

# KANSAS FARMER

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Bulls in service: Kodax of Rockland 40731, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 3 to 7 years old for sale.

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## Agricultural Matters.

### FOODS—NUTRITIVE VALUE AND COST.

Excerpts from Farmers' Bulletin No. 23, United States Department of Agriculture, by Prof. W. O. Atwater.

(Continued from last week.)

#### HOW FOOD IS USED IN THE BODY.

Blood and muscle, bone and tendon, brain and nerve—all the organs and tissues of the body—are built from the nutritive ingredients of food. With every motion of the body, and with the exercise of feeling and thought as well, material is consumed and must be resupplied by food. In a sense, the body is a machine. Like other machines it requires material to build up its several parts, to repair them as they are worn out, and to serve as fuel. In some ways it uses this material like a machine; in others it does not. The steam engine gets its power from fuel; the body does the same. In the one case coal or wood, in the other food, is the fuel. In both cases the energy which is latent in the fuel—the potential energy, as it is called in scientific language—is transformed into heat and power. When the coal is burned in the furnace a part of its potential energy is transformed into the mechanical power which the engine uses for its work; the rest is changed to heat which the engine does not utilize and which, therefore, is wasted. The potential energy of the food is transformed in the body into heat and mechanical power. The heat is used to keep the body warm. The mechanical power is employed for muscular work. The material of which the engine is built is very different from that which it uses for fuel, but part of the material which serves the body for fuel also builds it up and keeps it in repair. Furthermore, the body uses its own substance for fuel. This the steam engine can not do at all. The steam engine and the body are alike in that both convert the fuel into heat and mechanical power. They differ in that the body uses the same material for fuel as for building and also consumes its own material for fuel. In its use of fuel the body is much more economical than any engine.

The body is more than a machine. We have not simply organs to build and keep in repair and supply with energy; we have a nervous organization; we have sensibilities and the higher intellectual and spiritual faculties, and the right exercise of these depends upon the right nutrition of the body.

The chief uses of food, then, are two: (1) To form the material of the body and repair its wastes; (2) to yield heat to keep the body warm and muscular and other power for the work it has to do. In forming the tissues and the fluids of the body the food serves for building and repair. In yielding heat and power it serves as fuel.

The different nutrients of food serve the body in different ways. The principal tissue formers are the protein compounds, especially the albuminoids. These make the flesh of the body. They build up and repair the nitrogenous materials, as the muscles and tendons, and supply the albuminoids of the blood, milk, and other fluids. The chief fuel ingredients of the food are the carbohydrates and fats. These are either consumed in the body when the food is eaten or they are stored as fat to be used as occasion demands.

The albumen of eggs, the casein of milk and cheese, the gluten of wheat, the myosin of lean meat, and the other albuminoids of food are transformed into the albuminoids and gelatinoids of the body. Muscle, tendon, and cartilage are made of albuminoids.

The albuminoids of food also serve as fuel. A dog can live on lean meat; he can convert it into muscle, heat, and muscular power. The gelatinoids of food, as the finer particles of tendon and the gelatin, which is dissolved out of bone and meat in making soup, though somewhat similar to the albuminoids in composition, are not tissue formers. But they are used as fuel and hence are valuable nutrients.

The albuminoids are sometimes called "flesh formers" or "muscle formers" because the lean flesh, the muscle, is made from them.

The starch of bread and potatoes, and sugar, are burned in the body to yield heat and power. The fats, such as the fat of meat and butter, serve the same purpose, only they are a more concentrated fuel than the carbohydrates.

The fats of the food are stored in the body. The body also transforms the carbohydrates of food into fat. This fat, and with it that stored from the fat of food, is kept in the body as a reserve of fuel in the most concentrated form. One chief use of the fat stored in the

body is for fuel, to be drawn on in case of need.

The different nutrients can to a greater or less extent do one another's work. If the body has not enough of one for fuel it can use another. But while the protein can be burned in the place of fats and carbohydrates, neither of the latter can take the place of the albuminoids in building and repairing the tissues. At the same time the gelatinoids, fats and carbohydrates, by being consumed themselves, protect the albuminoids from consumption.

#### THE FUEL VALUE OF FOOD.

Heat and muscular power are forms of force or energy. The energy is developed as the food is consumed in the body. It is measured in the laboratory by means of an apparatus called the calorimeter. The unit commonly used is the calorie, the amount of heat which would raise the temperature of a pound of water 4° Fahrenheit.

Taking ordinary food materials as they come, the following general estimate has been made for the average amount of heat and energy in one pound of each of the classes of nutrients:

	Calories.
In one pound of protein .....	1,860
In one pound of fats .....	4,220
In one pound of carbohydrates .....	1,860

In other words, when we compare the nutrients in respect to their fuel values, their capacities for yielding heat and mechanical power, a pound of protein of lean meat or albumen of egg is just about equivalent to a pound of sugar or starch, and a little over two pounds of either would be required to equal a pound of the fat of meat or butter or the body fat.

Before the invention of matches, blacksmiths used to start their fires with iron heated by hammering. The heating of the iron was a case of the conversion of one form of energy into another. The muscular energy of the blacksmith's arm was transformed into the mechanical energy of the descending hammer; when the hammer struck, the energy was imparted to the iron, where it was transmuted into heat, and the iron became red hot. The energy came from the blacksmith's food. Just how all the energy of the food is disposed of in the body, experimental science has not yet told us. But it is certain that part of it is converted into heat and part into the mechanical energy exerted by the muscles. Some of it may be transformed into electricity.

There is no doubt that intellectual activity, also, is somehow dependent upon the consumption of material which the brain has obtained from the food, but just what substances are consumed to produce brain and nerve force, and how much of each is required for a given quantity of intellectual labor, are questions which the chemist's balance and the calorimeter do not answer.

The coal and wood we burn, the plants we grow, the food we eat, and the reserve materials in our bodies are reservoirs of latent energy. The source of that energy is the sun. The science of later years is explaining how the energy of the sun warms and lights our planet; how it is stored in coal and petroleum and wood; and how it is transformed into the heat of the furnace, the light of the lamp, the mechanical power of steam, or into electricity and then into light or heat or mechanical power again. The same energy from the sun is stored in the protein and fats and carbohydrates of food, and the physiologists to-day are telling us how it is transmuted into the heat that warms our bodies and into strength for our work and thought.

What has been said above about the ways in which our food nourishes us may be briefly summarized as follows:

#### WAYS IN WHICH FOOD IS USED IN THE BODY.

Food supplies the wants of the body in several ways. It either—

Is used to form the tissues and fluids of the body;

Is used to repair the wastes of tissues;

Is stored in the body for future consumption;

Is consumed as fuel, its potential energy being transformed into heat or muscular energy, or other forms of energy required by the body; or,

In being consumed protects tissues or other food from consumption.

Protein forms tissue (muscle, tendon, etc., and fat) and serves as fuel.

Fats form fatty tissue (not muscle, etc.) and serve as fuel.

Carbohydrates are transformed into fat and serve as fuel.

In being themselves burned to yield energy the nutrients protect each other from being consumed. The protein and fats of body tissue are used like those of food. An important use of the carbohydrates and fats is to protect protein (muscle, etc.) from consumption.

All yield energy in form of heat and muscular strength.

### KANSAS CROPS AND STOCK.

The crop bulletin of the State Board of Agriculture for the present year, showing final returns of the State's crop acreages, their yields and home values, together with the numbers and values of live stock for 1898, is just issued.

The figures on yields of wheat, corn and oats do not vary essentially from those given out earlier in the season, except that the yield of corn in some of the northern counties, which ordinarily have the great areas and yields, but were supposed to have only a very small output this year, makes a much better showing than was anticipated before husking. Wheats fall a trifle below the earlier estimates.

The winter wheat crop is 59,674,105 bushels, worth \$32,431,772; spring wheat, 1,116,556 bushels, worth \$505,269; Corn, 126,999,132 bushels, worth \$30,296,098; oats, 21,702,537 bushels, worth \$4,268,861.

The combined home values of the wheat, corn and oats amount to \$67,504,001, or \$735,211 more than in 1897.

The net increase in value of this year's agricultural productions over that of 1897 is \$15,587,439, and of live stock \$19,153,048, a total net increase for the year of \$34,740,507, or slightly more than 15 per cent. In two years the increase in value of Kansas' agricultural productions has been \$35,632,706 and of live stock \$39,662,032, or a total increase during the biennial period of \$75,294,738.

