The members of the Kansas Improved Stock Breeders' Association are receiving considerable benefit from their connection with the association, for, in addition to receiving their annual report, they also receive all the Agricultural Experiment Station bulletins, the Omaha Exposition report, and other good things too numerous to mention. Every stockman and fine stock breeder in Kansas should certainly have a membership in this association, and become a subscriber to the *Kansas Farmer*. Every stockman who receives a sample copy of this issue and mentions this notice will receive free a 25-cent copy of the stock breeders' book.

THE TRUST AT LAW.

Indictments of trusts, discussions of which constitute a large part of the matter printed in most western papers and in some at even the money centers of the East, are at last drawing answers from some quarters. Whether the large organizations of industries, which are usually dubbed "trusts," with little examination as to whether they use their powers oppressively or otherwise, are condemned or approved, the conviction is generally admitted that the large organizations will never be displaced save by larger organizations. The fact that the large organization of an industry can and does introduce economies not possible to the individual working alone, nor to the small concern which is able to avail itself of only a part of the advantages of the division of labor into specialties, nor to the larger aggregation which fails to specialize its work to the last degree—this fact is the only guaranty the trust needs of its continued existence. The further fact that many trusts, finding themselves able to crush out competitors and to control the markets, both for the raw materials which they buy and for the finished products which they sell, use this power oppressively in order to pocket unreasonable profits, stamps the trust a power against the abuse of which people as organized society will have to contend to the eradication of the abuses.

In the discussions of trusts there is recognizable—as indicated in the foregoing—two leading characteristics. The first of these is the power to produce cheaply, the second the power to oppress.

The power to produce cheaply is a commendable power. If, by better organization, better use of opportunities, more efficient application of human effort, the labor required for the production of things needful for human well-being shall be reduced, it will be possible either to reduce the toil of the laborer or to add to the aggregate of human comforts, luxuries, and other measures of enjoyment.

But with the power to produce cheaply comes the power to crush the competitor whose industry may not be organized on so large and perfect a scale. Having crushed competition, the trust may extort from the public.

The trust is an evolved entity. Probably it has not yet reached its final development. The earlier trusts were organizations of several corporations or persons engaged in some line of industry. The properties of the individual concerns were valued or appraised, their share stocks were placed in the hands of a trustee and trust certificates were issued by the trustee representing the appraised value of the property and business. The operation of the several establishments, and all business connected with them, passed to the general management, and profits were apportioned according to the trust certificates held. If the trust management found it more profitable to close an establishment, to lease or buy additional plants, or to suspend production, it had full authority to do so. In some cases the trust is able to dictate terms to both seller and buyer; to starve out all competitors, and to put prices up or down as its selfish interests require.

This kind of trust may easily be conceived to be a conspiracy, and against such conspiracies most of the trust legislation has, thus far, been directed. This is seen to be the theory of the Missouri law under which a recent decision was rendered at St. Louis. Some of the provisions of the Missouri law are as follows:

"Any corporation organized under the laws of this or any other State or country for transacting or conducting any kind of business in this State, or which does transact or conduct any kind of business in this State or any partnership or individual, or other association of persons whatsoever, who shall create, enter into, become a member of, or a party to any pool, trust, agreement, combination, confederation, or understanding with any other corporation, partnership, individual, or any other person or association of persons, to regulate or fix the price of any article of manufacture, mechanism, merchandise, commodity, convenience, repair, any product of mining, or any article or thing whatsoever, or the price or premium to be paid for insuring property against loss or damage by fire, lightning, or storm, or to maintain said price when so regulated or fixed, or shall enter into, become a member of, or a party to any pool, agreement, contract, combination, or confederation, to fix or limit the amount or quantity of any article of manufacture, mechanism, merchandise, commodity, convenience, repair, any product of mining, or any article or thing whatsoever, or the price or premium to be paid for insuring property against loss or damage by fire, lightning, or storm, shall be deemed and adjudged guilty of a conspiracy to defraud, and be subject to penalties as provided in this act: Provided, however, that the provisions of this section shall not apply to agreements of fire insurance companies, or their agents, or boards of fire underwriters, to regulate the price or premium to be paid for insuring property against loss or damage by fire, lightning, or storm in cities in this State which now have, or which may hereafter acquire, a population of one hundred thousand inhabitants or more; and provided further, that if such insurance companies, or their agents, or the board of fire underwriters, doing business in any such city, shall com-

bine in such city, either directly or indirectly, or agree, or attempt to agree, directly or indirectly, to fix or regulate the price or premium to be paid for insuring property located wholly outside of such city against loss or damage by fire, lightning, or storm, such company so violating the provisions of this act, either by itself, its agents, or by any such board of underwriters, shall be taken and deemed to have forfeited its right to do business in this State, and shall become liable to all the penalties and forfeitures provided for by the provisions of this act.

"That from and after the passage of this act, all arrangements, contracts, agreements, or combinations, between persons or corporations, or between persons, or any association of persons and corporations, designed or made with a view to lessen, or which tend to lessen full and free competition in the importation, manufacture, or sale of any article, product, or commodity, in this State, and all arrangements, combinations, contracts or agreements, whereby, or under the terms of which, it is proposed, stipulated, provided, agreed, or understood that any person, association of persons, or corporations doing business in this State, shall deal in, sell, or offer for sale in this State, any particular or specified article, product, or commodity, and shall not, during the continuance or existence of any such arrangement, combination, contract, or agreement, deal in, sell, or offer for sale in this State, any competing article, product, or commodity, are hereby declared to be against public policy, unlawful and void; and any person, association of persons, or corporation becoming a party to any such arrangement, contract, agreement, or combination, shall be deemed and adjudged guilty of a conspiracy to defraud, and be subject to the penalties, etc.

"It shall not be lawful for any corporations to issue or to own trust certificates, or for any corporation, agent, officer, or employee, or the directors or stockholders of any corporation, to enter into any combination, contract, or agreement with any person or persons, corporation or corporations, or with any stockholder or director thereof, the purpose and effect of which combination, contract, or agreement shall be to place the management or control of such combination or combinations, or the manufactured product thereof, in the hands of any trustee or trustees, with the intent to limit or fix the price or lessen the production and sale of any article of commerce, use, or consumption, or to prevent, restrict, or diminish the manufacture or output of any such article."

Among the penalties provided by the Missouri law it is enacted that:

"Any purchaser of any article or commodity from any individual, company, or corporation transacting business contrary to any provision of the preceding sections of this act shall not be liable for the price or payment of such article or commodity, and may plead this act as a defense to any suit for such price or payment."

These provisions appear to be pretty nearly iron-clad. But a trust operating in Missouri, organized a corporation under the laws of Missouri, and this corporation took charge of all the trust's interests and business in that State. A purchaser of some of the trust goods—the purchase having been made from the trust's corporation—refused to pay for the same, and, on being sued, pleaded the last-quoted provision of the Missouri anti-trust law. The court of appeals, sitting at St. Louis, sustained the contention that the debt was uncollectable, and held that the fact that the goods were sold by a corporation organized to evade the law was no bar to the purchasers' contention that the goods were sold by a trust and the price therefore uncollectable.

It is but a step, however, from the trust as described in the Missouri law, wherein the properties of the several component concerns are represented by trustees' certificates, to the more solid organization wherein a great corporation exchanges its stock for the stocks of the several components, making the transaction final and the stockholders members of the one great corporation instead of members of the component companies entering into the trust corporation. This stage was long ago reached by railroad corporations, and is being rapidly entered upon by the industrial trusts. The trust in this way obtains a legal footing, and, unless the courts shall hold that the fact of magnitude great enough to control products and prices constitutes them illegal combinations, the much talked of Missouri decision will not be applicable, even should the higher courts sustain it.

Doubtless the people will have to find a way to regulate the trusts, or to defend themselves against them, as legally incorporated business enterprises enjoying all the rights which have been conferred upon the artificial persons called corporations. By so doing it will be possible to make available the economic advantages introduced by the trusts and at the same time prevent the abuse of their powers to the oppression of the people.

OUR PAGE ADVERTISER.

After twenty-two years' successful experience in their special line, Drs. Thornton & Minor, of Kansas City, Mo., do not hesitate to use a whole page of the *Kansas Farmer* to show what they have actually done for the suffering, and confidently ask for the patronage of the readers of this paper, which they rightly feel they are entitled to because of their reputation of treating with skill and success. They are desirous that the suffering may come to them for treatment and be restored to

health, strength, and happiness as others have done, as shown by the letters given in their page advertisement this week.

Drs. Thornton & Minor never make a charge of any kind until a cure is effected, and they are very conscientious about making any false representations of any kind to a prospective patient. The writer of this knows of no more reliable, skillful, and worthy specialists than Drs. Thornton & Minor, and therefore has no hesitation in urging Farmer readers who may require treatment in their line to consult their advertisement in this issue only and write them for further information, not forgetting, of course, to mention *Kansas Farmer* in so doing.

BREEDERS' ANNUAL REPORT.

The Kansas Improved Stock Breeders' Association has just issued from the press of the *Kansas Farmer* its first published Annual Report in book form. It contains an introduction by Secretary Coburn, a history of the live stock organizations in Kansas by Secretary H. A. Heath, the full proceedings of the ninth annual meeting of the Kansas Improved Stock Breeders' Association, and the consolidation of the other live stock organizations of the State with it, together with the addresses, papers, and discussions as to the various branches of the animal industry of Kansas and live stock husbandry in general.

It is the first distinctive live stock report ever issued for Kansas and is a veritable live stock manual for the State. The Report also contains the Association's Kansas Breeders' Directory for 1899. As the association receives no State aid, but is supported entirely by its membership fee of \$1 per year, it has been decided to charge a nominal price for the annual report, as follows: Single copy, 25 cents; 10 copies, \$1.50; or 100 copies, \$10. Address all orders, or applications for membership, to H. A. Heath, Secretary Kansas Improved Stock Breeders' Association, Topeka, Kans.

A GEM FOR BREEDERS.

Secretary Coburn, of the State Board of Agriculture, who wrote the introduction for the annual report of the Kansas Improved Stock Breeders' Association, says: "My little introductory is the result of thirty-three years of acute observation, and is as good as I can write."

It is a perfect gem, and should be pasted in the hat of every breeder of pure-bred stock. We reproduce it, as follows:

"The mistake which keeps many a breeder down to or below the plane of mediocrity in business, is his failure to start with a right ideal and stick to it. The active years of any ordinary man's lifetime are sufficient for his acquiring fame, if not fortune, as a specialist in at least one breed of animals, if he starts right, breeds right, and feeds right. Success in its best sense will not, however, be likely to attend him if in that time he often changes breeds or ideals. It is the fixed, determined purpose that will bring him to the desired goal, and without this it is never reached. Bakewell, the Collings, and Cruickshank had it, and their names are revered wherever improved stock is known or appreciated. The man who breeds trotters this year and crosses them with Clydesdales next year, simply because draft horses seem to be in better demand, or breeds his Jersey cows to Hereford bulls, to meet the call for white-faces, will acquire neither honor nor riches. It is a great thing to excel, even with one breed; few men ever permanently succeed with more, and thousands who mean well, try, only to fail, because they are not equal to properly handling any, through lack of the essential genius.

"In breeding, as in character-building, a day or a false move may mar what has cost a lifetime or a fortune to make. To the beginner I would say, deliberate long in the selection of a breed and an ideal; having once adopted them, persevere to the end in the work of their better development, regardless of changing fashions or fluctuating markets. In other words, don't scatter and don't wobble.

"The breeding highway is strewn with the wrecks of those who had too many purposes and experimented with too many breeds."

The Humane Alliance, New York, is a popular and interesting magazine devoted to animals and pets and humane education. The May number is remarkable for its fine illustrations and the great amount and variety of interesting matter in relation to animals. Fifty cents a year.

We present to our readers in this issue a page advertisement of Drs. Thornton & Minor, the eminent specialists in the treatment of piles, fistula, and all diseases of the rectum. The advertisement is made up from testimonials given by former patients and leading citizens in their communities. Don't fail to read the advertisement.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending May 15, 1899, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

The week has been warmer, with temperature slightly above the normal, except Friday night and Saturday. Fair to heavy rains have occurred in the northeastern, eastern, southeastern and southern counties, with good showers in many of the central counties, light showers in the northwestern and heavier showers in the southwestern counties. A few hail-storms.

RESULTS.

EASTERN DIVISION.

Good growing weather, and in many of the counties a good week for work. In the central-northern, the eastern and southeastern counties it has been too wet for field work, and in the extreme southeastern too wet for corn and wheat. Corn-planting is nearing completion, and the early-planted is coming up as far north as Atchison and Marshall, while cultivation has begun as far north as Pottawatomie. Corn generally presents a good stand. Wheat has improved under the favorable conditions except in the extreme southeastern counties; it is beginning to head in southern counties. Flax, oats, and grass are growing rapidly. Potatoes are coming up and show a good stand. Some reports show fruit is falling, but are not definite. Chinch bugs are appearing in some wheat and oat fields.

Allen County.—A wet week, and not much farm work done; oats, flax, and corn growing well; corn not all planted; Kaffir and millet being sown.

Anderson.—Good growing week; local hail storms damaged crops and gardens; chinch bugs injuring oats; corn cultivation begun.

Atchison.—Early potatoes up and look well; early corn coming up; cherries setting well; much corn and flax washed out on 10th; winter wheat not gaining in appearance, chinch bugs injuring it; not over half of the corn planted; onions and radishes large enough for use.

Bourbon.—Too wet for work, but crops growing well.

Chase.—Fine growing weather; farmers about through planting; corn coming up well.

Chautauqua.—Wheat shows effects of too much moisture; corn needs work but it is

are growing rapidly; pastures good; strawberries ripening; wheat looks fine. Osage.—Corn looking well; oats being damaged by chinch bugs; pastures and gardens doing well.

Pottawatomie.—A fine growing week; corn cultivating begun; wheat looking well; blue-grass headed.

Riley.—Many cherry trees appear to be dying after coming out nicely at first. Shawnee.—Corn-planting progressing rapidly; ground in fine condition; everything doing well.

Wilson.—Fine growing weather; corn being cultivated; wheat gaining; rye heading; grass growing finely; apples promise well.

Woodson.—Corn-planting nearly done, cultivation in progress but corn needs more sunshine and warmth.

Wyandotte.—A good week; corn coming up; wheat growing rapidly; good prospect for apple and grape crops.

MIDDLE DIVISION.