The following table shows the yields of winter wheat, corn and oats by counties:

	Winter Wheat. Bushels.	Corn. Bushels.	Oats. Bushels.
Allen .....	83,648	1,991,625	185,490
Anderson .....	38,368	1,979,932	92,340
Atchison .....	280,436	927,318	272,656
Barber .....	245,728	618,408	38,479
Barton .....	3,589,200	325,350	57,390
Bourbon .....	45,192	2,240,982	269,648
Brown .....	678,495	2,458,980	495,501
Butler .....	220,008	3,515,204	567,792
Chase .....	92,586	952,864	49,134
Chautauqua .....	222,792	1,803,270	158,125
Cherokee .....	339,020	1,908,325	477,565
Cheyenne .....	71,840	389,846	35,772
Clark .....	21,690	29,520	6,785
Clay .....	469,455	916,628	740,411
Coffey .....	695,761	1,270,912	440,298
Comanche .....	186,214	3,163,356	198,911
Cowley .....	36,157	129,400	1,950
Crawford .....	1,164,566	2,784,240	466,055
Decatur .....	297,200	1,631,780	832,508
Dickinson .....	515,130	2,226,796	91,292
Doniphan .....	1,703,939	1,530,288	730,652
Douglas .....	602,625	1,598,136	257,202
Edwards .....	402,215	1,119,500	200,613
Ellis .....	431,244	243,711	130,248
Ellsworth .....	130,428	1,880,808	30,452
Finney .....	1,483,572	80,216	50,300
Ford .....	1,773,968	346,992	15,840
Franklin .....	15,684	7,650	2,088
Geary .....	268,695	139,300	123,250
Gove .....	105,768	2,205,838	137,196
Graham .....	221,952	742,500	125,741
Grant .....	154,119	118,524	24,300
Gray .....	314,650	667,200	23,105
Greeley .....	144	2,916	2,736
Greenwood .....	51,108	9,108	14,568
Hamilton .....	26,990	7,160	450
Harper .....	46,427	2,745,240	40,593
Haskell .....	6,342	1,768	1,494
Hodgeman .....	1,718,340	1,117,162	309,035
Jefferson .....	1,115,828	1,183,608	440,304
Jewell .....	32,705	6,080	2,592
Johnson .....	179,574	2,260,507	28,140
Kansas .....	25,639	2,260,507	28,140
Kearney .....	129,430	2,440,000	203,450
Kingman .....	500,820	2,744,709	480,350
Kiowa .....	255,651	1,719,873	325,680
Lamar .....	19,648	3,820	2,451
Labette .....	1,110,900	913,242	103,938
Lane .....	164,256	184,940	10,580
Leavenworth .....	442,698	1,316,000	666,539
Lincoln .....	200,910	1,016	10,566
Linn .....	346,766	1,522,675	255,332
Logan .....	1,511,279	328,896	21,195
Lyon .....	103,233	2,513,316	166,608
Marion .....	314,215	67,925	35,144
Marshall .....	107,328	2,655,488	60,200
McPherson .....	988,053	2,003,760	877,224
Meade .....	615,842	3,301,275	753,669
Miami .....	2,453,535	1,566,193	552,838
Montgomery .....	46,440	19,838	6,495
Morris .....	105,780	2,209,053	311,151
Morton .....	1,626,680	965,970	182,156
Muskegon .....	738,848	1,534,676	432,014
Nemaha .....	19,292	1,422,594	129,865
Neosho .....	5,600	2,150	1,104
Ness .....	185,318	3,748,263	419,112
Norton .....	321,178	1,791,216	459,198
Osage .....	519,778	60,304	33,980
Ottawa .....	410,828	2,637,364	171,744
Pawnee .....	54,992	2,961,596	139,644
Phillips .....	1,210,395	578,256	34,789
Pottawatomie .....	1,113,007	661,872	84,892
Pratt .....	1,393,632	144,780	125,039
Rawlins .....	329,088	2,429,940	185,600
Reno .....	95,712	2,814,278	178,176
Republic .....	1,214,335	355,050	113,040
Rice .....	587,352	435,050	44,990
Riley .....	905,049	3,574,152	442,589
Rooks .....	191,898	2,201,375	640,845
Russell .....	2,413,260	1,258,592	167,440
Sedgewick .....	63,180	1,214,480	419,552
Seward .....	609,430	262,032	76,440
Shawnee .....	1,222,664	65,946	81,810
Sheridan .....	1,878,352	176,785	43,920
Sherman .....	1,892,364	616,564	111,980
Stanton .....	129,396	11,583	22,660
Stevens .....	1,803,578	2,972,898	978,956
Sumner .....	9,002	4,774	1,080
Thomas .....	50,349	2,177,218	88,283
Trego .....	461,088	249,336	78,407
Wabaunsee .....	163,669	332,877	49,664
Wallace .....	611,298	1,961,210	306,540
Washington .....	1,630,605	1,319,778	51,376
Wichita .....	1,290	550	.....
Wilson .....	2,275	3,700	1,070
Woodson .....	4,208,334	1,977,380	750,310
Wyandotte .....	694,818	385,322	103,608
	350,325	62,622	25,245
	75,230	1,967,400	54,872
	21,322	29,128	5,024
	357,240	3,301,230	1,019,736
	225,813	35,076	13,635
	206,416	1,679,608	105,098
	67,140	1,157,640	93,765
	170,900	424,032	49,728

#### THE GROWING WINTER WHEAT.

The area of winter wheat reported as

## Salt Rheum

Intense Suffering—Could Not Sleep—Cured by Hood's Sarsaparilla.

"I had salt rheum on my arms, which itched intensely and kept me from sleeping. The skin on my hands would crack open. My friends believed I was suffering from blood poisoning. I decided to take Hood's Sarsaparilla. I did not see any improvement with the first bottle but continued with the medicine and after taking five bottles I was completely cured. My hands are now as smooth as I could wish." A. D. HAGEY, Elroy, Pa.

### Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills are prompt, efficient and easy in effect. 25 cents.

probably sown is 4,640,000 acres, which is an increase of about 3 per cent. from last year's sowing. An increase ranging from 1 to 20 per cent. is shown in eighty-eight counties, and ten counties estimate no change in their acreage. As a rule, the conditions since seeding are stated to have been exceedingly favorable and a most promising stand and growth is at this date beneath a beneficent blanket of moist snow.

Corn is being contracted to feeders in the corn territory at an average of 25 cents per bushel, and well-nigh half the crop is likely to be so marketed by January. The number of fattening cattle is less by at least 5 per cent. than one year ago. Swine of all ages show a decrease of 2 to 3 per cent.

#### ALL CROPS AND PRODUCTS.

The yields and values of the year's crops and products are as follows:

Winter and spring wheat, bushels .....	60,790,661	\$32,937,042
Corn, bushels .....	126,999,132	30,296,098
Oats, bushels .....	21,702,537	4,268,861
Rye, bushels .....	2,153,050	761,970
Barley, bushels .....	2,771,514	620,872
Buckwheat, bushels .....	7,217	4,330
Irish and sweet potatoes, bushels .....	6,383,680	2,768,017
Castor beans, bushels .....	68,679	55,798
Cotton, pounds .....	50,750	2,538
Flax, pounds .....	1,598,539	1,278,831
Hemp, pounds .....	54,000	2,700
Tobacco, pounds .....	32,300	3,230
Broom corn, pounds .....	13,411,600	299,638
Millet and Hungarian, tons .....	735,238	2,074,820
Sorghum for sirup, gals. .....	1,550,822	601,754
Sorghum, Kaffir corn, mello maize and Jerusalem corn for forage .....		7,795,753
Tame hay, tons .....	847,935	3,179,756
Prairie hay, tons .....	1,248,140	3,432,585
Wool clip, pounds .....	654,708	98,206
Cheese, butter and milk .....		6,049,552
Poultry and eggs sold .....		4,145,733
Animals slaughtered or sold for slaughter .....		49,123,517
Horticultural and garden products and wine .....		2,010,690
Honey and beeswax, pounds .....	626,352	94,135
Wood marketed .....		114,501
Total value .....		\$151,922,723

#### NUMBERS AND VALUES OF LIVE STOCK.

Horses .....	777,828	\$25,668,324
Mules and asses .....	84,223	3,200,474
Milch cows .....	605,925	19,389,600
Other cattle .....	1,998,140	51,951,640
Sheep .....	207,482	570,575
Swine .....	2,766,071	12,447,320
Total value .....		\$113,227,933
Grand total .....		\$265,150,656

#### Farmer's Handy Feed Cooker.

Reader's attention is called to this device, which is sold at \$12.50 for 50-gallon capacity. By feeding poultry and animals cooked food during winter at least



one-third of the feed is saved; also having stock in a healthy condition, preventing hog cholera among your hogs and insuring the hens laying freely during the winter months. On application to the Empire Manufacturing Co., Quincy, Ill., a catalogue giving full description, may be obtained. They are made in all sizes.



## The Stock Interest.

### THOROUGH-BRED STOCK SALES.

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

DECEMBER 15 AND 16—C. G. Comstock, Albany, Mo., Herefords, Kansas City, Mo.

### SUMMARY OF DIGESTIVE EXPERIMENTS WITH KAFFIR.

Oklahoma Experiment Station Bulletin.

In a digestion experiment with steers at this station, in the winter of 1898, the following results were obtained. Four trials were made in each case with the exception of soaked Kaffir corn, with which two trials were made:

1. Kaffir stover contained as much digestible matter as corn stover.
2. Kaffir fodder contained 10 per cent. less of digestible matter than corn fodder.
3. Kaffir heads contained one-third as much digestible matter as corn and cob meal.
4. Kaffir corn fed in the heads was neither more nor less digestible than when fed after threshing.
5. Kaffir corn fed after soaking in water for twelve hours was less digestible than when fed dry.
6. Kaffir corn fed dry contained 40 per cent. less digestible matter than coarsely-ground Kaffir meal.
7. Kaffir meal, coarsely ground, contained 20 per cent. less digestible matter than corn meal.
8. It paid to grind Kaffir corn. One hundred pounds of Kaffir meal contained as much digestible matter as 167 pounds of Kaffir corn.
9. A gain of 13 per cent. in the amount of digestible matter was secured when Kaffir fodder was threshed, the grain ground and fed to steers with the shredded stover from the fodder.
10. A gain of less than 2 per cent. in the amount of digestible matter was secured when Kaffir fodder was threshed, and the grain fed to steers with the shredded stover from the fodder.

#### SUMMARY OF RESULTS.

	PER CENT. DIGESTIBLE.					
	Dry matter	Ash	Protein	Fiber	N-free extract	Ether extract
Shredded Kaffir stover.....	56.3	19.0	80.5	67.0	58.2	79.8
Kaffir corn, fed dry.....	41.7	63.9	45.6	45.4	40.8	44.8
Kaffir corn, soaked.....	38.0	65.7	40.2	35.2	38.0	38.8
Kaffir heads.....	24.3	53.6	12.3	27.4	30.8	31.1
Coarse Kaffir meal.....	64.2	53.3	53.3	75.9	46.1	46.1
Kaffir fodder.....	60.6	7.8	38.1	60.4	66.4	61.0

Average of analyses of Kaffir products made at this station are given in the following table. Results are stated on the basis of material as sampled in each case:

	No. of analyses.	PERCENTAGE COMPOSITION.					
		Water	Ash	Protein	Fiber	N-free extract	Ether extract
Kaffir stover.....	6	19.18	8.02	4.85	26.78	39.60	1.57
Kaffir fodder.....	9	9.65	4.74	5.64	21.78	55.79	2.40
Kaffir heads.....	1	21.63	2.38	8.40	6.92	58.26	2.41
Kaffir corn.....	6	12.52	1.26	10.86	1.94	70.48	2.94

The following table is secured by combining the two previously given. "Carbohydrates and fat" includes the sum of the digestible fiber, nitrogen-free extract, and two and one-fourth times the ether extract.

	Total dry matter	PER CENT. OF DIGESTIBLE MATTER.				Nutritive ratio
		Protein	Carbohydrates and fat	Total	Nutritive ratio	
Kaffir stover.....	80.82	1.48	43.78	45.26	1:29.5	
Kaffir fodder.....	90.35	2.15	53.49	55.64	1:24.9	
Kaffir heads.....	78.37	1.03	21.53	22.56	1:20.9	
Kaffir corn.....	87.48	1.03	21.53	22.56	1:20.9	
Fed without previous preparation.....	4.73	32.60	37.38	1:6.9		
Soaked twelve hours before feeding.....	4.37	30.03	34.40	1:6.9		
Coarsely ground.....	5.70	56.54	62.33	1:9.8		

#### NOTES ON FEEDING EXPERIMENTS.

In trials during the winter of 1897-8, yearling steers fed Kaffir meal made better gains than those fed corn meal. In trials a year earlier corn meal gave somewhat better results, and this has been found true at other stations. Steers fed Kaffir heads made average gain of 1.85 pounds each per day; those fed Kaffir meal, 2.36 pounds. Slightly less was eaten in the head than when the grain was ground. Except in one trial, steers fed a mixture of Kaffir meal and corn meal made better gains than those fed either grain alone. The best gains, when several lots were fed alike, were made when about four pounds of whole cotton seed per

day for each steer was added to the Kaffir meal ration.

Horses, cows, sheep and hogs have all kept in good health and made fair gains when the only grain fed was Kaffir. In no trial at this station have hogs done quite as well when fed Kaffir in any form as when fed corn meal. The loss from failure to digest all the food eaten is much less when hogs are fed unground Kaffir than when cattle are so fed. In some cases hogs made less gain on soaked Kaffir than when it was fed dry—probably because they ate the latter more slowly and masticated it more thoroughly.

Running whole Kaffir stalks through threshing machine puts the stover in excellent condition for feeding. Cracking some of the grains in the process of threshing tends to increase percentage digested, if fed unground.

This station has not succeeded in getting large gains with steers fed whole cotton seed as sole grain, but making cotton seed a part of the grain ration has given good results in a number of cases.

From May 9 to September 1, of this year, nine yearling steers on pasture made an average gain of 160 pounds each. During September, when fed reasonably near full feed of corn, still on pasture, they averaged a gain of seventy-three pounds each. Taken from pasture and put on full feed of corn meal with dry rough forage they made little gain for the first three weeks of October, probably partly because of carrying less weight in stomach.

Experiments not completed, begun in October, 1898, indicated that where pigs can conveniently be allowed to harvest

tial in the finished carcass, he must nevertheless present that blocky frame and stoutness of build, accompanied by short, straight legs, wide back and loin, well-sprung ribs, fullness back of shoulders and in flanks, prominent brisket, full neck vein, wide chest, and well-rounded barrel, together with a good, soft, mellow handling skin and fine, silken hair, giving what is termed the thick, mossy coat, without coarseness, and with it all a good, strong, vigorous head, clear, full eye, and quiet temperament. The importance of an even covering of flesh and good handling quality can hardly be overestimated. The bone should be moderately fine and clean. Coarseness either in the bone or about the head and horns is particularly objectionable, as it indicates coarseness of texture throughout and a greater per cent. of offal and cheap meat, as well as a tendency to sluggish circulation. The head should present a certain refinement, finish and vigor that in a measure indicate general quality and superior excellence of finished product, though this refinement must not be accompanied by delicacy.—Prof. C. F. Curtis, in Fourteenth Annual Report of Bureau of Animal Industry.

#### Hog Houses and Feeding Floors.

Some advocate a covered feeding floor. We prefer one sheltered on the west and north, but not covered, writes L. N. Bonham.

No germs of disease can survive where there is no accumulation of dirt, and where the sun and fresh air have had access during the summer months. Summer shelters from the sun and storms are located in the clover fields or blue grass lots.



NEEDED ON EVERY FARM.