Wheat has improved in some of the counties, while in many it is stunted, has not stood, is thin on the ground and getting weedy. In the southern counties it is in better condition, and in Cowley is beginning to head. Corn-planting is nearing completion. Corn is coming up in Jewell, and is being cultivated as far up as Ottawa. Potatoes are coming up. Grass, oats, and barley are growing well. Fruit prospects are favorable. More rain is needed in the central and northwestern counties with warmer nights.

Barber.—A good growing and farming week; early-planted corn doing well; oats and rye doing finely; one-third or more of wheat acreage plowed under and planted to corn, cane and Kaffir; remaining wheat doing fairly well; prairie grass growing rapidly and cattle doing well.

Barton.—Rain has improved all crops; pastures doing well; corn is coming up nicely.

Butler.—All crops look well; corn being cultivated; cattle doing well on grass; good apple crop promised.

Cloud.—Wheat and oats badly stunted and very weedy, much being planted to corn; all other crops growing rapidly; fruit setting well; planting nearly done.

Cowley.—A fine growing week; wheat coming on rapidly, some heading; corn growing finely; cattle doing well on the range; corn being cultivated.

Dickinson.—Corn-planting about over; corn coming up slowly in southern part, better in northern; all crops needing rain badly.

WESTERN DIVISION.

The continued dry, windy weather is not favorable to growing crops and the improvement in wheat, oats, barley, and grass this week is generally confined to portions of counties in which good local showers occurred. Rye is beginning to head in Trego.

Clark.—Light rains have helped the grass.

Decatur.—Good week for work, rather unfavorable for crops; corn nearly all planted, much of it up; wheat standing nicely and prospects good.

Finney.—Dry, windy week; grass and alfalfa growing slowly; cattle doing well; fruit will be light; rain badly needed.

Ford.—Wheat improving; alfalfa will make a good crop; prairie grass much improved; cattle are in much better condition.

Gove.—Windy and dry, crops need rain; fruit trees in bloom; some wheat fine, other winter-killed.

Hamilton.—Fine rains; grass green and growing rapidly; all crops doing fairly well.

Kearney.—Dry; the first cutting of alfalfa will be light; a good soaking rain is needed.

Morton.—Wheat condition not improving much; some Kaffir and maize planted, but coming up slowly—too dry and cold.

Ness.—A light rain with some hail; early potatoes and corn coming up, but with the range grass, growing slowly; stock improving.

Norton.—Light rain Friday; spring-sown grain looks well; damage to winter wheat varies in localities, about one-half of it listed in corn; corn nearly all planted.

Rawlins.—Conditions beneficial to wheat in north and west part of county and farmers nearly through listing corn; dry in south and east part, getting too dry to list corn; vegetation growing finely; grasshoppers hatching in places.

Scott.—Crops growing very slowly; wheat stand will perhaps be better than anticipated; spring seeding finished, except for forage crops.

Sherman.—Continued dry weather; spring wheat growing nicely; corn mostly planted; grass growing well and cattle in fine condition.

Thomas.—Still dry, but wheat standing it well; oats, barley, and corn are suffering; potatoes coming up; cherry and apple trees in bloom; peaches and grape vines winter-killed.

Trego.—Wheat not improved, but from four to six inches high; rye beginning to head; busy sowing fodder crops; need rain.

Four New Farmers' Bulletins.

The United States Department of Agriculture has in press four new Farmers' Bulletins, as follows:

POTATO DISEASES AND THEIR TREATMENT.

A number of diseases affect the Irish potato in this country and the losses they occasion are often a serious drain on the farmer's income. The most important of these diseases are the potato leaf blight, or early blight; potato blight, late blight, or rot; brown rot; potato scab; and tip burn, leaf burn, or scald. All of these diseases and the methods of treatment are described in Farmers' Bulletin No. 91, "Potato Diseases and Their Treatment," by B. T. Galloway, Chief of Division of Vegetable Physiology and Pathology.

The bulletin also calls attention to the poisoning of potato leaves by the use of Paris green in water. The injuries thus produced can not be distinguished from early blight by an ordinary examination. The bulletin contains four illustrations.

SUGAR AS FOOD.

"A lump of sugar represents about as much nutriment as an ounce of potato, but while the potato will be eaten only because hunger prompts, the sugar, because of its taste, may be taken when the appetite has been fully satisfied.

"Sugar is a useful and valuable food. It must, however, be remembered that it is a concentrated food and therefore should be eaten in moderate quantities. Further, like other concentrated foods, sugar seems best fitted for assimilation by the body when supplied with other materials which dilute it or give it the necessary bulk.

"Persons of active habits and good digestion will add sugar to their food almost at pleasure without inconvenience, while those of sedentary life, of delicate digestion, or of a tendency to corpulence would do better to use sugar very moderately. It is generally assumed that 4 or 5 ounces of sugar per day is as much as it is well for the average adult to eat under ordinary conditions."

So says Farmers' Bulletin No. 93, entitled "Sugar as Food," prepared by Mrs. Mary Hinman Abel, under the supervision of the Office of Experiment Stations.

This bulletin shows that the English-speaking people are the largest consumers of sugar. It also treats of the chemical composition of sugar, its food value, use in dietaries of adults and children, and the sources of cane sugar.

THE VEGETABLE GARDEN.

There has been for a long time a demand for information in relation to vegetable gardening. To meet this demand Farmers' Bulletin No. 94, entitled "The Vegetable Garden," was compiled by Charles H. Greathouse, of the Division of Publications. In the preparation of this bulletin the object in view was to give a few brief suggestions as to the cultivation and care of the most common vegetables.

The bulletin begins with a paragraph showing the importance of the farm garden

HERE THIS IS IT.

Know by the sign /



ST. JACOBS OIL

CURES

Rheumatism, Neuralgia, Solatia, Lumbago, Sprains, Bruises, Soreness, Stiffness.

to the farmer, both as to the revenue to be derived from it and also as a means of supplying his home table.

The location of the garden as to convenience, sun, wind, and protection from storms, and the size, shape, soil, and drainage are considered. The necessity of proper drainage is pointed out and methods of drainage described.

The next step is the preparation of the soil, and this is also described. Plowing, fertilizers, and the quantity and quality of seed and young plants receive due attention. A chapter is devoted to growing plants in hotbeds and how to make the hotbeds.

Suggestions as to planting, marking the rows, condition of the soil, depth of planting, transplanting, rotation, cultivation, time for the soil mulch, irrigation, killing weeds, and insecticides follow, and the bulletin concludes with specific directions for growing several vegetables. It contains eight illustrations.

GOOD ROADS FOR FARMERS.

After the farmer has grown and harvested his crops a very important question then presents itself: How shall he get them to market? If he lives along the line of a railroad the matter is easily settled. But should it be necessary to haul them a long distance the condition of the roads over which they are to be hauled becomes a matter of great consequence.

Farmers' Bulletin No. 95, "Good Roads for Farmers," by Maurice O. Eldridge, Assistant Director of the Office of Road Inquiry, United States Department of Agriculture, fully covers the road question and the principles which govern their location and treatment.

Different kind of roads and the methods of construction are described and the cost given. Grades, drainage, water breaks, side ditches, repairs, and maintenance are among the subjects covered in the bulletin.

The above bulletins are for free distribution and may be obtained of Senators, Representatives, or Delegates in Congress, or by application to the Secretary of Agriculture. One copy only is mailed to each applicant.

Health for 10 cents. Cascarets make the bowels and kidneys act naturally, destroy microbes, cure headache, biliousness and constipation. All druggists.

Publishers' Paragraphs.

Wholf Tavern.—Santa Fe conductor, N. G. Hackett, informs the Farmer that Excelsior Springs, Mo., is to have a modern hotel opened up June 1, 1899. Wholf's Tavern will be up-to-date in every way and prices moderate.

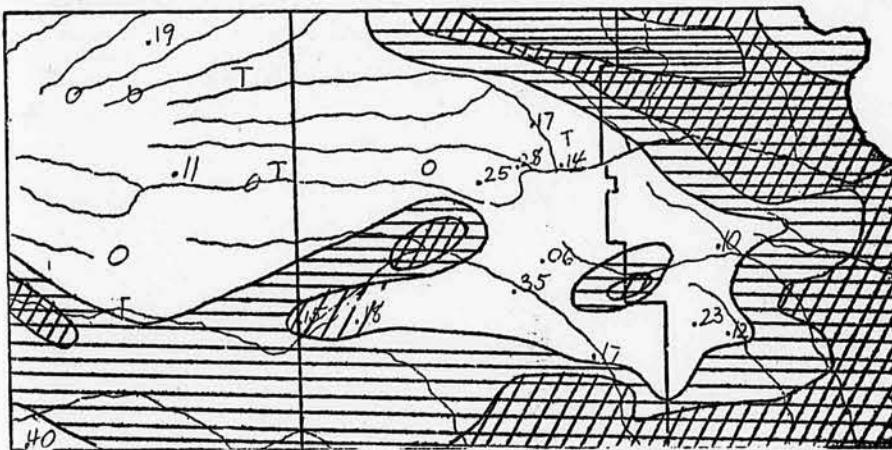
The Verdict is a new weekly paper published in New York, edited by Alfred Henry Lewis, the famous writer and Washington correspondent. The subscription price is \$4 a year. It is the most interesting and powerful political weekly in the United States. The Verdict and the Kansas Farmer, both one year, \$4.

Now that the hay crop is assured, our readers will be especially interested in knowing what is the most successful rake in use. This is well answered by our new advertisers, Chambers, Bering Quinlan Co., Decatur, Ill., who have been manufacturing and selling quite largely the C. B. & Q. side-delivery hay rake, which has a splendid record of nine years' successful work in the field. The advantage of using the side-delivery rake is that it makes an even, continuous windrow around the field, which a good team will follow without a driver. The hay does not have to be cured entirely before raking, as the curing process will be completed in the windrow. Another advantage is that the hay-loader can follow the rake, thereby avoiding damage to the hay by wet weather.

Buffalo and Return at One Fare for the Round Trip

Via the Nickel Plate Road, June 12 and 13. Tickets good to return to and including June 17, 1899. City ticket office, 111 Adams St., Chicago. Depot (on the Loop), Van Buren St. and Pacific Ave., near Clark.

(5)



ACTUAL RAINFALL FOR WEEK ENDING MAY 13, 1899.

too wet; pastures fine and cattle doing well. Coffey.—Corn nearly all planted; early corn being cultivated; east part of county too wet to work, northwest portion too dry; flax looks fine; oats not so well; some complaint of chinch bugs.

Doniphan.—Corn-planting progressing; oats coming up nicely; wheat a failure in north part; apples promise well.

Douglas.—Good week for work, though a little wet for corn-planting; wheat and grass growing finely; fruit falling off badly. Elk.—Ground getting dry enough to work; need sunshine.

Franklin.—Good week for work; early-planted corn coming up well; flax doing nicely; many cherry trees winter-killed.

Greenwood.—Fine growing conditions; corn well up and much of it being cultivated; Kaffir corn being planted; bugs hurting some wheat.

Jackson.—Corn-planting about half done; early corn coming up; pastures growing well; apple trees full of bloom; clover and timothy sown this spring coming up nicely; wheat improved a little.

Jefferson.—Three-fourths of corn planted; ground in fine condition; grass fine and cattle on pasture.

Johnson.—Corn nearly all planted and coming up well; wheat, oats, and flax looking well; pastures good; everything growing rapidly and ground in fine condition.

Labette.—Too much rain for wheat, turning it yellow in spots; corn coming up but very weedy and too wet to plow; apples fair, cherries light crop.

Leavenworth.—Wheat not doing well; corn-planting progressing; early potatoes coming up; pastures growing finely and stock much improved; fruit promising well, except peaches.

Lyon.—Alfalfa in fine condition on the bottoms; corn looks well and is clean.

Marshall.—Corn nearly all planted and is coming up; some corn fields washed out; tame grass growing rapidly; pastures good; all growing crops doing finely.

Montgomery.—Rain six days of the seven, preventing farm work; wheat growing well but needs sunshine, the early is heading; weeds are taking corn fields and thin wheat fields; chinch bugs numerous.

Morris.—Excessive rains and hail damaged crops in northwest part of county; southwest part dry; ground in good condition; all crops are growing finely; many chinch bugs in the air.

Nemaha.—Vegetation rapidly advancing; growing crops promise well; ground is thoroughly moist and creeks have good flow; corn-planting retarded by rains; fruit blossoms have set well; gardens in good condition; pasture fine.

Neosho.—Cloudy, rainy week, but crops

Edwards.—Corn-planting about done, early-planted up and ready to be cultivated; oats and barley growing slowly; apples setting well; pastures good; stock doing well; wheat is yellow.

Harper.—Conditions favorable; pastures improved; everything backward on account of the cool weather.

Harvey.—Crops are in good condition, but a good rain is needed.

Jewell.—Corn about all planted and first planting coming up; crops growing slowly; wheat nearly all plowed up in north part of county.

McPherson.—Wheat revived considerably, about one-fourth of the acreage was plowed up and put in oats and corn; apples promise well; cherries short; grass good.

Marion.—Wheat not doing well, stunted by hard winter; chinch bugs numerous in localities; oats are looking well; corn backward and yellow; fruit will make fair average crop; pasture short, needing rain.

Ottawa.—Corn mostly planted, early-planted is up and being worked; cattle doing well on pastures; oats making good start; rye that was not pastured is heading; alfalfa showing better than other crops; rain needed; much damage by hail in north part.

Phillips.—Wheat in the corn-stalks is fine; corn looks well, and generally a good stand; a general rain is needed.

Pratt.—All crops made a good growth; corn shows a good stand and is being worked; wheat is improving.

Republic.—Good rains this week, ground in good condition; corn nearly all planted; conditions this week will help the wheat and give oats a good start.

Reno.—Ground in good condition; corn being cultivated.

Russell.—Everything needs rain.

Saline.—Wheat improved some, but not well stood; a good deal of thin, weedy wheat has been put in corn; corn about all planted, coming up and growing slowly—nights too cool; oats a poor stand and yellow; alfalfa a splendid crop.

Sedgwick.—Corn being cultivated; pastures good; wheat injured more than heretofore supposed; in western part of county the sand-storm damaged one-tenth of the fruit in old orchards, and nine-tenths of it in young orchards.

Stafford.—Corn growing slowly, very dry; wheat needing rain.

Sumner.—Wheat, corn, oats, and barley looking fine; too wet to cultivate and corn getting weedy; good growing weather.

Washington.—Wheat nearly a failure; Oats look very well; apples fair, Winesaps blossomed full; not many Ben Davis or other varieties; corn about all planted.

Horticulture.