A good mill that will grind every kind of grain is a necessity on every farm and ranch. There are so many uses to which it can be put. No farm is quite complete without it. The Dain Double Geared Mill grinds any kind of grain as easily and twice as quickly as any other mill on the market, being so constructed that the inside burr revolves twice to one revolution of the sweep. The pressure between the burrs in grinding is carried on chilled roller bearings, reducing friction to the minimum and doubling the quantity of grist with the usual draft. There is no comparison between the Dain Double Geared Mill and any other mill for capacity or ease of operation. Top of box covered, preventing snow and rain from wetting ground feed and wind from blowing smaller kernels from receiving-box. Thousands of satisfied users testify to its superiority. If you are not familiar with it, send your name and address for circulars and illustrations to Dain Mfg. Co., Carrollton, Mo.

crops of peanuts, sweet potatoes or cow peas, being fed corn at the same time, these crops help much in economical use of corn. If fenced lots are available for the purpose, it is believed the saving of cost of gathering the crops makes this a desirable method of feeding.

Somewhat limited trials in feeding "stock melons" show them to be much liked, especially by hogs. Having a fair feeding value, being well suited to serve as a corrective of the bad effects of exclusive grain feeding to hogs, their large yield and the readiness with which they can be harvested make it probable that they may be wisely substituted for root crops in Oklahoma, in part, at least.

#### Selection of Stock Cattle for Feeding.

Practical and experienced feeders, who breed and purchase steers for fattening, observe striking differences in the aptitude of animals of varying types and make-up to lay on flesh readily and in such form and quality as to command the highest price on the market. It requires a well-trained eye to detect in all cases the possible variations of results in the store or stock steer; but there are some distinctions that are easily detected. There are certain types of cattle, for instance, that never feed profitably under any conditions, and it is quite as important to discriminate against these in a feed lot as to be able to recognize the excellence in other types.

The characteristics that make the profitable feeder are naturally more difficult to detect in animals in stock condition than when fattened, but notwithstanding this there are a number of indications that are fairly reliable. Though the young steer may be comparatively thin in flesh and temporarily lacking the thick, even covering of the back and ribs so essen-

tial in the finished carcass, he must nevertheless present that blocky frame and stoutness of build, accompanied by short, straight legs, wide back and loin, well-sprung ribs, fullness back of shoulders and in flanks, prominent brisket, full neck vein, wide chest, and well-rounded barrel, together with a good, soft, mellow handling skin and fine, silken hair, giving what is termed the thick, mossy coat, without coarseness, and with it all a good, strong, vigorous head, clear, full eye, and quiet temperament. The importance of an even covering of flesh and good handling quality can hardly be overestimated. The bone should be moderately fine and clean. Coarseness either in the bone or about the head and horns is particularly objectionable, as it indicates coarseness of texture throughout and a greater per cent. of offal and cheap meat, as well as a tendency to sluggish circulation. The head should present a certain refinement, finish and vigor that in a measure indicate general quality and superior excellence of finished product, though this refinement must not be accompanied by delicacy.—Prof. C. F. Curtis, in Fourteenth Annual Report of Bureau of Animal Industry.

The covered floor in winter will be icy in places, from slop and urine. The sunny floor is freed from moisture and ice by sunshine and is washed off by rains, and is more easily kept clean and wholesome. Let the sunlight into the house and pens and on the feeding floors during the winter and spring months. It is a tonic and disinfectant and health giver that excels all of man's make, and is cheaper. The absence of it is the bane of hog houses as well as of stables and dwellings.

The Red Polled Cattle Club of America held its annual meeting at the Sherman House, Chicago, November 22, 1898. The reports of the Secretary and Treasurer showed the Club to be in a flourishing condition financially. The Committee on Medals, consisting of the President and Secretary, made an oral report to the effect that it had carried out the resolution of instructions adopted at the last meeting, and distributed the medals to those entitled to receive them. Suitable action was taken to prevent the registration of animals otherwise than as approved by the Club. The following resolution, which was adopted by the Directors, looks to an exhibition of Red Polls at the Paris Exposition: "Resolved, That it is the sense of this board that an exhibit of Red Polled cattle should be made at the Paris Exposition in 1900, if suitable regulations are made, and that in furtherance of this purpose a committee of three members of the Club be appointed to correspond with breeders with a view to carrying out this resolution."

A Dutch investigator, Beyerinck, has lately made a special study of the little organisms called photo-bacteria, to which, in a large degree, the phosphorescence of the ocean is due. He has been unable to discover that the luminosity of these strange creatures plays any important part in their vitality. It appears to depend chiefly upon the food that they are able to obtain. When they have plenty of carbon they shine brilliantly, and the ocean surface glows with their mysterious light. When fed with sugar or glycerine, their phosphorescent power is increased.

A physician quoted by the Boston Transcript says that acute insomnia may be promptly cured by the practice of deep breathing. Draw into the lungs as much air as possible and do not exhale it until obliged to, and then as slowly as possible. It is somewhat of a task when the night is oppressively warm, but if persisted in is fairly sure to relieve that hyperaemia of the brain which everyday folk call wakefulness. The tricks of the sleepless to induce sleep are many, but none is found to be more immediately efficacious than this plan of forcing the lungs to take the burden off the brain and nerves.

M. Claudot, French Inspector of Forestry, has published his observations, made during several years, on the influence of woods on rainfall. He finds that the mean temperature is always lower in the woods than in the open, but the difference is only about half a degree, as a rule. Rain is more abundant in wooded lands, other circumstances being equal. There is three or four times more evaporation of water from open ground than from forest in a year, and the difference is greatest in summer. In open ground evaporation is greatest in July, and in forests it is a maximum in April. Woods exposed to the south and southwest receive most rain.

Following the old feudal custom of presenting a town or corporation with a mace as an ensign of authority, the people of London are about to present the colonists of Cape Town, South Africa, with an expensive silver mace. The design follows the form of the finest maces now in use in England. The head, surmounted by an imperial crown, is divided into four panels by figures of mermaids, typifying the maritime character of the city. The front one is filled by the coat-of-arms of the city, the reverse by those of the colony. The whole of the metal work, which is of silver and richly gilt, was designed and executed by a firm of silversmiths in Birmingham. The mace is said to be among the handsomest in the world.



### Corn at Oklahoma Experiment Station.

Oklahoma Experiment Station Bulletin.  
Except as noted, all tests were made with Adams' White Dent, a good medium early variety which has been grown in the neighborhood for eight years.

**Time of Planting.**—Beginning March 28, plats were planted each week until April 25; also one May 13. The largest yield was from first planting; next from third. Aside from this there was a steady decrease, except that planting May 13 gave larger yield than planting three weeks earlier. The later planting matured in less time than the earlier, there being only eight days difference in maturing of corn planted four weeks apart. In former years differences in yield caused by differences in time of planting were less marked.

**Thickness of Planting.**—The results from comparisons of plats planted at different thicknesses were somewhat contradictory. In general, the best yields were where planting was at rate of one kernel at about each twelve inches in rows three feet eight inches apart. Where the rows were three feet apart the yields averaged less. It made little difference whether the kernels were planted singly or two, three or four together at correspondingly greater distances. In 1897, on bottom land, there were small differences in yield whether the kernels were at rate of one for each twelve, fifteen or eighteen inches. In 1896 the largest yield was where single kernels were nine inches apart.

**Depth of Plowing.**—The largest yield, sixty bushels per acre, was from plat

larger yield than those cultivated even nine times. A yield of over thirty-nine bushels per acre was had where the only cultivation after planting was scraping surface, May 30. The kind of implement used seemed to make little difference. The season was more than usually favorable. In 1896 shallow cultivation gave better yields than did deep in all cases.

**Test of Varieties.**—Little was done in comparing varieties, trials in former years having seemed to show that a locally-grown, medium early white variety was equal to any of the large number tried at the station. An extravagantly-praised variety, the Cornucopia, or "seven-eared," was tried, giving a very small yield—less than fifteen bushels per acre. The ears were small. This trial would indicate that the variety has little value for Oklahoma. Planted thinly on rich soil it might give a large yield from an individual stalk. The "Brazil Flour corn," sometimes recommended, gave a yield of twenty-one bushels per acre, or considerably less than half the usual yields of the dent variety used in all other experiments.

A large number of plats gave yields of from forty to sixty bushels per acre. The soil was dry at time of planting, and in many cases not all the seed grew, giving an unsatisfactory stand. Chinch bugs did some damage on a number of plats.