KANSAS EXPERIENCE IN ORCHARDING.

From "The Kansas Apple."

A. Munger, Hollis, Cloud County: I have lived in Kansas fifteen years; have an apple orchard of seventy-five trees twelve inches in diameter, eighteen feet high, seventeen years old. I prefer for market Ben Davis, Missouri Pippin, and, to a limited extent, Yellow Transparent and Grimes' Golden Pippin, and for a family orchard add Early Harvest and Maiden's Blush. Have tried and discarded the Willow Twig on account of blight and rot. I prefer bottom land, with a loose subsoil, and young and stocky trees. I plant my orchard to potatoes, beans and vines for ten years, and use a cultivator that keeps three inches very mellow, and cease cropping when impossible to cultivate. I grow weeds in the orchard and mow them. Wind-breaks are not essential, but are very desirable; would make them of Osage orange, Russian mulberries, or box-elder. Set the first row four feet apart, the second six inches, and never trim; the third six feet. For rabbits I use traps and gun. I hunt the borers and encourage the birds. I prune my trees so as to give air and sunshine; think it pays. Do not thin the fruit while on the trees. My apples are in mixed plantings. I fertilize my orchard in the winter with stable litter fresh from the stable; it appears to do good, and would advise its use, with judgment, on all soils. I pasture my orchard with hogs and calves. I do not think it advisable among young trees. My trees are troubled with leaf roller, and my fruit with codling moth. I spray just after the blossom falls, with paris green, for the codling moth. Prices have been from 25 cents to \$1 per bushel. What the future of apple growing in northern central Kansas may be, it is of course impossible to tell, but from the success of the few orchards that have been planted, and after being planted have received some attention besides that bestowed by calves and pigs, it would seem well worth a trial. There are years when the best attention possible can not prevent damage and some loss from drought, especially on upland. For this reason bottom land would seem more suitable for an orchard in this county, even though subject to some disadvantages. In some orchards on low land only a few feet above the water level, where a sandy subsoil admits of a free natural subirrigation, the thrift and productiveness of the trees have been unusually good. Cold seems to be dreaded less than hot, dry weather in the latter part of the summer, although late spring frosts sometimes do damage. Even the traditional "north slope" might have its advantages somewhat balanced in this county by the valley lands that retain a large amount of moisture.

A good soil with a loose subsoil that holds the greatest possible amount of water are the most important requirements as to location. If the cultivation is then such as to save the water of early summer rains to the best advantage until the dry weather of the late summer comes, it will be drawn upon, and some very dry seasons may be tided over without much loss. Plowing in the spring and very frequent shallow cultivation afterwards are, as yet, the best known means to this end; and as a general rule they are sufficient to answer every purpose as far west as central Kansas, without artificial watering, as the average rainfall shows; but if the early rains are allowed to go to waste by falling on the hard ground and running directly off, or by rapid evaporation from an undisturbed surface, where capillary force is rapidly carrying back to the surface what has already soaked in, we invite ultimate failure when the drought comes. Cultivate once a week, or after each rain, when they come oftener than that, with something that will keep two or three inches of very fine, mellow earth on the surface, and will cause an amount of water to be retained in the soil below the earth mulch that will surprise any one who has never tried it. An ordinary harrow will do very well, or better a five-tooth cultivator, behind which I fasten a 2x4 scantling with large wire nails driven through it, about two inches apart, weighted on the back edge to keep it right side up; the scantling is cut as long as the width of the cultivator. At one operation the cultivator and this harrow leave the ground about like a hand rake would, marked only by the footprints of the driver. Last summer this was used several times where young peach trees had been set out, going around each row and sometimes over the entire ground. There was no time during the summer that the trees stopped growing or showed signs of needing more moisture than they had. Nine

hundred and ninety-four lived, the horses killed two, and the borers two more. Fifteen years ago I bought a small farm having on it a small family orchard of seventy-two apple trees. It included several varieties, from summer to winter sorts.

The trees were 28x28 feet apart, with peach trees alternating both ways, making three times as many peaches as apples in the orchard. The land was cultivated until the trees were ten years old, then sowed to timothy and clover. The timothy soon died out; but the clover lived for a few years, but is gone now. It happened that some of the years that it was not cultivated were some of the driest during the fifteen, and several trees died of blight. Would this have happened if the cultivation had been continued? I have gone to plowing and cultivating again, anyway, with no crop in the orchard. The trees are now fifteen or twenty feet high, and about twelve inches in diameter at the ground. The peach trees have mostly been cut out. Can not see that they did any harm, unless it might have been harder on the apple trees during the dry season; but if it was, the peaches were worth about as much as the apples, and the trees make a quick, bushy growth, thus forming a shelter for the apple trees, which now stand straight and are well balanced. We have had a peach crop about half of the years. Potatoes, beans and vine crops were raised in the orchard the first few years. It was surrounded by a wind-break of cottonwood and box-elder trees, several rows, seven feet apart each way. This is certainly very beneficial; but Russian mulberries grow as well, make a thicker top, and at the same time invite birds to keep up their quarters there and make their homes with us, "a consummation devoutly to be wished." Osage orange, planted the same as for a hedge and never cut back, will make a better wind-break than cottonwood or box-elder, and a fence at the same time.

This orchard has borne variable crops, some good, some light, but always fruits. It is on bottom land sloping very slightly to the southeast; soil a sandy loam with a clay subsoil. It has been pruned considerably, but not very much at a time. One man in this county who succeeds well with apples never prunes, except to keep the center open to sun and air. Another near him gave his orchard a severe trimming a few years ago, and had no fruit, but some dead trees for two or three years afterward. In planting, the ground should be well plowed, then mark off one way with a plow or lister. Twice to the row with the lister, with three or four horses, and the subsoiler well down, will make a very good preparation for small trees without much digging, and small trees are best for several reasons: they are cheaper, less work to set out, and more likely to live. Set stakes to go by, and, in planting, cross the furrows. We have just finished setting 2,000 peach trees in this way, and very little digging was needed. Then cultivate well and often. Rub off shoots that start where limbs are not wanted, and start an evenly balanced top of four or five limbs. A year after the trees are set out, if any of them are leaning much, dig away the dirt on the side from which they lean, and set them up straight, tramping the dirt well on the opposite side.

With winter will come the rabbits, and they will girdle the trees if not prevented. Many and varied are the sure cures for them, but none are perfect. A wash of ordinary whitewash and a pint of sulphur to the bucketful, applied with a brush or swab to the bodies of the trees, generally stops their work, but if the rain washes it off it must be put on again or they will resume operations. A little coal oil added to the whitewash prevents the rain from having so much effect on it: make it thin, so it will not scale off so badly. Two applications have been enough for our young trees the past winter. We also use traps which are very similar to the Wellhouse traps, described in the Kansas State Horticultural Report for 1897. Tarred paper, cornstalks, veneering, screen wire, cloth tied around the trees, or a woven-wire fence around the entire orchard, are all among the practical means used to fence against rabbits; but don't try the plan of one of my neighbors, unless you have too many trees; he applied coal tar; it kept the rabbits off, and his orchard is now a treeless cornfield.

During winter we haul manure direct from the stable and spread under the trees (not against them) out as far as the ends of the limbs. On good ground I would not do much of this until the trees get to bearing, as it would interfere somewhat with cultivation and would not be needed, but when a good annual crop is taken from the orchard something must be returned, or the supply is going to run out. On thin land rotten manure applied when the trees are small will do them good. Pasturing an orchard at any time is of doubtful expediency; it is safer not to. I have sprayed

but once. That was done just after the blossoms fell, and again ten days later. There were fewer wormy apples than usual. That was last year. Think I will try it further.

For a home orchard Early Harvest, Yellow Transparent, Maiden's Blush, Grimes' Golden Pippin, Winesap, Missouri Pippin, and Ben Davis do well here and keep up a supply from first to last. For commercial planting Ben Davis is perhaps best here as elsewhere. Missouri Pippin does well; Winesap bears enormously, but is too small, and gets smaller as the trees get older. There is a good local demand here for Grimes' Golden Pippin and a few of any very early variety. Willow Twig has been worthless on account of blight and rot. Encourage birds by every means, and never let one, or a nest, be disturbed, unless it is that belligerent little alien, the English sparrow. They are at war with all the feathered tribe, even with their own relations, and should be exterminated. Don't begrudge birds a few feeds of cherries and berries, when they work for nothing and board themselves nearly all the year.

A. H. Buckman, Topeka, Shawnee County: I have lived in Kansas twenty-eight years; have an apple orchard of 1,000 trees two to twenty-six years old. For market I prefer Maiden's Blush, Jonathan, Winesap, Ben Davis, Missouri Pippin, and Huntsman's Favorite; and for a family orchard White Juneating (the earliest apple known), Red June, Early Ripe, Duchess of Oldenburg, Sweet June, Fulton Strawberry, Cooper's Early White, Smokehouse, Maiden's Blush, Grimes' Golden Pippin, Jonathan, Winesap, Rawle's Janet, Ben Davis, Ramsdell Sweet, Roman Stem, and Red Romanite. I have tried and discarded King, on account of rot, falls early, water core, short-lived; Kansas Keeper, on account of blight, poor tree; Yellow Bellflower, on account of being a shy bearer and rot; Willow Twig, on account of blight; Lansingburg, on account of blight when the tree is young; R. L. Greening, on account of its falling early, and rot. Baldwin, falls early and rots. Lawver, no good on my soil. McAfee's Nonsuch, poor bearer. Rambo, not acclimated. Northern Spy, rots. Pryor's Red, ripens unevenly, and is affected with scab. Dominie, there are many better of its season. Esopus Spitzenburg, rots badly. Rome Beauty, good some seasons. Ohio Nonpareil, poor bearer, falls before ripe. Lowell, blights while trees are young. Winter Swaar, rots before perfectly ripe. Autumn Swaar, good of its season, and should have a place in the family orchard. York Imperial, poor quality; rots too bad for commercial purposes. American Summer Pearmain, shy bearer while young. White Winter Pearmain, is affected with scab and is no good. Red Winter Pearmain, falls off early; the tree is poor. Gilliflowers, black and red, rot badly. Pennsylvania Red Streak, affected with scab; very good some seasons; trees die early. Sweet Bough, trees die early. Bentley Sweet, keeps all right, moderate bearer; tree appears to be tender. Clayton, rots and is no good. Calvert is a poor bearer and rots with me. Pound Pippin, no value. Iowa Blush, no value, small. Red Vandervere, no value; rots. Vandervere Pippin, moderate bearer and rots. Pennock Summer, good market in its season. Pennock, fairly good; we have plenty better. Early Harvest is affected with scab some seasons. Early Ripe is better and larger and to be preferred. Smith's Cider, blight, poor tree. Red Astrachan, poor bearer. Roxbury Russet, all russets fail with me. Jeffries, quality fine, but will not bear. Ortley, good, but is inclined to rot.

I prefer hilltop having a drift soil, but the subsoil is of more importance than the surface soil. I prefer a north or northeast aspect. I prefer two-year-old, medium-sized trees, clear of root aphids, set in a dead furrow, with peach trees between north and south. I cultivate my trees six years after planting, with a plow and five-tooth one-horse cultivator. Plant the young orchard to corn; cease cropping after six or seven years, and then seed down to clover. Wind-breaks are essential; would make them by planting one to six rows of Osage orange, red cedar or catalpas all around the orchard. The boys hunt the rabbits with shotguns. I wash the trees with a carbolic-acid wash for borers. I prune with a knife and saw to balance the top, keep down watersprouts, and to get rid of useless wood. I think it pays and is beneficial, as it shades the body of the tree and keeps off the flathead borers. I do not thin the fruit. Can see no difference whether trees are in blocks of one variety, or mixed plantings. I fertilize my orchard with stable litter all over the ground, and wood ashes around the trees, but do not believe it pays, and would not advise it on all soils; any soil that is suitable for an orchard will not need enriching until after it ceases to be profitable. I pasture my orchard with hogs and calves; I think it advisable under certain condi-

tions, and find it pays. My trees are troubled with root aphids, roundhead borers and buffalo tree crickets; and my apples with codling moth. I do not spray. I pick my apples by hand, from a ladder, into a sack with a strap over the shoulder. I sell the bulk of my apples in the orchard, from piles, at wholesale and retail; sell the grocers and fruit dealers what are left of my best apples. Make cider of the second and third grades of apples. Feed the culls to the hogs. My best market is in Topeka. Never tried distant markets. Do not dry any. I store some apples for winter in bulk, in boxes and in barrels in a cellar. I have to repack stored apples before marketing. Apples have been about forty cents in the orchard for the last ten years.

E. Higgins, Seabrook, Shawnee County: I have lived in Kansas twenty-six years; have an apple orchard of 250 trees twenty-five years old. For market I prefer Winesap, Jonathan, Maiden's Blush, Smith's Cider, and Ben Davis; for family orchard, Winesap, Jonathan, Maiden's Blush, Red June, and Grimes' Golden Pippin. Have tried and discarded Kansas Keeper on account of blight. I prefer hilltop; best below lime rock, with a northeast slope. I prefer two-year-old, low-headed trees, set thirty feet each way. I plant to corn for four years, then cease cropping and seed to clover. I have a wind-break on the south side made of Osage orange, to keep the hot winds off. I prune lightly to thin out some of the middle branches; I think it pays. Do not thin my fruit. I fertilize my orchard with stable litter, and plow it under. I think it beneficial, and would advise its use on all soils. I sow my orchard to oats, and pasture with hogs with rings in their noses; they live on the oats, and don't hurt the trees, but with the help of the chickens they keep the cankerworms off. My trees are troubled with round- and flathead borers. I do not spray. I hand-pick my apples; sort into two classes—shipping and cider. I sell my apples in the home market; sell second and third grades to the cider mills. Never tried distant markets. I do not dry any. I am successful in storing apples in bulk in a cellar; find Winesap to keep best. Prices have been from 50 to 60 cents per bushel. I employ young men at \$17 per month.