### Kaffir Corn in Oklahoma.

The experiments with Kaffir corn at the experiment station in 1898 add to the evidence of the great value of this crop for Oklahoma. In the tests as to the

### A Question of Reseeding Prairie.

Editor Kansas Farmer:—I have a field which has been cultivated till the buffalo grass is killed out, and I want to work it back into grass again. It will go back to buffalo grass again in time if it is left alone, but this will take several seasons and I don't want to wait. Is there any tame grass to which it can be seeded, which will stand drought and trampling by cattle and make good pasture the first year? Will Johnson grass fill the bill, and if so where can the seed be bought and what will it cost? The ground is loose and in good condition, though somewhat weedy. Can the seed be drilled in or disked in, or will it be necessary to plow the ground again? Am not particular about getting a full stand. Would rather drill the seed in and turn the cattle on it and get half a stand, instead of plowing the ground and herding off of it to insure a full stand. Perhaps there is some other grass better suited for my purpose than Johnson. Should like to hear from some one who has had experience raising tame grasses on western Kansas uplands.

W. P. HARRINGTON.

Gove City, Kas.

### Preventing Texas Fever.

The trials under direction of the Oklahoma Experiment Station, of dipping cattle in the oil preparation prescribed by the United States Department of Agriculture showed that careful dipping would destroy all the ticks. A varying percentage of the cattle had their skin injured by the oil, with considerable irri-



Pleasant Dreams.

It does not lie in the painter's fancy to imagine a prettier picture than that of a young girl, with lips luscious with the promise of love, half parted in the smiles of happy dreamland. The mind of happy maidenhood is a clear and polished mirror, which, when the wits go wandering into the ghostland of dreams, reflects the impressions of waking hours. If those impressions are pleasant and painless and happy, she will smile in her sleep. If the impressions are those of a suffering woman, tortured with the special ailments to which the feminine organism is liable, the picture is spoiled by the lines of suffering and despondency. Maladies of this nature unfit a woman for joyous maidenhood and for capable motherhood. They incapacitate her to bear the burdens of life in any sphere of action. Household, marital and social duties alike are a burden to the woman who is constantly suffering from headaches, backaches, dragging sensations and weakening drains. Dr. Pierce's Favorite Prescription positively, completely, unfailingly cures troubles of this nature. It imparts health, strength, vigor to the distinctly womanly organs. It fits for carefree, healthy maidenhood, happy wifehood and capable motherhood.

"I have a little step-daughter who had St. Vitus's Dance, which your medicine cured," writes Mrs. T. F. Boze, of Ford, Dinwiddie Co., Va. "I spent about twenty dollars for doctor's bills and medicine, and it did not do the child one cent's worth of good. We commenced giving Dr. Pierce's Favorite Prescription and 'Golden Medical Discovery' and used three bottles of each, which cost only six dollars. Now the child is running around every where and is just as healthy as ever."

## B. & B.

### There's Time Yet

to send here for your holiday goods and get the advantage of this store's choice goods for less prices.

If you haven't our catalogue to select from, send your order anyhow—we'll give it the best attention, and follow your idea of what's wanted as closely as possible. Such large assortments to select from as allow of no disappointment to any preference.

### Some Holiday Specials

from among hundreds:—

Men's or women's all pure linen hem-stitched Handkerchiefs with hand embroidered initial—any letter—25c each—\$2.85 dozen. Half dozen lots in pretty box without charge.

Children's all linen Handkerchiefs with hand embroidered initial, 75c for box containing six.

Ladies' yard square Liberty Silk Scarfs—fine quality—\$1.00 each—pink, light blue, cardinal, lavender, maize, white or black.

Ladies' black, brown, blue, green or red grain leather combination Pocket-books—sterling or oxidized corners, 50c.

Men's Military Hair Brushes—ebony, sterling silver back, fine bristles, \$2.00 pair.

Superb assortment men's neckwear—Puffs, Ascots, Ties, Four-in-hands, 50c. Strings and Bowties, 40c. Almost no end of nobby colorings.

Our mail order department is thoroughly organized and equipped for promptness and sureness.

## BOGGS & BUHL,

Department G. G. Allegheny, Pa.



### \$2.75 BOX RAIN COAT

A REGULAR \$5.00 WATERPROOF MACKINTOSH FOR \$2.75.

Send No Money. Cut this ad. out

state your height and weight, state number of inches around body at breast taken over vest under coat

close up under arms, and we will send you this coat by express, C. O. B., subject to examination, examine and try it on at your nearest express office and if found exactly as represented and the most wonderful value you ever saw or heard of and equal to any coat you can buy for \$5.00, pay the express agent our special offer price, \$3.75, and express charges.

THIS MACKINTOSH is latest 1899 style, made from heavy waterproof, tan color, genuine Davis Cover Cloth; extra long, double breasted, Sager velvet collar, fancy plaid lining, waterproof sewed, strapped and cemented seams, suitable for both rain or overcoat, and guaranteed greatest value ever offered by us or any other house. For Free

Cloth Samples of Men's Mackintoshes up to \$5.00, and Made-to-Measure Suits to \$5.00 to \$10.00, write for Free

and Overcoats at from \$5.00 to \$10.00, write for Free Book No. 800. Address, SEARS, ROEBUCK & CO., CHICAGO, ILL.

(Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

Mention Kansas Farmer.



VIEW SHOWING WACONDA SPRINGS IN DISTANCE, AND ROCK FORMATION FORMED FROM OVERFLOW OF SPRINGS, CAWKER, KAN.

From a photographic view taken along the line of the Missouri Pacific Railway.

plowed with disk plow, running about six inches deep, with its subsoiler four inches lower, loosening ground to depth of ten inches from surface. Almost as good yield was from plat plowed in same way except that subsoiler ran deeper—loosening to depth of twelve to fourteen inches. Where the land was plowed eight inches deep with good riding plow the yield lacked little of being equal to the best. Singularly enough, the yield was less where the subsoiler followed the eight-inch plowing. The smallest yield by far was from plowing four inches deep.

**Root Pruning.**—Ten hills on each of five plats were purposely root-pruned with knives five times from May 17 to June 14—the period of cultivation. No injury resulted from attempted pruning where knife ran only three inches deep; in fact, the yields were larger than on the unpruned check plats. Where the knife cut six inches deep within six inches from the stalk the yield was much reduced; also when the pruning was done to depth of six inches at distance of twelve inches from stalks, but no harm came by pruning at depth of six inches twenty-two inches from the stalks. Apparently there were fewer or no roots within three inches of the surface and few six inches from the surface in the center of the rows.

**Methods of Cultivation.**—The results were not conclusive. Taking averages, little differences were found whether the cultivation was deep or shallow. The two largest yields were nearly the same, one with deep, one with shallow cultivation. No gain came from very frequent cultivation. A plat cultivated twice gave

thickness of planting, five plats gave an average yield at rate of 87 bushels threshed grain, 56 pounds to the bushel—ranging from 80 to 102 bushels per acre; six others gave average yield at rate of 73 bushels per acre.

The largest yields were where the corn was planted thicker than most farmers think best, when grain is the part chiefly desired. With rows three feet apart, four plats, where the stalks averaged one to a little over four inches, gave yield at rate of 85 bushels; ten plats with stalks averaging one to each eight inches gave yields at rate of 45 bushels, and six plats, where the stalks averaged one for a little over twelve inches, gave yields at rate of 24 bushels per acre. Where the rows were thirty inches or forty-four inches apart the yields decreased with the thinner platting in about same proportion. The thicker planting gave a larger total yield as well as larger yields of seed. Two plats gave yields of stover at rate of over seven and one-half tons per acre.

The yields in 1897 were much smaller than those in 1898, but, as this year, the largest yields were where the rows were three feet apart and the stalks were at the rate of one for each six inches or less. It is believed that, for average upland soils in the Territory it is advisable to plant so as to have one stalk at about each two inches in rows three feet apart. The weight of stalks and leaves is greater and the quality better than with thinner planting.

The "Black Hulled White" was the variety used. The land had been given a coating of stable manure. The cultivation was not exceptional in any way.

tation of the eyes. Where the cattle were driven considerable distance or exposed to storms soon after dipping, some of them died. The indications are that it is much safer to dip in warm weather than cold weather. In all cases the cattle should have good care and feed for some days after dipping. Driving on dusty roads is a chief cause of injury to the eyes.

The results of trials by the station of inoculating Northern cattle with blood of Southern cattle were unsatisfactory. In most cases they contracted Southern or Texas fever, sometimes with fatal effects. The indications are that the cattle recovering were at least partially immune, but the apparent inability to control results with our present knowledge makes it not advisable to recommend this method of preventing loss.