J. C. Beckley, Spring Hill, Johnson County: I have lived in the State thirty years; have an apple orchard of 130 trees, twenty-eight years old and large for their age. For a commercial orchard I prefer Ben Davis, Jonathan, and Missouri Pippin; and for family use Early Harvest, Maiden's Blush, Jonathan, and Winesap. I have tried and discarded Smith's Cider, Talmann (Sweet), Rambo, Fameuse, Willow Twig, White Winter Pearmain, Roman Stem, Dominie, Fallawater, Wagener, Baldwin, and White Pippin, because they mature too soon, fall off and rot long before it is time to pick them. I prefer hilltop with a dark mulatto soil and a clay subsoil, with a western aspect. I prefer two-year-old trees, with plenty of fibrous roots, and a well-developed top, set forty by forty feet. I cultivate my orchard till it is six or seven years old with a common plow and harrow. In a young orchard I plant potatoes, corn, pumpkins, melons, and garden truck; I cease cropping after eight or nine years, and seed bearing orchard to clover. Wind-breaks are not essential, unless on the south and north sides; would make them of cedar or evergreens. I would not make a wind-break at all. For rabbits I wrap the trees. When hunting borers I take knife and chisel and pare all gum and dirt off the roots; then I cut wherever I see signs of a borer until I get him; and if he has gone too deep to cut out I take a No. 20 wire six or eight inches long, bend a very small hook on one end, and run it up in the hole he has made, and ninety-nine times out of a hundred pull him out. When done put some alkali of some kind around the tree, such as lime, ashes, or soft soap; then cover up.

I prune with a saw or knife, cutting out the crossed limbs and shaping the top. I think it pays while the trees are young. I never thin the fruit while on the trees. My trees are in mixed plantings. I fertilize my orchard with stable and hog manure; I think it very beneficial, and advise its use on all soils, especially on old orchards. I pasture my orchard with hogs, and think it advisable at times. It pays. My trees are troubled with cankerworms, roundhead borers, and leaf rollers, and my apples with codling moths. I have never sprayed, but intend to this spring, in April and May. I am going to use a dust sprayer with London purple and paris green for cankerworm. I pick my apples by hand from a ladder into a sack, sort into two classes by hand, pack in a two-bushel crate, fill full, with blossom end up, mark with the grade, and ship to the market place by freight. I retail apples in the orchard; sell my best ones in crates; feed the culls to hogs. Best market is at home; never tried distant markets. We sun-dry some apples for home use, then heat on the stove and put into paper sacks. I am quite success-

Cheap vs. Cheap.

There are two kinds of cheap. One means good value for the money paid. The other means nasty cheap; that is, low first cost, regardless of quality. We make cheap farm separators; that is, big value for the money.

A SHARPLES FARM SEPARATOR

is a 365 days per year and a ten years without repair separator. Send for Catalogue No. 19.

BRANCHES: **P. M. SHARPLES,**
Toledo, O. Omaha, Neb. West Chester, Pa.
Dubuque, Ia. St. Paul, Minn.
San Francisco, Cal.



ful in storing apples in bulk, boxes and barrels in a cellar. Ben Davis, Winesap, and Little Romanite keep best. Sometimes I have to repack stored apples before marketing, losing about 1 per cent of them. Prices have been about 60 cents per bushel, and dried apples 5 to 6 cents; evaporated apples, 7 to 8 cents.

Albert Perry, Troy, Doniphan County: Have lived in Kansas forty-one years; have an apple orchard of 5,000 trees, planted from five to twenty-four years. I grow for commercial purposes, first, Jonathan; second, Ben Davis, York Imperial, and Mammoth Black Twig. Ten years hence those who now plant Ben Davis will probably regret it. There is a growing demand for a better eating apple. I now plant Jonathans and York Imperial. The latter is a good bearer, and a vigorous tree, however aged. For family orchard, I would advise adding to these Rambo and Fall Strawberry [Chenango]. I have tried and discarded many others. Prefer bottom, loess formation, near Missouri River. No slope has any advantage over another. Cultivate with plow and harrow, growing corn as an orchard crop for five years; then seed to clover and blue grass only. Do not care for wind-breaks. Where there are wind-breaks apples on trees do not get sufficient air. I protect from rabbits by tying corn-stalks about the young trees. Prune some. I believe all apple blossoms are self-pollinating, and there is no advantage in mixed plantings. Need no fertilizers but clover in my locality. Believe it pays to pasture the orchard with horses in the winter; if you have a stack of hay for them to go to they will not harm the trees. Am troubled with codling moth and apple curculio. Spray for codling moth ten days after the apple is formed, and I believe I have reduced their number. I use the knife for borers. Pick in baskets; deliver to packers in orchard. The aphid appears to do no particular injury to tree or fruit. Burn fall webworm with coal oil torch. Sort into number one, fancy; number two, fair but defective in shape, color, or otherwise; and culls. Pack in three-bushel barrels, pressed so they will not shake. Sell firsts in orchard; sell seconds in car lots in bulk; sell culls in bulk for cider or vinegar. My best market is in the orchard. Have tried consigning to distant markets, but it did not pay. Have stored second grades for winter in boxes and barrels in bulk, and made it pay. Ben Davis, Winesap, and Rawle's Janet keep best. We sort and lose about one-fifth of the second grade only. Prices have run from \$1 to \$1.50 per barrel, of late years, in the orchard. For help in care of orchard I use men. In picking season I use all kinds of help. No experts. Pay from \$1 to \$1.50 per day.

Health for 10 cents. Cascarets make the bowels and kidneys act naturally, destroy microbes, cure headache, biliousness and constipation. All druggists.

Light Running.

Many dairymen are deterred from buying a hand separator because they "run so hard." Some do, but a child can turn the



Empire Cream Separators

without fatigue. They require about one-half the power of other machines of equal capacity. We guarantee the Empire machine to fulfill every claim we make and to give perfect satisfaction to every purchaser, or your money back.

Catalogue of the largest line of hand separators in America for the asking. Agents wanted.

U. S. Butter Extractor Co., Newark, N. J.

In the Dairy.

Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

EXAMINATION OF PATRONS' CLASS

At Kansas State Dairy Association, November 17, 1898.

Examiner—W. H. Phipps.
Judge—Prof. H. M. Cottrell.

(Continued from last week.)

VIII.—How do you clean dairy utensils?

G. W. Priest—When our milk comes from the creamery we empty it as quickly as possible and rinse the cans with cold water. They are then scalded and turned upside down on a slatted platform to dry.

D. P. Hollis—My wife is the one that does the cleaning of the dairy utensils. I ought to have fetched her along. Just as quick as we get our cans from the station we empty our skim-milk in a tank and wash our cans and put them out in the sun. We don't allow any sour milk to set in the cans at all.

G. W. Stewart—Rinse out first, clean up, and scald thoroughly.

J. B. Harmon—When the cans come back from the creamery we empty the milk immediately and rinse the can out first with some cold water, then take a rag and wash it with several waters, getting it perfectly clean, and finally scald it out with plenty of hot water; shake the can with the lid on and turn it over a stake.

C. W. Filkums—With hot water.

T. A. Borman—The milk buckets, pails, strainers, cans, etc., are rinsed first with cold water, then they are washed with hot water and soap, sapolio, pearline, or something of that kind, then they are scalded and allowed to steam for from five to fifteen minutes, and after the water is poured out, in the case of milk pails, the pails are dried and placed in the sun or in the air where they have an opportunity to be cleaned; the milk cans are treated in the same way, and, after being thoroughly drained, are turned with the mouth up—not set on a post so that the air will rise in them and become heated, and, failing to get out, sour the can—but after the can is drained, it is set on its bottom to allow the sun to shine into it.

IX.—What are your yearly receipts per cow from milk, from calves, and from skim-milk?

G. W. Priest—The milk delivered at the creamery from the first of October, 1897, to the first of October, 1898, will make about \$33 per cow for milk. We take enough out for house use and what is needed by our calves. My calves at a year old would be worth \$20 and my skim-milk fed to pigs would probably be worth \$40 to \$50.

Prof. Cottrell—How much per cow from skim-milk?

G. W. Priest—I value the skim-milk at about 12 cents per 100 pounds; it is worth more than that fed to Poland-Chinas, though, if they don't die with cholera, as mine did last fall.

D. P. Hollis—I will give you my receipts for last year, from the first of March, 1897, to the first of March, 1898. I was milking eight cows and received \$343.14 for the butter fat, and from the calves I received \$16 a head at 6 months old.

Q.—What about the skim-milk?

A.—I couldn't tell you how much the skim-milk would be worth. It would be quite a little item, but I never paid any real attention to it. And, besides, we make butter for ourselves, and use quite a large amount of milk for the family, but the \$343.14 is just what we sold from the eight head of cows.

Mr. Burtis—From the way that gentleman fed, he got not less than 20 cents per hundred for his skim-milk. I make this statement simply as information to him.

G. W. Stewart—My cows, as near as I can come to it, would average me, say, \$4.50 outside of the calves, per month. With two of these cows I kept the milk separate and sent it to the creamery and took the weight for those two cows, and they produced me 3,150 pounds of milk, which tested 3.6 per cent. At the price I got for butter, they netted me a fraction over \$9 a head, but as near as I can come to it, \$4.50 strong, for the ten months, is about right.

J. B. Harmon—I am unable to give you a very correct answer. I think that last year we realized about \$12 a head. The calves I think it would be fair to estimate at \$15 a head.

Q.—Now, as to skim-milk?

A.—I have no definite data in regard to its value. I know from a practical standpoint that it is very good, and I judge

from other estimates that it would be worth about 20 cents per hundred.

Mr. Burtis—At what age are your calves valued at \$15 each?

A.—At 6 or 8 months old.

C. W. Filkums—I am not prepared to answer that question; I didn't know I was coming, and so did not look these matters up.

T. A. Borman—We sold last year \$41.37 worth of milk from each of our cows; as the herd average, those cows produced, taking into consideration \$2.22 worth of whole-milk fed to each calf, \$49.70 worth of milk per month, or the yearly average per cow, calculating the sale of the calf at a year old, was \$81.19.

Prof. Cottrell—What was the calf worth?

A.—The calf is averaged at \$15.

Q.—At a year old?

A.—Yes, sir. Understand, however, that the desirable heifer calves are retained, and we estimate the value of these, as yearlings, at the price of a first-class milch cow, because we believe that they will make it next year at this time. I figure these at feeders' prices also; the steers and heifers sold this year at 4 cents a pound.

Mr. Phipps—How about skim-milk, Mr. Borman?

A.—We figure that our skim-milk produced us this year a profit of \$75. We fed 300 barrels, and that skim-milk we figured was worth \$75 more than it cost us. It cost an average price of 12½ cents per barrel. We figured that there was a profit to us of \$75.

X.—How can you increase your profits from dairying?

G. W. Priest—By weeding out my poor cows and getting better ones, raising more of the feeds that I have to feed instead of buying them, and by feeding more judiciously. Probably the feed that I give my cows could be improved considerably by Professor Cottrell, and I might save a great deal in feed, and probably I could do better by raising alfalfa if I could get a stand, but so far I have not been successful.

D. P. Hollis—There are a good many ways a man could increase it. In the first place, I am trying to get the very best dairy cows that I can get hold of, and, in the next place, I can increase my product from my dairy cows by handling them gently and carefully, and, in another way, I can increase it a good deal by the stock I am breeding.

G. W. Stewart—I think with what I have learned, and what I have read out of this bulletin, there is a bright outlook. Now, there is one thing against us in getting the right kind of feed to produce the protein; that is the expense we have to go to in buying bran and oil meal or cottonseed meal, which is almost out of reach at the prices we have been getting for our butter. They want from \$10 to \$12 a ton for it. Some of these gentlemen say that alfalfa is one of the best feeds for protein that ever grew; they state that it even beats red clover, and I now see the reason why I did not get the result from millet hay that I should—the milk was not in it. They tell us to feed alfalfa hay; it is something that we can raise. By raising alfalfa and Kaffir corn and mixing them I think I can raise a cheap feed and one that fills the bill. Having the right kind of cows, and having selected them for producing milk, I don't see what you can do to produce cheaper milk.

J. B. Harmon—By getting better cows, by raising the feed stuffs we use, and by getting competent help to manage the business.

C. W. Filkums—By getting better cows.

T. A. Borman—By taking better care of the cows we have and by feeding them better—we can improve on our rations—and by breeding better cows. We have cows which are producing an average of 355 pounds of butter per year. We hope to make it 400 pounds next year. By the way, remember that we have one cow

CREAM SEPARATORS.

Would you know all about them?

The best, the cheapest and the reasons why?

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THE DE LAVAL SEPARATOR CO.

Randolph and Canal Sts., No. 74 Cortlandt Street.
CHICAGO. NEW YORK.

which last year did produce 12,000 pounds of milk and made us 476 pounds of butter.

Cleaning Glassware.

It very often happens that test bottles, pipettes, and other articles of glassware in use about the dairy become coated on the inside with a white, and sometimes a brown sediment, which it is impossible to wash out with even the hottest water. This sediment not only gives the glassware a dirty appearance but interferes with the accurate measurements of milk or butter fat.

In such cases a small amount of sulphuric acid will prove very helpful in cutting loose the white or brown sediment. Pour seventeen or eighteen cubic centimeters of acid in the test bottle, shake it up well and pour the acid into another bottle that needs cleaning. Rinse out the first bottle in hot water, and in nearly all cases it will be found to be nice and clean; if not, repeat the operation.

Pipettes may be cleaned in a similar manner. Care should be taken to get the acid all off of the upper end of the pipette, otherwise there will be danger of burning the mouth when the pipette is used.

The burette used in Maun's acid test often becomes so coated with white sediment, caused by the action of the alkali on the glass, that it is impossible to see the

Used in the Best Butter.

W., R. & Co.'s Improved Butter Color the Standard.

Used and Endorsed by Prize Winners Everywhere.

At the national convention of butter-makers held at Sioux Falls in January, 1898 out of the 600 tubs of butter exhibited, were colored with Wells, Richardson & Co.'s Improved Butter Color.

This is the standard color. Commission merchants everywhere recommend its use, and exporters will not buy butter that is not colored with it. Although by far the best color on the market, it is more economical than any other, for it is prepared in such concentrated form that a bottle of it will color more butter than the same amount of any other make.

If you are not using this color, send 4 cents for postage on a free sample, to the manufacturers, Wells, Richardson & Co., Burlington, Vt.

The U.S. Triple Current Separator

Is noted for its

THOROUGHNESS OF SEPARATION,
EASE OF OPERATION, AND DURABILITY.

Used 5 Years with Little Expense.

SPRING GROVE, MINN.
I have used the No. 5 U. S. Separator five years, have paid out hardly anything for repairs and it skims as clean as ever.
L. T. JOHNSON.

Leaves the Least Fat of Any Make.

RANSOM, MICH.
Have tested the skim milk from several different separators, and our Improved U. S. left the least butter fat of any.
GEO. BURT & SONS.



Write for large illustrated catalogues. Free.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

graduations. A little sulphuric acid poured into it, shaken up, and then rinsed out with hot water, will leave it nice and clean.
J. A. CONOVER.