TO BE HEALTHY AND STRONG  
Use "Garland" Stoves and Ranges.

### Wanted.

A system of creameries, and skimming stations in the best field in Kansas; a territory that is as yet unoccupied. A splendid chance for the right person or company. For further information call on or write C. V. Kinney, Oakley, Kas.

### Big Drop in Dress Goods.

Every one can now buy Dress Goods of every description and from one yard upwards, for just as little money as the largest merchants can buy in quantities. You will receive free by mail postpaid, a book of 60 cloth samples of latest things in all kinds of Dress Goods, at 12½c to \$1.25 per yard, also full instructions how to order, etc., if you will cut this notice out and mail to the big reliable house of SEARS, ROEBUCK & CO. (Inc.), Chicago.



## Gossip About Stock.

R. S. VanTassell, Cheyenne, Wyoming, recently purchased forty-one head of registered Hereford bulls of C. A. Stannard, Hope, Kas.

Last week R. T. Scott, of Pawnee City, Neb., and L. J. Hitchcock, of Salem, Neb., held a public sale of forty-four Short-horn cattle at Fall City, Neb., at an average of \$137.87. Nine Scotch females averaged \$210.55. The bulls averaged \$189.

A swine event of rare importance will be the public sale of eighty Duroc-Jersey swine, to be held at Cherokee, Kas., December 14, by our old advertiser, M. H. Alberty. Persons interested in this class of swine should make it a point to be on hand.

D. B. Turner, of Frederick, Rice county, Kansas, has made a good start for a herd of pure-bred Hereford cattle, having recently purchased from the Sunrise stock farm, owned by C. A. Stannard, of Hope, Kas. His herd bull is Kodax 2d by Kodax of Rockland 42397 and out of Cherry Blossom 2d.

R. S. Cook, Wichita, reports the Champion herd of Poland-Chinas as doing tip-top and in the best of health. He has ready for sale twenty-five head of nice large, growthy spring males, sired by Jumbo, Lawrence Perfection 2d and King Hadley. Also twenty gilts bred or open as desired. He will now spare King Hadley, as he has used him as long as desirable in his herd.

On Tuesday, December 20, 1898, there will be a combination sale of Short-horn cattle by E. H. Littlefield and Poland-China swine by F. B. Hutchinson, of Newkirk, Okla. Both of these breeders are well known as among the very best in Oklahoma and have been generous patrons of our best Kansas breeders. The character of the offering is representative and well worth the attention of breeders everywhere. Notice advertisement in another column and write for catalogue.

On November 29, at Centralia, Mo., there was held a sale of Hereford cattle which may properly be called a farm sale, as the cattle offered had no special preparation and were but little advertised, except locally. The offering of fifty head was made from the herds of John F. Wilhite, Pochepot, Mo., and W. C. Baskett and H. R. Walker, of Pavette, Mo. Nine bulls averaged \$216.66; forty-one females averaged \$167.80, with the general average for fifty head of Herefords \$176.50.

For the encouragement of Berkshire breeders, it may be stated that our advertisers report unusually good sales. Mr. C. A. Stannard, of Hope, Kas., reports the largest sales he has ever known, having made sales this season which have gone to various States. The most numerous sales have been made in Kansas and Missouri, but quite a number of choice animals have gone to the States of Arkansas, Colorado, South Dakota, Nebraska, Iowa, Illinois and California, besides several to Oklahoma and Indian Territory and New Mexico.

## International Poultry Exhibition at St. Petersburg.

The United States Department of Agriculture has received notice through the Department of State from Count Cassini, Russian Ambassador, that the Russian Society of Bird Dealers will hold an International Poultry Exhibition at St. Petersburg from the 13th to the 28th of May, 1899. Exhibitors will be granted reduced rates for their exhibits on all Russian railroads, and free entry for same on condition that they be exported from Russia within two months after the close of the exhibition.

The exhibits are to consist of nine classes, as follows: Domestic birds; domesticated wild birds; pigeons; singing and exotic birds; fattened poultry and killed fowl and game; products of poultry keeping; apparatus and accommodations for breeding, guarding, fattening, and transporting birds; models of poultry yards, incubators, etc.; medical, hygienic, antiseptic, and feeding articles; and photographs, nests, stuffed birds, eggs, etc.

Exhibitors will be required to pay an entrance fee for their exhibits before their arrival at St. Petersburg and to send notice of their intention to enter exhibits to the Committee of Organization of the International Poultry Exhibition, Fontanka, 10, Imperial Agricultural Museum, St. Petersburg, Russia.

Diplomas of honor; gold, silver, and bronze medals; honorable mentions; and objects of artistic value will be awarded as prizes.

## Sharples Quality.



Dairying is not unpleasant when you have the proper tools. A man takes pride in having a reputation for making better quality butter than his neighbor.

A LITTLE GIANT SEPARATOR will enable him to make the highest quality of butter. The separator takes much of the drudgery away from dairying.

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

## Interesting Paragraphs.

Friend—I understand your wife's family trace their lineage back to William the Conqueror. Mr. Meek—I guess that's so. Old William was a terrible fighter, wasn't he?

She—I cannot entertain the idea of marrying you. My heart is with our brave boys at the front. He—It's a good thing for the boys. They need all the ice they can get down there.—Indianapolis Journal.

The German biologist says that the two sides of a face are never alike; in two cases out of five the eyes are out of line; one eye is stronger than the other in seven persons out of ten; and the right ear is generally higher than the left.

First Theosophist—That settles it; I resign from the society. Second Theosophist—What's the matter? First Theosophist—Why, one of my tenants has gone off without paying his rent and left me a note saying he would try and square with me in some future existence.

A common shorts bag, with a rope of the right length, its two ends fastened to the upper corners of the bag, makes a good wood carrier when the kitchen box has to be filled. The rope is slipped over the shoulders, or over one and under the other arm, then the other end of the bag is held up apron-wise and the wood piled in. A huge armful of wood can be carried easily in this way.

A German dentist named Dr. Herz has made a most valuable discovery, which is likely to prove beneficial to a vast number of persons. It consists in an inculcant prepared from microbes he cultivates for the purpose. When applied in the case of a decayed tooth it stops the pain, but does not destroy the nerve; further, it again fixes the tooth and makes it possible to put in a lasting stopping. He has already treated a number of cases with it, and they have proved most successful.

Goodyear's great discovery of the art of vulcanizing India rubber needs a supplement in the shape of a process of devulcanizing old rubber so as to make it amenable to a second treatment. No perfect reclaiming process has ever been devised. The present imperfect process gives a product which is used for some articles, such as the heels of India rubber boots. India rubber is advancing in price and a substitute for it remains to be discovered. It is said that an India rubber factory once built a road through a swamp with the waste scrap from its works. Now it would be reclaimed and utilized.

At one time "The Five Alls" used to be a not uncommon sign for public houses, representing five human figures in different dresses. In the center of the picture stood the King in his robes and crown, with the motto, "I govern all." Next to his majesty, on his right, was the lawyer in his gown, with the motto, "I plead for all," and next the lawyer was the priest in his pulpit—"I pray for all." On the King's left stood the soldier in full uniform and usually very fat, with the motto, "I fight for all," and next him came the farmer, hook in hand, with the grim motto, "I pay for all." In some sign-boards the figure of a workingman with his tools took the place of the farmer.

Books printed four centuries ago still exist, with their paper in good condition, but if the committee recently appointed by the Society of Arts in London to study the deterioration of modern paper is not seriously mistaken, multitudes of books printed to-day will be very short-lived. Perhaps, in many cases, that fact is not to be regretted. If bad and worthless books could always be printed on paper that in a few years turns to dust, and good books always on enduring paper, the makers of bad paper would, after all, be benefactors of the public. The committee referred to finds that paper containing mechanical, or ground, wood pulp especially tends to both disintegrate

## Dairy School,

State Agricultural College,  
Manhattan, Kansas,

JANUARY 3 TO MARCH 25, 1899,

For creamery patrons and Private dairymen, offering thorough instruction in the selection, feeding, breeding and care of the dairy cow, and best methods of handling her products.