Official Tests of Holstein-Friesian Cows.

These butter tests (made from May 1 to May 31, 1898,) are for seven consecutive days, and are supervised by officers of agricultural colleges and State experiment stations or by persons vouched for by such officers. The amounts of butter fat are determined by the Babcock test and the amounts of butter are calculated on the basis of 80 per cent fat to a pound of butter, the rule established at the World's Columbian Exposition.

Rixa Silva's Last 39389; age 2 years, 11 months, 12 days; amount of butter fat, 10.339 pounds; amount of butter, 14.174 pounds.

Lady Longfield 3d 39945; age 3 years, 3 days; amount of butter fat, 12.894 pounds; amount of butter, 16.114 pounds.

Jessie Fobes 3d 32286; age 6 years, 1 month; amount of butter fat, 17.11 pounds; amount of butter, 21.39 pounds.

Vevie DeKol 40932; age 1 year, 9 months, 22 days; amount of butter fat, 7.936 pounds; amount of butter, 9.92 pounds.

Johanna Clothide 40384; age 2 years, 6 months, 26 days; amount of butter fat, 10.839 pounds; amount of butter, 13.549 pounds.

Johanna Rue 3d 42167; age 2 years, 20 days; amount of butter fat, 13.477 pounds; amount of butter, 16.846 pounds.

Johanna Aaggie 36477; age 4 years, 5 months, 9 days; amount of butter fat, 18.289 pounds; amount of butter, 22.861 pounds.

Aaggie Paul 40930; age 2 years, 2 months, 2 days; amount of butter fat, 12.574 pounds; amount of butter, 15.728 pounds.

Fannie Douglas 4th 41943; age 1 year, 11 months, 26 days; amount of butter fat, 8.934 pounds; amount of butter, 11.198 pounds.

Ollie Watson 3d 41944; age 2 years, 11 days; amount of butter fat, 7.311 pounds; amount of butter, 9.139 pounds.

Francktie 2d 40125; age 1 year, 9 months, 28 days; amount of butter fat, 8.637 pounds; amount of butter, 10.796 pounds.

Gewina 2d's Lulu 41945; age 2 years, 17 days; amount of butter fat, 11.959 pounds; amount of butter, 14.949 pounds.

Lottie Lass 19220; age 9 years, 2 months, 3 days; amount of butter fat, 15.75 pounds; amount of butter, 19.69 pounds.

Vrouwkje of Hijaard 7th 28449; age 7 years, 26 days; amount of butter fat, 14.791 pounds; amount of butter, 18.489 pounds.

Sijtje T'wisk Pietertje 38233; age 4 years, 10 months; amount of butter fat, 12.041 pounds; amount of butter, 15.051 pounds.

Hetje 6th's Pietertje 38945; age 3 years, 29 days; amount of butter fat, 11.123 pounds; amount of butter, 13.904 pounds.

Lotty Moselle's Pietertje Mechthilde 41805; age 2 years, 2 months, 24 days; amount of butter fat, 9.765 pounds; amount of butter, 12.206 pounds.

Hetje 6th's Mechthilde 41809; age 2 years, 1 month, 7 days; amount of butter fat, 9.001 pounds; amount of butter, 11.251 pounds.

Mechthilde of Midland 41806; age 2 years, 1 month, 29 days; amount of butter fat, 7.456 pounds; amount of butter, 9.32 pounds.

Midland Gem 41811; age 1 year, 11 months, 19 days; amount of butter fat, 7.916 pounds; amount of butter, 9.895 pounds.

Pietertje Mechthilde of Midland 41887; age 2 years, 2 months, 1 day; amount of butter fat, 7.732 pounds; amount of butter, 9.665 pounds.

Leda's Princess 2d's Aaggie Wayne 33501; age 5 years, 10 months, 3 days; amount of butter fat, 16.44 pounds; amount of butter, 20.55 pounds.

La Reina Maud 43380; age 3 years, 7 months, 3 days; amount of butter fat, 13.68 pounds; amount of butter, 17.10 pounds.

Aaggie Paul 40930; age 2 years, 2 months, 2 days; amount of butter fat, 11.303 pounds; amount of butter, 14.129 pounds. This last test was made to ascertain cost of food per pound of butter. It was supervised as other tests. The cost per pound as per schedule of prices prepared by the board of officers, was 6.3 cents.

S. HOXIE,

Superintendent Advanced Registry Holstein-Friesian Association of America.
Yorkville, N. Y.

A Summer Resort for the Cow.

The secretion of milk being in a large measure due to the nervous condition of the animal, it is important that we give her comfortable surroundings where she can recreate and chew her cud. Last summer the college herd was pastured one-half mile north of the college barn, and in order to furnish protection from the hot sun and the flies a small thicket in the lower end of a draw was opened up. The cows ignored this act of kindness and betook themselves to the top of the highest bluff, and there, where the cool breezes would strike them, recreated with seeming satisfaction. The stiff breezes usually found on such high spots, had the effect of driving away many of the flies, and left the cows free to manufacture pasture grass into milk. Any dairyman having a high knoll or bluff accessible to his cow pasture would do well to fix it as a summer resort for his cows. If possible, select a bluff where trees will furnish plenty of shade. If that be impossible an open shed will keep off the hot sun. While the cow is thus enjoying her summer outing, she will at the same time be hard at work returning thanks to her owner in the form of butter fat.

D. H. O.

We invite your careful attention to our page advertisement in this issue of the Kansas Farmer. Our twenty-two years of successful practice in the treatment of piles, fistula, and all diseases of the rectum enables us to guarantee a cure. We do not take one cent of pay until you are cured. The testimonials in the ad are from prominent people, and we ask you to write to them for a statement of their judgment as to our ability to do what we claim. Send for our 88-page book, which contains hundreds of just such testimonials as are published in our ad; also for our 32-page book to ladies. This book contains testimonials from ladies whom we have treated and cured. Address Drs. Thornton & Minor, 100 West Ninth St., Kansas City, Mo.

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

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107 K. & P. Bldg. - - KANSAS CITY, MO.
RELIABLE AGENTS WANTED.

Publication Notice.

(No. 20013.)

In the District Court of Shawnee County, State of Kansas.

Clayton M. Parke, Plaintiff,

vs.

A. F. Hilton, Emma M. Hilton,

I. B. Mason, et al., Defendants.

The above-named defendants, I. B. Mason and Emma M. Hilton, will take notice that the plaintiff, the said Clayton M. Parke, did on the second day of May, 1899, file his petition in said District Court within and for Shawnee County, Kansas, against you and each of you must answer said petition, filed as aforesaid, on or before the 25th day of June, 1899, or said petition will be taken as true and a judgment rendered against the defendant A. F. Hilton in said action, for \$5,625.00, together with interest at 10 per cent per annum from the 17th day of April, 1899, and for costs of suit, and also a decree of foreclosure against all of the above-named defendants of mortgage dated May 26, 1891, given by the defendant A. F. Hilton, on the following described real estate, situate in Shawnee County, Kansas, to wit: A part of the southwest quarter of section number thirty (30), township number eleven (11), south of range number sixteen (16), east of the sixth principal meridian in Kansas, adjacent to the city of Topeka. Commencing at a point thirty-two and one-half (32½) feet southerly from the intersection of the center of First avenue in the city of Topeka extended upon the said quarter section and the east line of the alley between Fillmore street and Western avenue in said city of Topeka extended as aforesaid, said point being in the east line of said alley; thence southerly along said east line of said alley extended eighty-two and one-half (82½) feet; thence at right angles easterly one hundred and eighty-five (185) feet; thence northerly at right angles eighty-two and one-half (82½) feet; thence westerly at right angles one hundred and eighty-five (185) feet to place of beginning, and you will be forever enjoined from claiming any right, title or interest in and in the said described real estate.

(SEAL)
NELLIS & NELLIS, Attorneys for Plaintiff.

ON AGAIN—APRIL 30TH.
THE "KATY" FLYER.



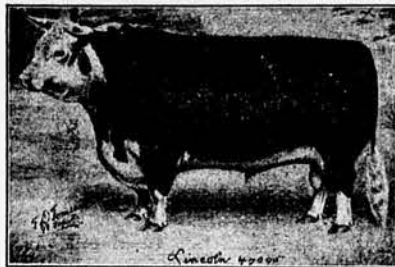
This trade mark has been known to progressive horsemen for many years. It stands for

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the most famous (and most successful) veterinary specific of the age. It WILL CURE curbs, splints, colic, lameness, shoe boils, thrush, horse ail, etc. Won't scar or change the hair. Locates lameness by remaining moist on the part affected.

Tuttle's Family Elixir cures Rheumatism, Sprains, Bruises, etc. Samples of either Elixir free for three 2-cent stamps for postage. Fifty cents buys either Elixir of any druggist, or it will be sent direct on receipt of price. Money refunded if not satisfactory in every way. Particulars free.

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Lincoln 47065 by Beau Real, and Klondike 42001, at the head of the herd. Young stock of fine quality and extra breeding for sale. Personal inspection invited.

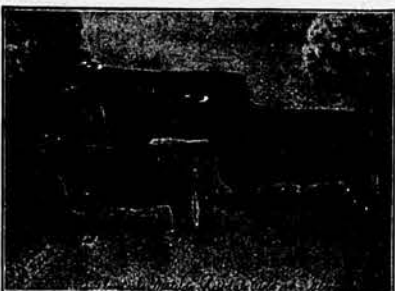
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Golden Knight 108036 by Craven Knight, out of Norton's Gold Drop, and Baron Ury 2d by Godoy, out of Mysle 50th, head the herd, which is composed of the leading families. Young bulls of fine quality for sale.

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Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 11870, by Ambassador, dam Glanthis, and Scotland's Charm 12724, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale.

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124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruickshank bulls, Imp. Thistle Top 83876, Earl of Gloster 74523, etc. Size, color, constitution and feeding quality the standard. A few good cows for sale now bred to Gallant Knight. A few young bulls of serviceable age for sale. Address

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Best of shipping facilities on the A. T. & S. F. and two branches of the Missouri Pacific Railways. Parties met by appointment.

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Registered Galloway Cattle. Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbo, and the saddle stallion, Rosewood, a 15-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address

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REGISTERED Galloways FOR SALE!

IN LOTS TO SUIT. 12 2-year-old bulls, 20 yearling bulls, balance cows and heifers. Inspection desired. Call on or address,

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FOR SALE—25 Cruickshank Topped SHORTHORN BULLS 6 to 13 months old. Come and make your own selection, or write for my prices this month.

'DAISY' SPRAY PUMP

For spraying fruit trees, shrubbery and lawns and washing windows, buggies, etc. Easiest to operate, simplest and cheapest pump on the market.

200,000 In Use.



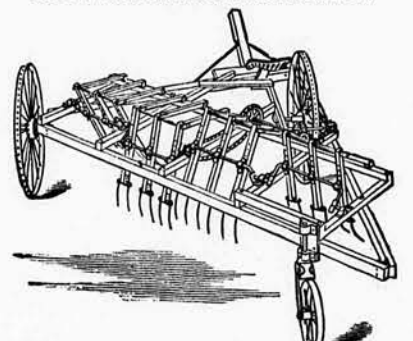
Have established branch house in Kansas City, Mo., where we can promptly fill orders from the West. One live energetic agent wanted in every county.

Send \$1.50 for sample (heavy tin) pump.
Send \$2 for sample Kalamien iron pump.
Best spraying receipts furnished with every pump.
Send for complete catalogue.

WM. M. JOHNSTON & CO.,
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Nine Years in the Field.

ONLY SUCCESSFUL ONE MADE.



C. B. & Q. Side Delivery Hay Rake throws the hay in a loose continuous windrow, so that the sun and wind can penetrate, and thus obviate the necessity of a hay tedder. The team goes around the field the same as the mower, taking up the driest hay, leaving it shaken loosely in the windrows so that the sun and wind will dry it out if not quite dry when raked.

CHAMBERS, BERING, QUINLAN CO.,
Manufacturers, Decatur, Illinois.

Save Hogs.

Prevent Hog Cholera by giving occasional doses of a remedy that has saved thousands. You can buy drugs and make it for 10 cents a pound. Fifteen years a success. Recipe and full directions, \$1.00. Sent to any address, by H. D. RECORD, Kiowa, Kans.

Gluten Feeds.

The cheapest source of Protein for a Balanced Ration.

Will produce richer milk and more of it; a more rapid growth and development of Cattle and Hogs, and better meat for market purposes than any other feed on the market. Highly recommended by Prof. H. M. Cottrell, of Manhattan Agricultural College. For information and prices address

N. T. GREEN & CO. Kansas City, Mo.

MARKET REPORTS.

Kansas City Live Stock.

Kansas City, May 15.—Cattle—Receipts, 2,765; calves, 118; shipped Saturday, 391 cattle; 1 calf. The market was generally steady. The following are representative sales:

DRESSED BEEF AND SHIPPING STEERS.	
No.	Ave. Price.
10.....	1,409 \$4.85
51.....	1,238 4.75
14.....	1,114 4.55
2.....	1,215 4.25

WESTERN STEERS.	
No.	Ave. Price.
24.....	1,393 \$4.90
64 stk.....	633 4.50
1.....	900 4.35
37.....	677 4.05

NATIVE HEIFERS.	
No.	Ave. Price.
3.....	613 \$4.60
8.....	1,326 4.50
1.....	730 4.15

NATIVE COWS.	
No.	Ave. Price.
8.....	1,382 \$4.15
3.....	1,186 3.85
4.....	1,087 3.70
1.....	910 2.50

NATIVE FEEDERS.	
No.	Ave. Price.
4.....	935 \$4.70
20.....	1,015 4.40
6.....	953 4.40

NATIVE STOCKERS.	
No.	Ave. Price.
1.....	420 \$5.25
32.....	670 4.90
2.....	850 4.25
1.....	810 3.85

Hogs—Receipts since Saturday, 5,762; shipped Saturday, 436. The market was steady to a shade weaker. The following are representative sales:

70.....	287 \$3.80	64.....	323 \$3.80	60.....	280 \$3.80
65.....	310 3.77½	59.....	316 3.75	70.....	295 3.75
56.....	318 3.75	143.....	286 3.75	67.....	298 3.72½
50.....	265 3.70	76.....	259 3.70	74.....	248 3.70
80.....	222 3.70	68.....	212 3.70	57.....	270 3.70
49.....	265 3.70	75.....	247 3.67½	63.....	277 3.67½
49.....	230 3.65	75.....	232 3.65	70.....	217 3.65
82.....	221 3.65	8.....	266 3.65	15.....	242 3.65
75.....	206 3.62½	81.....	214 3.62½	88.....	200 3.62½
61.....	225 3.60	69.....	166 3.60	52.....	219 3.60
44.....	231 3.60	18.....	166 3.57½	94.....	207 3.55
53.....	184 3.55	43.....	190 3.55	94.....	166 3.52½
11.....	188 3.52½	20.....	151 3.50	118.....	152 3.50
17.....	145 3.47½	9.....	131 3.45	5.....	150 3.45
27.....	140 3.40	26.....	123 3.40	8.....	118 3.40
5.....	316 3.35	1.....	380 3.35	14.....	130 3.30
1.....	300 3.25	1.....	200 3.25	19.....	137 3.25
15.....	96 3.25	17.....	98 3.25	1.....	130 3.00

Sheep—Receipts since Saturday, 3,340; shipped Saturday, 740. The following are representative sales:

100 spg. lbs.....	47 \$7.50	497 Col. lbs.....	71 \$6.25
211 Col. lbs.....	85 6.15	296 U. clp. lb.....	76 5.70
61 Col. clp. lb.....	66 5.60	450 U. clp. s.....	114 5.10
475 clp. W. w.....	96 4.70	42 W. bks.....	127 3.50

St. Louis Live Stock.

St. Louis, May 15.—Cattle—Receipts, 2,500; market steady; beef steers, \$4.00@5.50; light steers to dressed beef grades, \$3.50@5.10; stockers and feeders, \$3.10@4.65; cows and heifers, \$4.25@4.85; Texas and Indian steers, \$3.40@4.95; cows and heifers, \$2.50@4.25.

Hogs—Receipts, 4,000; market steady; pigs and lights, \$3.70@3.85; packers, \$3.75@3.90; butchers, \$3.85@3.95.

Sheep—Receipts, 1,500; market strong; natives, \$3.75@5.10; lambs, \$7.00@8.50.

Chicago Live Stock.

Chicago, May 15.—Cattle—Receipts, 17,000; market generally steady; beefs, \$4.10@5.50; cows and heifers, \$3.25@4.85; Texas steers, \$3.85@5.00; stockers and feeders, \$3.90@5.15.

Hogs—Receipts, 35,000; market active, generally 5¢ lower; mixed and butchers, \$3.70@3.90; good heavy, \$3.50@3.95; rough heavy, 3.50@3.65; light, \$3.60@3.85.

Sheep—Receipts, 17,000; market steady to strong; sheep, \$4.00@5.25; lambs, \$5.00@6.65.

Chicago Grain and Provisions.

	May 15.	Opened	High'st	Lowest	Closing
Wh't—May.....	68½	69½	68½	69½	69½
July.....	70½	70½	69½	70½	70½
Sept.....	69½	70½	69½	70½	70½
Corn—May.....	32½	32½	32½	32½	32½
July.....	33½	33½	33½	33½	33½
Sept.....	34½	34½	33½	34½	34½
Oats—May.....	26	26½	26	26½	26½
July.....	23½	23½	23½	23½	23½
Sept.....	21	21	20½	21	20½
Pork—May.....	8 35	8 42½	8 32½	8 40	8 40
July.....	8 50	8 57½	8 50	8 55	8 55
Sept.....	8 50	8 57½	8 50	8 55	8 55
Lard—May.....	5 07½	5 12½	5 05	5 10	5 10
July.....	5 17½	5 22½	5 17½	5 22½	5 22½
Sept.....	4 70	4 72½	4 67½	4 72½	4 72½
Ribs—May.....	4 82½	4 85	4 82½	4 85	4 85

Kansas City Grain.

Kansas City, May 15.—Wheat—Receipts here to-day were 87 cars; a week ago, 69 cars; a year ago, 313 cars. Sales by sample on track: Hard, No. 2, 68½¢@68¼¢; No. 3 hard, 63¢@65¼¢; No. 4 hard, 60¢@62¢; rejected hard, 58¢@60¼¢. Soft, No. 2 red, nominally 71¢@74¢; No. 3 red, nominally 68¢@72¢; No. 4 red, 62¢; rejected red, 59¢. Spring, No. 2, 65¼¢; No. 3 spring, 61¢@64¢.

Corn—Receipts here to-day were 48 cars; a week ago, 67 cars; a year ago, 188 cars. Sales by sample on track: Mixed, No. 2, 32½¢@32¢; No. 3 mixed, 32¢; No. 4 mixed, nominally 32¢; no grade, nominally 31¼¢. White, No. 2, 33¼¢@33½¢; No. 3 white, nominally 33¢; No. 4 white, nominally 32¢.

Oats—Receipts here to-day were 6 cars; a week ago, 4 cars; a year ago, 30 cars. Sales by sample on track: Mixed, No. 2, 27¼¢; No. 3 mixed, 27¼¢; No. 4 mixed, nominally 26¢. White, No. 2, 28¼¢@29¢; No. 3 white, 28¢.

Rye—No. 2, nominally 5¼¢; No. 3, nominally 5¼¢; No. 4, nominally 5¼¢.

Hay—Receipts here to-day were 60 cars; a week ago, 37 cars; a year ago, 40 cars. Quotations are: Choice prairie, \$7.75@8.25; No. 1, \$7.25@7.75. Timothy, choice, \$9.00@9.50. Clover, pure, \$6.75@7.50. Alfalfa, \$7.00@8.00.

Chicago Cash Grain.

Chicago, May 15.—Wheat—Cash, No. 2 red, 72¢@74¢; No. 3 red, 69¢@73¢; No. 2 hard winter, 67¢; No. 3 hard winter, 66¢; No. 1 northern spring, 10¢@70¢; No. 2 northern spring, 69¢@70¢; No. 3 northern spring, 68¢@69¢.

Corn—Cash, No. 2, 33¼¢; No. 3, 32¼¢.

Oats—Cash, No. 2, 26¼¢@26½¢; No. 3, 26¢.

St. Louis Cash Grain.

St. Louis, May 15.—Wheat—Cash, No. 2 red, elevator, 73¢; track, 74¢; No. 2 hard, 69¢. Corn—Cash, No. 2, 32¼¢; track, 34¢. Oats—Cash, No. 2, 27¢; track, 27¼¢@28¢; No. 3 white, 29¼¢@30¢.

Kansas City Produce.

Kansas City, May 15.—Eggs—Strictly fresh, 11½¢ per doz.

Butter—Extra fancy separator, 15¢; firsts, 13¢; seconds, 11¢; dairy fancy, 13¢; country roll, 11¢@12¢; store packed, 10¢@11¢; packing stock, 9¢@10¢.

Poultry—Hens, 7½¢; springs, 10¢; old roosters, 15¢ each; young roosters, 20¢; ducks, 7¢; geese, 5¢; turkeys, hens, 7¢; young toms, 6¢; old toms, 6¢; pigeons, \$1.00 per doz.

Vegetables—Navy beans, \$1.35 per bu. Lima beans, 4¼¢ per lb. Onions, red globe, 50¢@75¢ per bu.; white globe, 50¢@75¢ per bu.; yellow globe, 40¢@50¢ per bu. Horseradish, \$1.50@2.00 per bu. Beets, northern, \$3.00 per bbl. Turnips, home grown, 15¢@25¢ per bu. Lettuce, home grown, 50¢@75¢ per bu. Pieplant, 10¢ per doz. bunches. Parsnips, 50¢@60¢ per bu. Spinach, home grown, 60¢@75¢ per bu. Asparagus, home grown, 15¢@30¢ per doz. bunches.

Potatoes—Home grown, 60¢@65¢ per bu.

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	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1898	1,846,233	3,672,909	980,303
Sold in Kansas City 1898	1,757,163	3,596,828	815,580

C. F. MORSE, Vice Pres. and Gen. Mgr. **E. E. RICHARDSON,** Secy and Treas. **H. P. CHILD,** Asst. Gen. Mgr. **EUGENE RUST,** Traffic Manager.

The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kans., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the KANSAS FARMER. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

THE YOUNG TURKEYS.

I breed from only fine, healthy stock, saving my best for that purpose, and do not breed from the same stock long. I change my gobblers preferably every year, and select hens from my own stock, as they are less inclined to wander away than strangers. The hen dearly loves a secluded spot for the nest, so it is well to prepare a place where she can slyly make a nest and deposit her eggs unknown. It is turkey nature to nest on the ground, and the eggs hatch better if exposed to the earth's moisture. I often place old barrels on their sides, or set coops half around, and throw branches and twigs over them, and place hay and leaves carelessly inside for them to lay on in winter. When they come to sit, the nest is put in shape, so there is no danger of the eggs becoming chilled. If, as sometimes occurs, the hen does not take the nest prepared, but seeks a nest in the wood near by, I follow and gather the eggs as laid. When she sits, I put shelter over her that can be closed up at night and opened every morning, to keep the wild "varmints" from her, and let her sit, providing she has chosen a reasonable place for the purpose. If moving is attempted, they are very "set," and will sometimes abandon a nest if moved, or so neglect the eggs, if shut in, that they fail to hatch. Sometimes there are one or two very early layers in the flock, too early to really care to set them, for early turkeys are not desirable, as the early rains and dampness are destructive. In this case I break these hens up and let them lay again, putting the surplus eggs under chicken hens. When I come to set them I prefer not to make mothers of the latter, as their habit is so different the little ones will not thrive with them after they begin to need a wider range. The lice of hens accumulate quickly, and prove more fatal than their own and harder to get rid of, so I put little ones hatched by hens with turkey mothers.

Sometimes the wings of little turkeys grow faster than their bodies, and the quills stick out longer than the tail feathers; at the same time many dwindle, get thin, and die. Unless the one in charge understands these symptoms the loss may be great without the cause being suspected. Catch the little ones and carefully turn back the feathers which cover the root of the quills on the wing, and in between the quills will usually be found lice, which are sapping the life away. The surest remedy for turkey lice is one part kerosene to three parts oil; any oil which runs freely and will not get gummy on the feathers, is good. Put it in a slender-necked machine oil can and let a little out along the roots of the feathers of each wing affected. The kerosene needs the oil, as alone it blisters the tender flesh and causes unnecessary suffering. Night is a good time to apply, just as they are put in the coop. Be careful not to get on too much, as that sticks the feathers down. Go over the flock a second time to make sure of a second crop; a large flock can be gone over very quickly.

After the patient mother has completed her time (from twenty-eight to thirty days), I teach her to come to the house everyday for food, and then comes the time of caring for the little creatures, which are to be tended and kept growing into lordly young gobblers and meek, plump hens to grace some festive board later on. I keep my eye on a hen which I know to be hatching, but never allow her to be disturbed to remove the little ones. If kept quiet, she will seldom kill any, and will call them out of the nest herself.

The mother needs a refreshing dust bath often, as she has not left the nest while hatching. She is not confined, but the little ones are at first, while unsteady on their legs. I make a triangle of boards nailed together, which need not be very high nor very large, yet large enough for the mother to get in with her brood when she chooses. The little ones doze and enjoy the sun, while the hen dusts herself and picks grass and gravel at pleasure. The cheapest and most healthful food for little turkeys is curd made like cottage cheese, unseasoned. They are very fond of it and thrive upon it, with the insects of all kinds which they

get. Stale bread soaked in sweet skim-milk is for newly hatched poults. Milk is good for turkeys of all ages, but for young ones do not let it stand and get warm and sour. It is unnecessary to make egg bread, custard, cakes, and expensive foods; they are rich, produce diarrhoea, and must be guarded against. Make the food sweet and wholesome, as variety is not necessary, but do not give grease or meat of any kind.

In wheat localities, whole wheat boiled to bursting makes the best food, both for young turkeys and for fattening. Don't fuss with a healthy flock, but if there is a tendency to diarrhoea, pepper, black or red, mixed in the food, is a good remedy. As a tonic, give a small lump of copperas in the drinking water occasionally. Many lose small turkeys by keeping them too closely confined. Turkeys must have a range, in order to become strong and thrive. I have large coops for each mother, but unless necessary they are not shut up after the dew is off the grass, excepting rainy days. They run in an orchard, and the little bodies grow broad and the legs get the stocky look of thrifty little turkeys; when a little older they stay very contentedly in my meadow nearly all day.

THE CARE OF THE COOPS.

A turkey hates to get into her coop at night unless it has been moved during the day. If it is changed every day she soon regards it as a safe place to keep her little family over night. Should it rain in the night, change it that it may be clean for the day. Filth is a deadly foe to a young turkey in confinement. I have always kept my coops on the ground. An experienced raiser who has tried floors prefers the ground, as it is more natural and healthful. I think it is a good plan to keep a box skunk trap set at night near the coops.

When the turkeys get large enough to fly over a stone wall, they will wander further away, and there is danger from hawks and foxes. I keep track of their whereabouts as well as I can, which takes me outdoors no more than is necessary for my good health. I have had them so wild that they have caused me considerable trouble, but it was caused by introducing new blood through strange hens instead of the gobblers. The latter is the better way.

THE TURKEY DIET.

The curd diet is excellent while it lasts, but much is required as they grow larger. While they are small a little goes a great way, even feeding five times a day. I prefer whole buckwheat to any food, when my supply of curd runs short. It is healthful, and prevents diarrhoea. The finest turkeys I ever raised were fed almost exclusively on fresh curd and buckwheat. Cracked corn, wheat, and buckwheat is good food when they have grown large.

As soon as they show a desire to roost, I encourage them, providing it gives promise of fair weather in which to make the new departure. I accordingly introduce them to the turkey tree, a large maple tree in which generations of turkeys have roosted before them, providing a narrow board with cleats to climb upon. They are soon up and off in the morning without waiting for breakfast, preferring grasshoppers and crickets to anything I might offer, returning often about 10 or 11 a. m. to rest and refresh themselves with cool buttermilk, sweet skim-milk, or whatever I have for them. I make it a point to offer them something to encourage them to come home.

A turkey regards home as a place to get something to eat. It is well always to feed when shutting them up at night, which should be at 5 p. m. when small, as after that time they get so sleepy it is slow work. This teaches them to expect supper and they will soon come of their own accord. When large, the supper need not be a very hearty one, as they don't need it if they are plenty of bugs; but just for the principle of the thing, to get them home, it is best to offer a reward. When feeding buckwheat for the first time, they rush around in a confiding way they have, expecting the familiar food of curd. Seeing only buckwheat, a universal cry of "quit" will be set up all along the line, and it is only after careful examination and thoughtful observation of the fact that the mothers are eating, that they can be induced to touch the stuff of which they are afterwards always so fond. After the flock goes to roost they are usually very little trouble until marketing.