Tuition Free. Board and Books at Cost. For full particulars address PRES. THOS. E. WILL.

tion and discoloration. Papers consisting mainly of fibers of cotton, flax and hemp are the most lasting.

Use Dr. Bull's Cough Syrup for that hacking cough. It is the best medicine for throat and lung affections. One bottle of this reliable remedy will effect a cure. Price 25c.

## A Bunch of Keys

descriptive of the agricultural and mineral resources of Western Canada will be sent to all applicants free.

## The Experience of Settlers and Reports of Delegates

will prove most interesting reading, and if you are seeking a new home surrounded by the conditions making life for yourself and family agreeable, with a certain prospect of competence for yourself and an assurance for your children's prosperity, you will take up 160 acres of Western Canada's great wheat land, adapted also to dairying and mixed farming. These lands are given free to every bona fide settler. For further information apply to the Department of the Interior, Ottawa, Canada, or to

J. S. CRAWFORD,  
214 West Ninth St., Kansas City, Mo.,  
Government Agent.

## "FEEDS AND FEEDING."

A Hand-Book for the Stockman, by Prof. W. A. Henry, of the Wisconsin Experiment Station. Price \$2. It is a large octavo volume of 657 pages. Years of time and thousands of dollars in cash were spent in its preparation. Part I.—Plant Growth and Animal Nutrition. Part II.—Feeding Stuffs. Part III.—Feeding Farm Animals. In addition to the thirty-five chapters enumerated in above parts there is an appendix containing elaborate and up-to-date tables giving the average composition of American feeding stuffs, their digestible nutrients and fertilizing constituents, feeding standards for farm animals and a glossary of scientific terms. The volume closes with an extended index arranged for easy and quick reference. Throughout the work there are numerous cross references so that any subject may be quickly and exhaustively studied. Of this work, Thos. Shaw, Professor of Animal Husbandry, Minnesota College of Agriculture, says: "You have made the entire live stock community your debtor." This valuable book will be sent by prepaid express to any address for \$2.75, or with the KANSAS FARMER one year for \$2.75. Address KANSAS FARMER CO., Topeka, Kas.

# CALIFORNIA

## GREAT

## ROCK ISLAND

## ROUTE

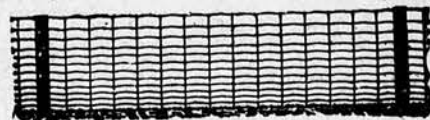
LOW RATES ON OUR PERSONALLY CONDUCTED TOURIST EXCURSIONS.

Leave Kansas City every Friday via Colorado Springs and Scenic Route. Southern Route leaves Kansas City every Wednesday via Ft. Worth and El Paso to Los Angeles.

These Excursion Cars are attached to fast passenger trains, and their popularity is evidence that we offer the best.

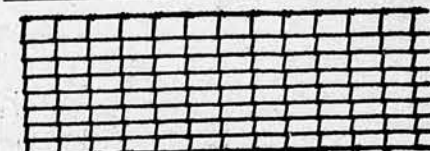
Write for handsome itinerary which gives full information and new map, sent free. For complete information, rates and berth reservations, see your local ticket agent or address

E. E. MacLEOD, A. G. P. A., Topeka, Kas.  
JOHN SEBASTIAN, G. P. A., Chicago.



## LIVELY MUSIC!

We've always kept the Fence Business "Humming," but we would like you to learn our new March and Waltz, and "Come in on the chorus." Copies free. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



## CABLED FIELD AND HOC FENCE

With or without lower cable barbed. Cabled Post-and-Rail, Garden and Rabbit Fence, Steel Web Picket Fence for lawns and cemeteries, Steel Gates and Posts. DE KALB FENCE CO., 23 High St., DE KALB, ILL.



YOU CAN MAKE \$10 TO \$30 Per day exhibiting our Panoramic Cuban War Exhibition Outfit.

Everybody is enthused over the brilliant victories of our Army and Navy and the exhibitions have only to be seen to bring crowded houses at good prices for admission. We furnish the complete outfit, including 55 Cuban War Views, High Grade Stereoscopes, large (14x21) Advertising Posters, Admission Tickets, etc. for a big money. Cut this ad. out and send for circulars with full particulars and copies of testimonials from exhibitors who are making big money with our outfit. Address, SEARS, ROEBUCK & CO., INC., Chicago, Ill.



## YOU CAN MAKE BIG MONEY

EXHIBITING OUR WONDERFUL GEM GRAPHOPHONE TALKING MACHINE. In public halls, school houses and churches, it talks, it sings, it laughs, it plays music, it imitates perfectly the brass band, the orchestra, the piano, the human voice, in fact anything. A wonder as a money maker and as a home entertainer. All the latest music, either vocal or instrumental, speeches of prominent men, etc. COMPLETE OUTFIT consisting of Talking Machine with automatic spring motor, 12 musical or talking records, large illustrated advertising posters (12x18 inches), admission tickets and instruction book with advice about making engagements, securing the use of halls, etc. FOR \$15.25 + \$0.50 S.M.P. that a child can operate it and nothing to get out of order. Will last a lifetime. Cut this ad. out and send for catalogue of Gramophones, Records, etc., with copies of hundreds of testimonials from people who are making hundreds of dollars with our exhibition outfit. ADDRESS, SEARS, ROEBUCK & CO., (Inc.) Chicago, Ill.

## SEND US ONE DOLLAR and this ad. and we will send you this big \$25-lb. COOK STOVE, by freight C.O.D., subject to examination.

Examine it at your freight depot and if found perfectly satisfactory and the greatest stove bargain you ever saw or heard of, pay the freight agent our SPECIAL PRICE \$13.00 less the \$1.00 sent with order, or \$12.00 and freight charges. This stove is size No. 8, oven is 16x21x11, top is 12x23; made from best pig iron, extra large flues, heavy covers, heavy linings and grates, large oven shelf, heavy tin-lined oven door, handsome nickel-plated ornamental castings and trimmings, extra large deep genuine Standard porcelain lined reservoir, handsome large ornamental base. Best coal burner made, and we furnish FREE an extra wood grate, making it a perfect wood burner. WE GUARANTEE with every stove and guarantee safe delivery to your railroad station. Your local dealer would charge you \$25.00 for such a stove; the freight is only about \$1.00 for each 500 miles, so we save you at least \$10.00. Address, SEARS, ROEBUCK & CO., (Inc.) CHICAGO. (Sears, Roebuck & Co. are thoroughly reliable—Editor.)



## WRITE FOR OUR BIG FREE STOVE CATALOGUE

## 4-POUND CATALOGUE FREE!

THIS BIG CATALOGUE CONTAINS 1120 PAGES is 9x12x2 inches in size, contains over 100,000 quotations, 10,000 illustrations, the largest, most complete and lowest priced catalogue ever published. NAMES THE LOWEST WHOLESALE CHICAGO PRICES ON EVERYTHING, including everything in Groceries, Drugs, Dry Goods, Hardware, Stores, Dresses, Boots and Shoes, Watches, Jewelry, Books, Hardware, Stores, Machinery, Crockery, Organs, Pianos, Musical Instruments, Furnishings, Guns, Revolvers, Fishing Tackle, Bicycles, Photographic Goods, etc. Tells just what your storekeeper at home must pay for everything he buys and will prevent him from overcharging you on anything he buys. Explains just how to order, how much the freight, express and mail will be on anything to your town. THE BIG BOOK COSTS US NEARLY \$1, the postage alone is 30 cents.

OUR FREE OFFER. Cut this advertisement out and send to us with 15 cents in stamps to help pay the 30 cents postage and the Big Book will be sent to you FREE by mail postpaid, and if you don't say it is worth 100 times the 15 cents you send, as a key to the lowest wholesale prices of everything, say so, and we will immediately return your 15 cents.

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"Sears, Roebuck & Co. is one of the largest houses of its kind in Chicago."—Chicago Inter Ocean.

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"A law should be passed compelling the use of this catalogue in all public schools."—The Hon. G. A. Southtown.

We could quote thousands of similar extracts. SEND 15 CENTS AT ONCE and you will receive the 4-lb. book by return mail.

Address, SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL., U. S. A.



## The Home Circle.

### SEALED ORDERS

Our life is like a ship that sails some day  
To distant waters, leagues and leagues  
away;

Not knowing what command to do and dare  
Awaits her when her eager keel is there.