I suffer very little loss from sickness, but hawks and foxes sometimes make sad havoc. I fatten on whole corn, with an occasional feed of buckwheat to counteract bowel looseness. Clear Indian meal is a harmful food at any time for turkeys, but mixed with boiled potatoes it makes an appetizing change, and does not have the bad effect of the clear meal.

They should be provided with gravel to assist the digestive process, and have pure water within reach. Some shut them up; I do not. Norfolk, the great English county for fine turkeys, fattens them by filling a trough with corn and good barley. Besides that, two meals a day of as much

THE CAUSE OF DYSPEPSIA.

Loss of Vitality Known to be the Parent of this Dread Disease—The Method of Cure that Has Proved Most Successful.

From the Republican, Scranton, Penna.

The most common of all human ailments is deranged digestion: the most aggravating disease, inherited by man, dyspepsia. Insidious in its nature, varied in its forms it tortures its victims, baffles the skill of physicians and the power of medicine.

The primary cause of dyspepsia is lack of vitality; the absence of nerve force; the loss of the life-sustaining elements of the blood.

It is a truism that no organ can properly perform its function when the source of nutriment fails; when it is weakened on one hand and over-taxed on the other. When the stomach is robbed of the nourishment demanded by nature, assimilation ceases, unnatural gases are generated, the entire system responds to the discord.

A practical illustration of the symptoms and torture of dyspepsia is furnished by the case of Joseph T. Vandyke, 440 Hickory St., Scranton, Pa.

In telling his story Mr. Vandyke says:

"Five years ago, I was afflicted with a trouble of the stomach, which was very aggravating. I had no appetite, could not enjoy myself at any time, and especially was the trouble severe when I awoke in the morning. I did not know what the ailment was, but it became steadily worse and I was in constant misery."

"I called in my family physician, and he diagnosed the case as catarrh of the stomach. He prescribed for me and I had his prescription filled. I took nearly all of the medicine, but still the trouble became worse, and I felt that my condition was hopeless. My friends recommended various proprietary remedies,

some of them among the best in the market, but I tried several of them without receiving benefit. After I had been suffering several months, and had secured no relief from any of the many remedies which I had taken, a friend of mine, by the name of Thomas Campbell, also a resident of this city, urged me to try Dr. Williams' Pink Pills for Pale People. I told him it would be a useless waste of money to buy them, as I was convinced that nothing could do me any good.

"I was finally persuaded to buy a box and began to use the pills according to directions. Before I had taken the second box I began to feel relieved, and after taking a few more boxes I considered myself restored to health. The pills gave me new life, strength, ambition and happiness."

An unfailing specific is found in Dr. Williams' Pink Pills for Pale People for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effect of la grippe, palpitation of the heart, pale and sallow complexions, that tired feeling resulting from nervous prostration, all diseases resulting from vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature. These pills are manufactured by the Dr. Williams' Medicine Co., Schenectady, N. Y., and are sold only in boxes bearing the firm's trade-mark and wrapper at 50 cents a box or six boxes for \$2.50, and are never sold in bulk. They may be had of all druggists.

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CANDY CATHARTIC
Cascarets
REGULATE THE LIVER

barley meal as they will eat, with gravel, etc., is given.—Miss E. J. Pine, in "Turkeys, and How to Grow Them."

The Chicken Mite.

Editor Kansas Farmer:—This exceedingly troublesome and often fatal pest is the cause of many complaints from those raising chickens. The attacks of the pest are not confined to poultry, as they are often found in pigeon houses and in the nests of other birds about farm buildings. Where they are numerous, they often find their way to animals confined in the infested buildings. The mites are nocturnal in their habits. During the daytime they are generally in hiding about the building, but at night they abandon their hiding places and seek for food. Chickens are often prevented from sleeping at night, and not rarely forced to abandon their eggs when sitting. Instances have been recorded where birds have been killed by this mite.

There is no way to receive permanent relief from the pest. The remedies must be applied often and thoroughly, since the insect is able to live a long time without eating. Cleanliness must be observed. The hen manure should be frequently removed, as it often swarms with the pest. If the hen house is tight, fumigation with sulphur is very effective. To prevent any accident by fire, float the metal vessel containing the burning sulphur in a tub of water. After several hours of fumigation, air the building well before occupancy. Pure kerosene is also to be recommended. The interior of the building, including perches, should be well sprayed with it. After using kerosene, remember to air the building before introducing a light. P. J. PARROTT, Kansas State Agricultural College.

Chicks that do not thrive well the first few weeks of their lives seldom make fine or profitable specimens at maturity. When chicks are hatching it is well to keep close watch that none die in the shells after the shells are pipped. The idea that chicks helped from the shell are not hardy is erroneous. Take the pipped eggs, place in water heated to 103°, and watch until the chick chirrup loudly and struggles at the same time, then return it to the nest, when generally the chick will get out without more attention. If not out at the end of an hour remove the shell and wrap the chick in flannel and keep it warm by the fire or place in an incubator.

The Church Society for the Promotion of Kindness to Animals makes the following suggestions respecting the packing of poultry for transmission abroad: The coop should be of ample size, open at the front, with upright laths three inches wide and two and a half inches apart. A drinking dish, at least three inches deep, should be fixed on the outside of the upright laths, sufficiently above the bottom of the coop to prevent the dirt from fouling the water. A three-inch feeding trough should be fixed on the outside, running the whole length of the coop, so that the fowls may put their heads between the laths and feed at leisure. The floor of the coop should be covered an inch deep with peat moss dust (not peat moss litter). A sack of mixed corn and grit, amply sufficient for the voyage, should be strapped on the top of the coop, and the words, "Please give us a drink and a handful of corn," printed in bold letters in some conspicuous place.

How's This!

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

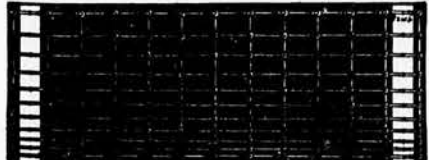
F. J. CHENEY & CO., Props., Toledo, Ohio.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by the firm. WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

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

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Buy the Pittsburgh Woven Wire Fence and avoid all mistakes. It's a good long-lived fence at a reasonable price. Takes up all expansion and contraction and never sags. It's close enough and strong enough to turn all live stock. Keeps yours in and your neighbor's out. We want good agents in every locality. First order secure township agency. Circulars free. Pittsburgh Woven Wire Fence Co. Penn. Av., Pittsburgh, Pa.

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fruits, jellies, pickles or catsup are more easily, more quickly, more healthfully sealed with Refined Paraffine Wax than by any other method. Dozens of other uses will be found for

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Special Reference: The Chicago National Bank.

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Send for catalogue illustrating the old Reliable Peck Well Auger, Rock Drill, Hydraulic Machinery, etc. FREE. Have been in use over 18 years and are no experiment. **W. M. THOMPSON CO.,** Successors to Sioux City Engine & Iron Works, SIOUX CITY, IOWA.

We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. Our productions are standards; are first-class in every respect and are sold on trial. Send us a postal and we will tell you all about them. **CURRIE WINDMILL CO.,** Manhattan, Kas. AGENTS WANTED.

A Small Thresher

The COLUMBIA has great capacity—runs easy. Will thresh all grains with less help, at less expense. Full line of sweep and tread powers.

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It will return FORK, CARRIER AND ROPES back to starting point, saving all the hard work of pulling them back by trip rope. Terms and prices on application. Agents wanted. **RONEY RETURNER CO.,** Box U., Independence, Ia.

BINDER TWINE.

New, guaranteed. At prices that will tickle you. Send for prices delivered at your town. Riding Gang Plows, \$35. Sulky Plows, \$25. 64-T. Lever Harrow, \$7.50. 12-T. Disc Harrow, \$16.00. 10-T. S. B. Plow and Rolling Coupler, \$10.50. Mowers, \$20.40. Wagons, Buggies, Harness, Sewing Machines and 1000 other articles at one-half dealer's prices. Catalogue free. **Hagood Plow Co.,** Box 262 Alton, Ill. P. S.—Only Plow Factory in the United States selling direct to the farmer.

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FENCE FOR LAWNS AND CEMETERIES. Steel Gates, Posts and Rail. Cabled Field and Hog Fence with or without lower cable barbed. Cabled Poultry, Garden and Rabbit Fence. **DE KALB FENCE CO.,** 23 High St., DE KALB, ILL.

Will Give 10c. for every Gopher Scalp.

The above offer is made by many counties in the western states. We guarantee the "Out-O-Sight" Gopher Trap to catch when all other traps fail. Send 25 cents for a sample by mail, or have your dealer order for you. Don't wait; gophers are active. **ANIMAL TRAP CO.,** 13 Meek St., Abingdon, Ill.

OUR YOKES SAVE LAWSUITS

BRUISED HEADS AND FAMILY FEUDS,

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they keep cattle in a wire enclosure where they belong. Price, 75c each; or \$4.50 per dozen. Our Wire Harness only 30c, and the best appliance for the money that can be purchased anywhere; \$1.50 per dozen. Satisfaction guaranteed. Drop us a postal card for full particulars.

Address **ROGERS MANUFACTURING CO.,** Harper, Kans.

Buy a Buggy Direct

from the factory. The price will be a revelation to you concerning carriage values, with profits of middlemen and dealers cut off. You will pocket these profits. In buying a buggy, a carriage or wagon, or any kind of harness or horse accessories from our catalogue, you have a larger stock to choose from than any dealer can carry. You order with safety because our broad guarantee goes with everything we sell. If dissatisfied, send back your purchase and get your money, and we will pay the freight both ways.

PAY ONLY ONE PROFIT

We manufacture on a large scale and with every improvement for economy and excellent work. To the cost of manufacture we add one profit—that is all you are charged. Before you spend your money study our catalogue and see what we offer you, and at what low prices. It is sent free.

THE COLUMBUS CARRIAGE AND HARNESS COMPANY, COLUMBUS, OHIO.



No. 3034 Buggy. Price \$37.25 With Leather Quarter Top.

Hodges "Lassie" Self Dump Rake

brings together in one machine all those essential points which go to make a Perfect Hay Rake. In the first place this rake is constructed entirely of steel which combines lightness, neatness and durability in the highest degree. The wheels being 54 inches high provides for the largest basket on any rake made. The axles are of 1 1/4 cold rolled steel extending entire length of rake head. Teeth are of finest oil tempered steel, being either flat or round pointed. A simple, positive and substantial dumping device that never fails to act.

At a small extra expense we supply rakes with our new patented relief spring; it entirely overcomes all shocks and jars incident to tripping and assists the operator in dumping.

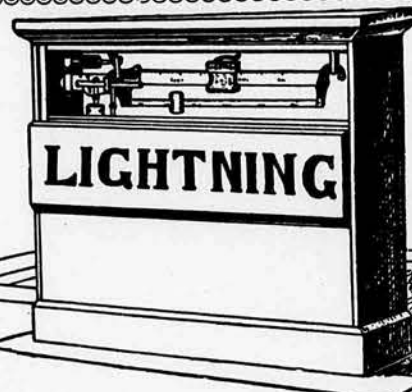
This Rake is also made in Hand Dump Form.

Manufacturers also of the Famous Hodges Header, Hodges Hercules Mower, Monarch and Acme Sweep Rakes and Stackers. Don't buy until you get our new illustrated catalogue. We send it FREE upon request.

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SIZES: 8, 10, 10 1/2, and 12 feet wide, having 22, 28 and 34 teeth.



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Compound Beam Furnished on all Scales. No Extra Charge.

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HODGES NEW STEEL CHAIN DRIVE HEADER

is the perfected result of 39 years of continuous header construction. In material, design, working ability, ease of draft, poise and balance this machine is without a peer.

Among leading points of excellence are: the highest and widest wheels commensurate with perfect traction, application of power and easy draft. Lightest, strongest re-inforced steel frame. Power applied by steel drive chain—perfectly adjusted to save lost motion, strong and durable.

Adjustable reel—easy to handle. Elevator has wagon rollers—prevents wear and friction and adds to life of spout and barge. Trussed steel tilting lever—strongest and lightest.

Convenient self locking lever for throwing in and out of gear—no jolt or jar can throw it out when once set. It is supplied with a sensitive rudder which makes it very easy to guide. A strong equalizing spring in conjunction with the tilting lever enables the operator to control perfectly the height of cutter bar, raising and lowering from 3 to 32 inches.

THE ONLY PERFECT HEADER MADE.

ACME HARVESTER COMPANY, PEKIN, ILL.

We also make the Hodges Hercules Mowers, Hodges "Lassie" and "Lassie" Hand and Self Dump Rakes, Monarch and Acme Sweep Rakes and Stackers. Our new catalogue tells all about them. IT IS FREE. Write for it before you buy.

It will Save Money, Labor and Grain.

CANCER CURED

WITH SOOTHING, BALMY OILS. Cancer, Tumor, Catarrh, Piles, Fistula, Ulcers, Eczema and all Skin and Womb Diseases. Write for Illustrated Book. Sent free. Address **DR. BYE,** Cor. 9th & Broadway, Kansas City, Mo.

Ladies Our Monthly Regulator never fails. Box FREE. Dr. F. May, Bloomington, Ill.

PENNYROYAL PILLS

Original and Only Genuine. SAFE, always reliable. LADIES ask Druggist for **Chichesters' English Diamond Brand** in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Refuse dangerous substitutions and imitations. At Druggists, or send 2c. in stamps for particulars, testimonials and "Heller for Ladies," in letter, by return Mail. 10,000 Testimonials. **Heller Paper,** Chichesters Chemical Co., Madison Square, PHILADELPHIA, PA.

Sold by all Local Druggists.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

To the Readers of the Farmer.

We present the abstracts of a few testimonials from former patients we have cured of piles, fistula and other diseases of the rectum, and earnestly ask you to read them, and if you are afflicted with rectal trouble of any kind, send for our 88-page book, which we send to you free, upon request. This book contains hundreds of testimonials from people we have cured during our 22 years of practice as specialists in rectal diseases in Kansas City, also over 1,000 names of former patients, any or all of whom you can write to, to find out whether or not it will pay to investigate our claim.

We desire to say that we treat nearly as many women as men. We do not publish letters from lady patients in the newspapers. We have recently, however, prepared a pamphlet for private circulation among ladies. It contains a number of letters from former patients, who have very kindly permitted the use of their letters in this restricted manner, in the hope of benefiting members of their sex afflicted as they were before they came to us for treatment and cure.

We guarantee to cure every case of rectal trouble. Our guarantee is this: You keep the money until you are cured. We do not ask you to sign a note, or in any way lay yourself liable. Space limits anything more. Send for the book by letter or postal card. Consultation free by mail or in person.

Prominent Business Man Cured.

Kansas City, Mo., Oct. 29, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Dear Sirs:—I can not recommend your treatment for piles too highly; you have treated me very successfully. I was afflicted for years and you effected a permanent cure without a day's loss from my business. Very truly yours,
J. J. Swafford,
Pres. Swafford Bros. Dry Goods Co.

Several hundred testimonials in our 88-page book.

Has Perfect Health.

Kansas City, Mo., Dec. 22, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—Before you treated me I had been troubled for eight or ten years, but am pleased to say I have not been bothered in any way since, and have perfect health, for which I can give you credit. I am always ready and willing to recommend you to any one whom I can.
Yours very truly,
Geo. S. Tamblin,
Tamblin & Tamblin, Live Stock Com. Mer., Kansas City, Mo.

We do not take one cent of money until patient is cured.

A Cattleman Cured.

Kansas City, Mo., Nov. 8, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Dear Sirs:—I have no hesitancy in recommending your treatment to any one suffering with piles. Four years ago I had a very bad case of protruding and bleeding piles. I suffered intense pain, becoming so bad I could neither ride nor walk. You cured me in a short time, and I have never had them since. I would not suffer one day for the price I paid you.
Respectfully yours,
George E. Cole,
Cattle Salesman for Offutt, Elmore & Cooper, Kansas City Stockyards.

Not one cent of money until cured.

Should Have Gone Sooner.

Dwight, Kans., Nov. 16, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Dear Sirs:—The fistula which you treated me for is cured completely. I was afflicted for about twelve years, and I regret I did not go to you for treatment years ago. I see no reason why any one should suffer who can avail themselves of your treatment. I found you straight and honorable gentlemen to deal with. In these days of quacks and impostors it is a source of much satisfaction to know there are doctors who can and will do what they claim. Truly yours,
Wm. Taylor.

Prompt Cure; Reasonable Fee.

Hall's Summit, Kans., Nov. 8, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—In your letter of recent date you ask me whether I am satisfied with treatment by you. In reply I will say, one who has suffered from piles as I had for fifteen years ought to be satisfied to be cured in ten days for a reasonable fee. I tell my friends I feel five years younger. I am able to do double the labor I did before you cured me. I shall continue to advise friends afflicted with such diseases to give you a chance to cure them as you did me. Very respectfully,
Washington Baker.

At the doctors' office you meet people from all parts of the country.

As Free from Disease as When a Boy.

Hesper, Kans., Nov. 30, 1896.
Drs. Thornton & Minor, Kansas City, Mo.:
Dear Sirs:—I was a sufferer from rectal trouble for a number of years before being cured by you in the spring of 1894, and am now as free from any disease for which you treated me as when I was a boy. I never fail to say a good word for you, as I have perfect confidence in your ability to cure all cases you undertake. With many thanks for your kind treatment, I remain, Your true friend,
Barclay Thomas,
Treas. Hesper Academy.

What a Leading Merchant Says.

Helmick, Kans., Oct. 25, 1898.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—Nine months ago I underwent treatment at your hands for piles and

Drs. Thornton & Minor,

Specialists in PILES, FISTULA and all Diseases of the Rectum.

Read the testimonials in this advertisement. They will interest you. Send for our 32-page book for ladies; the testimonials in it are published by special permission and will interest every lady who is afflicted. We cure as many ladies as we do men, but never use their names in our newspaper advertisements.

Call at our office or address us by mail at 100 West Ninth street, Kansas City, Mo. We will be pleased to correspond with you about your case. CONSULTATION IN PERSON OR BY MAIL FREE.

ulceration of the rectum. My affliction had been a source of trouble to me for twenty-nine years, and for ten years prior to your treatment I was a constant sufferer. Five years prior to treatment I was compelled to change my vocation, because of inability to perform manual labor. I had been treated by various physicians, but my trouble constantly grew worse instead of better, and, at time of applying to you for treatment, the ulcers had become of a cancerous nature, and my nervous system almost a wreck. I had about despaired of ever being benefited, but was induced to give your treatment a trial by the testimony of friends whom you had successfully treated. I am exceedingly glad that I can add to your long list of testimonials the fact that I am perfectly, and, I believe, permanently cured of the trouble for which I was treated. My nervous system, general health, strength and appearance are so much improved that friends and acquaintances frequently speak to me about it. Your ability has ceased to be a question in this (Morris) county, where you have treated so many, and your reliability proven beyond doubt, by the fact that not one cent was either required or paid until a cure was effected. I desire to express my thankfulness to you, and would advise all afflicted as I was to apply to you for treatment. Yours very gratefully,
J. O. Rochat.

Can Not Praise Them Too Highly.

Larned, Kans., Dec. 9, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—For the benefit of those who may be afflicted as I was I wish to state that I was afflicted with piles and fissure in a very bad form, for thirteen years previous to coming to you for treatment. I tried different physicians and used all kinds of patent medicines and various remedies that I could hear of, but they did me no good. I gradually grew worse until I went to you. I was under your treatment exactly seventeen days, and was perfectly cured.

I can not say too much in praise of you, gentlemen, not only as physicians, but as men. You did not charge me a cent until I was perfectly well, and I never paid a bill with more gratitude than I did yours, nor one for which I felt that I had received so much. Very respectfully,
J. M. Blackwell.

Don't fail to send for our 88-page book, free.

Recommends the Treatment Highly.

Liberal, Kans., Jan. 20, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—I was troubled with fistula, ulceration of the rectum, and piles for at least ten years prior to 1892, when you treated me and cured me, and I have not been troubled since, in any way or shape, by that dreaded disease, and do recommend your treatment highly. Thanking you for what you have done for me, I am,
Gratefully yours,
Chas. Summers.

We guarantee to cure you.

Three Treatments Cured Him.

Newman, Kans., Oct. 30, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—I was afflicted with piles for twelve years. I tried several doctors, but kept getting worse and had given up all hopes of ever being cured. Three treatments from you last May cured me perfectly well. I can safely recommend you to all afflicted to be able to do all you advertise. Yours respectfully,
J. C. Dinnen.

Get a free book, and read Mr. Barnes's full testimonial.

Perfectly and Radically Cured.

Paola, Kans., Dec. 19, 1896.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—I wish to say that the rectal trouble of more than twenty years' standing, for which you treated me in June last, has been entirely relieved, and if I am not perfectly and radically cured for all time to come, then all signs fail. I give you permission to make this statement public, with the hope that it may be the means of influencing some sufferer to take advantage of your skill as specialists, and by so doing take a new lease on life. Very truly yours,
Geo. P. Leavitt,
Notary Public and Broker.

Osage City, Kans., June 23, 1896.
To whom it may concern:—This is to certify that Drs. Thornton & Minor, of Kansas City, Mo., in the year 1892, successfully treated myself and wife for hemorrhoids. Since that time I have not been troubled with them, nor have I had any symptoms of their return. My wife died in 1894, but up to the time of her death she was perfectly free from any symptoms of the disease. Respectfully,
M. L. Campbell,
Druggist and Pharmacist.

Send for 86-page book, free.

Tried Every Remedy.

Topeka, Kans., Nov. 26, 1896.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—For thirty years prior to receiving your treatment I was afflicted with the piles. During that time I tried every

remedy internal and external known to medical science, without relief.

I went to you for treatment last February. Since being dismissed by you, a short time afterward, up to the present time I have had no symptoms of the piles. I am well. I will gladly answer all letters of inquiry concerning your treatment. Very truly yours,
Chas. N. Duncan.

Saved His Life.

White City, Kans., Nov. 5, 1898.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—I can not speak too highly of your treatment of my case. I was afflicted with piles, fissure and stricture for more than fifteen years before being treated by you last February. I believe if I had not gone to you for treatment then I could not have endured my suffering six months longer. I could eat only certain things. Now it makes no difference. I can eat anything with a relish. I gained fourteen pounds the first month after leaving your office. You did not ask me to pay you one cent until I was satisfied I was cured. I never paid a bill as cheerfully as I did that, and I think you earned your money. I feel that I never can pay the debt of gratitude I owe you. I never fail to speak of your skill when I see any one afflicted. Your book of testimonials was the first one I could read and believe it all, as I do. I know that while I was being treated you cured some patients who could not find words to explain their previous sufferings, nor their gratitude to you for curing them. If any one desires information concerning my knowledge of your wonderful ability I will gladly answer any inquiry if stamp is enclosed for reply. Yours respectfully,
John Trager, Jr.

A Bad, Complicated Case.

Wilson, Kans., Nov. 1, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Dear Sirs:—I feel it is my duty to give my earnest opinion as to your ability as doctors. You do exactly as you say in every respect and you are honorable and upright in your dealings. And my advice is, if any one is suffering with rectal disease to go to you for treatment, for you never fail to cure. I was afflicted with piles, fissure, and ulceration of the rectum, and you made a permanent cure of my disease. I had piles for twenty years and last February the ulcer and fissure started, and I doctored four months and did not get any better, but gradually grew worse. In eight weeks you cured me sound and well. Yours truly,
W. F. Redman.

The Most Competent Specialists.

Wellsville, Kans., Dec. 1, 1897.
Drs. Thornton & Minor, Kansas City, Mo.:
Dear Sirs:—I was afflicted with a very bad case of piles for twenty years, having been treated by different physicians, and using all kinds of salves and remedies that I could hear of. Ten years ago I came to you for treatment. In a short time you cured me perfectly, and I have never had the least symptoms of any trouble since. I was also afflicted with fistula for a year, which you also cured in a very short time. I earnestly recommend you to any one suffering with such troubles. I believe you to be the most competent specialists in your line to-day. You do exactly as you advertise in every respect. I did not pay you a cent until I was perfectly well. I will gladly answer all desiring any information concerning your treatment if they will enclose stamp for reply. Very respectfully,
J. R. Murphy.

The above means wonders to the afflicted.

Cured After Being Treated by the Knife, Ligation and Hypodermic Injections of Carbolic Acid.

Independence, Kans., Oct. 17, 1898.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—More than a year has elapsed since you treated me for piles, and I have felt no symptoms of a recurrence of the disease. I feel warranted in saying that your treatment has been perfectly satisfactory to me, and I believe the cure is permanent. I was afflicted for fourteen years and had been treated by a number of physicians, with ligatures, hypodermic injections of carbolic acid, and the knife, none of which afforded me permanent relief. After each treatment I grew worse, until I was almost unable to attend to business, and frequently did not leave my bed for a week at a time. When I began to take treatment from you I had been unable to attend to business for four weeks. Since then I have not lost a day out of the store. My business—that of a grocer—keeps me almost constantly on my feet, and requires a great deal of heavy lifting. I can stand on my feet all day and feel none of the dragging-down pain in my back and hips, which gave me so much trouble before. My general health is also much improved. I feel it a duty I owe to you, as well as to others, to make this statement. If you deem it best you may publish it. I hope I may influence some one suffering as I was to go to you and be cured. I will always be thankful that I went to you, and shall lose no opportunity to try to influence others to do likewise. Respectfully yours,
W. S. Myers.

From Experience and Observation.

Girard, Kans., Dec. 15, 1896.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—From experience and observation I heartily recommend your work. Yours respectfully,
T. W. Stutterd,
Probate Judge, Crawford County, Kansas.

Send for our 88-page book of testimonials.

Painless and Absolutely Certain.

La Cygne, Kans., Dec. 13, 1898.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—It affords me great pleasure to certify to the value of your treatment for piles. It is painless and absolutely certain in removing the troubles. Yours truly,
Geo. Miller Mercantile Co.

At the doctors' office you meet people from all parts of the country.

Entirely Well Now.

Neodesha, Kans., Nov. 21, 1896.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—I am entirely well at this time. I was afflicted with fistula and fissure for about seven months before going to you, and you cured me. You can use my name, or refer any one to me. I will gladly tell him all I know. Yours respectfully,
C. H. McCreedy.

Ladies' separate reception and treating rooms.

Strong Statement by a Prominent Physician and Well-Known Kansan.

Atchison, Kans., Dec. 3, 1898.
Drs. Thornton & Minor, Kansas City, Mo.:
My Dear Doctors:—During a varied experience in the practice of medicine since 1849, nothing has impressed me so deeply nor increased my faith in the skilled and humane physician and surgeon more than the marvelous success with which you have recently reconstructed my anatomy and inspired me with new energy and strength. For more than twenty years I have been annoyed and impaired by prolapsus, and, which of late years largely incapacitated me for labor or locomotion. Relief was sought by the use of astringents and various local applications without success, and I was forced to accept the inevitable. The incident through which I was thrown in your way is well known to you, and it only remains for me to emphasize the results by saying that you, Doctor Minor, with the tenderness of a woman and the deftness of a master, performed on me two painless operations, through which, with less than twenty days, the surplus folds of the rectum were obliterated, the sphincter was tightened up, and I was made as sound as when a boy, and consequently happy. Fraternally yours,
W. L. Challis, M. D.

Investigate, then decide about coming to us for treatment.

No One Else Has This Treatment.

Warrensburg, Mo., Dec. 24, 1896.
To whom it may concern:—For nearly twenty years I was afflicted with rectal trouble. Was treated by a physician who claimed to have the same treatment as Drs. Thornton & Minor. The relief was only temporary and the trouble came back in an aggravated form. Was advised to go to Drs. Thornton & Minor. Supposing I was treated by their method, I was slow to try it again. Finally I reached a point where it was treatment or death. About two and a half years ago I went to Drs. Thornton & Minor. They told me that no one had their treatment. To my surprise and satisfaction it was wholly different; the pain being not nearly so severe and the cure complete. Before treatment I weighed 145 pounds and had not ridden a horse for years. Now I weigh 175 pounds and can ride all day without the least inconvenience. Drs. Thornton & Minor can be relied upon to do just what they say they will do. Respectfully,
J. T. Osborn,
Pastor Baptist Church.

Our guarantee: Pay your money when cured.

Could Not Have Lived.

Parsons, Kans., Dec. 18, 1898.
Drs. Thornton & Minor, Kansas City, Mo.:
Gentlemen:—You treated me in September, 1884, for piles and made a complete cure. I had been very bad; in fact, do not think I could have lived had I gotten any worse. You removed several tumors and made a complete cure. Yours truly,
J. D. Main, Parsons, Kans.

We guarantee to cure you.

Tried Every Remedy.

Topeka, Kans., Nov. 26, 1896.
Drs. Thornton & Minor, Kansas City, Mo.:
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