Birth, love and death are ports we leave  
behind;

Borne on by rolling wave and rushing wind,  
Bearing a message with unbroken seal,  
Whose meaning fain we would at once re-  
veal.

It may not be. But ever and anon  
Some order, sealed at first, we open and con;  
So learn what next, so east or westward fly,  
And ne'er again the port of Birth espy.

Where lies our course in vain we seek to  
know.  
"Go forth," the Spirit says, and forth we  
go;

Enough that, wheresoever we may fare,  
Alike the sunshine and the storm we share.

But still not knowing, still with orders  
sealed,

Our track shall lie across the heavenly field;  
Yet there, as here, though dim the distant  
way,

Our strength shall be according to our day.

The steady his. He made it, and his grace  
Lurks at its wildest wave, its deepest place.  
Our truest knowledge is that he is wise;  
What is our foresight to his sweet surprise?  
—J. W. Chadwick.

### Why They Came to Kansas.

BY ENGLISHWOMAN.

Mother had gone up to London to see  
her folks and had taken the baby. Con-  
sequently John found plenty of time to  
get into mischief. He often employed  
some of his leisure evening hours in  
tending a pretty garden—so did the new  
neighbor. Said "new neighbor" was a  
tall, gentlemanly man with a wonderful  
taste for arranging and planning an ar-  
tistic flower garden. He seemed to have  
plenty of spare time, too, and was often  
to be seen entertaining a group of the  
villagers with his conversation. John  
wondered what his special hobby might  
be, and not unwillingly accepted his help  
in bedding out some choice geraniums.  
The stranger proved himself both en-  
tertaining and talkative. He came, he  
said, from the northwest corner of Iowa  
—was an artist by profession but at  
present time was enjoying a visit to his  
native land and was also employed in the  
interests of the — railroad, trying to  
persuade people to emigrate to that  
paradise spot—the "northwest corner  
of Iowa." Such tales he told of the won-  
ders of that far-away region—the im-  
mense crops of corn; the valuable crops  
of flax, the industry, energy and easily-  
acquired wealth of the inhabitants—  
were all dwelt upon with marvellous  
power, to say nothing of the enormous  
quantities of wild fruit. "Why," said he,  
"we just hitch up a wagon and in the  
season five or six of us can easily gather  
a wagon-load of wild strawberries in a  
day—and such big ones, too." Very  
soon John's pretty country villa was  
inundated with papers, reports, maps and  
periodicals, all setting forth in one way  
or another the glories of that famous  
place.

Mother came home after a month's  
absence, to find her husband afflicted  
with the Iowa fever of a most malignant  
type. Letters were written, plans made,  
estimates drawn up, with the help of the  
artistic agent, who spent a part of nearly  
every evening with them for the pur-  
pose of aiding and abetting in every way  
the possible move in the near future.

Before long John's mind was made up  
—he would emigrate—he would throw up  
his present permanent and lucrative em-  
ployment; he would sell out his stocks  
and dispose of his houses, and at forty  
years of age start afresh, in a new coun-  
try, in a new business. But although  
still in the delirium of fever, John had  
some sense left, and the thought oc-  
curred to him whether, after all, the  
northwest corner of Iowa was the best  
spot on the face of the earth. He deter-  
mined to investigate the matter, and  
wrote to several of the State Governors  
for information from the various States.  
Then, indeed, were the papers, reports  
and maps multiplied and duplicated, till  
one might suppose every State to be a  
paradise. It was not long before two or  
three other States were picked out as at  
any rate being equal to Iowa, and in  
some respects better. The accounts of  
Kansas sounded very alluring just after  
the mighty harvest of 1878, and a  
kind and cordial invitation from the  
Governor of Kansas settled the matter,  
and so they came to Kansas.

To his credit be it said, the immigra-  
tion agent took the disappointment with  
a good grace and even helped them with  
such advice as he was enabled to give.

The Missouri Pacific will sell tickets on  
December 24, 25, 26 and 31, 1898, and January  
1, 2, 1899, limited for return January 4,  
1899, at rate of one fare for the round trip,  
between points within 200 miles distance.  
Minimum rate 50 cents.

### Birth of Many Ports.

Mistress—Did you manage to find the  
basket of eggs that was on the pantry  
floor, Kate? Servant—Oh, yes, mum,  
aisily. I shtopped in it.—Tit-Bits.

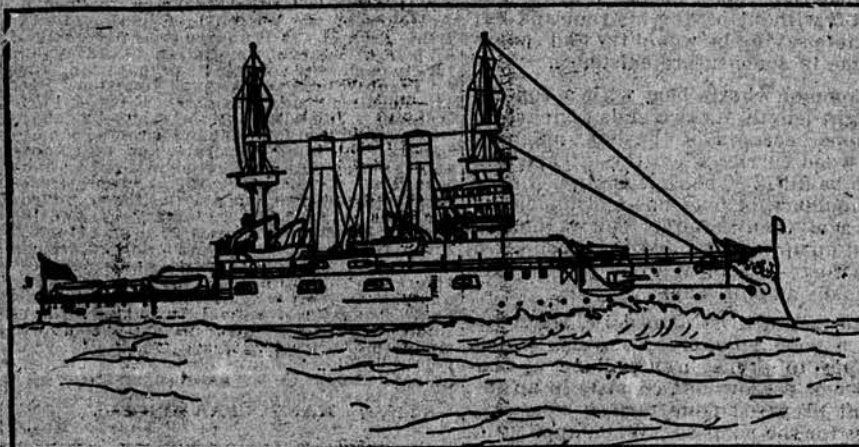
Doctor—That's a bad razor cut in your  
head, Rastus. Why don't you profit by  
this lesson and keep out of bad company?  
Rastus—Ah would, doctah, but Ah ain't  
got no money for toe git er divorce.

The British foreign office receives  
about 100,000 dispatches a year. That  
is, for every working day in the year  
over 300 dispatches come under the notice  
of the department presided over by the  
Secretary of State for Foreign Affairs.

Broncho Bill—Since Pistol Pete dug up  
that tree the boys hung his father on and  
planted it in his front yard he's got aw-  
ful proud. Tenderfoot—Proud? What is  
there about that to make him proud?  
Broncho Bill—Why, he's now the only  
man in town with an authentic family  
tree.

Uncle Jabez—I understand that old  
Skayles, the feller that runs the grocery  
down at the Corners, is goin' to fix up a  
bill agin Spain for an indemnity. Uncle  
Silas—He is? What fer? Uncle Jabez—  
Why, he claims that he had fourteen  
first-class store boxes whittled all to  
pieces while the war was in progress.—  
Judge.

The largest boat ever launched on the  
Mississippi slid off the ways at the Iowa  
Iron Works' ship yard in Dubuque on  
Monday. This is a transfer steamer built  
for the Texas & Pacific Railway Com-  
pany, to be used at New Orleans. It is  
a steel hull 303 feet long, fifty-six foot



THE NEW "MAINE"

After a Drawing in Harper's Weekly. Copyright, 1898, by Harper & Brothers.

The accepted plans for the new battle-  
ship Maine, and her sister ships, the  
Ohio and the Missouri, call for a ship of  
approximately 12,150 tons, with a water-  
line length of 338 feet, beam 72 feet, and  
draught of 24 feet 6 inches, with full  
stores, supplies and ammunition, and a  
guaranteed speed of 18 knots, at a cost  
of \$2,885,000.

In appearance, according to Harper's  
Weekly, the Maine, Ohio, and Missouri,  
up to the top of the superstructure, and  
as far as the armament is concerned, are

beam and eighty-seven feet over all, and  
covers five-eighths of an acre, or 28,000  
feet. The vessel will leave Dubuque  
drawing but seventeen inches of water  
and will receive her machinery at New  
Orleans.

There are 250,000 Indians in the United  
States, distributed throughout twenty-  
five States and Territories, the largest  
number, 72,000, living in the Indian Ter-  
ritory, with 35,000 in Arizona, 18,000 in  
South Dakota, 13,000 in Oklahoma, 12,-  
000 in California, 10,000 in Wisconsin,  
5,200 in New York and 2,800 in North  
Carolina.

College girls in England have taken of  
late to a new old game—hockey. Boys  
know all about it. The girls of Girton  
College and Newham College recently  
played a match game at Wimbledon.  
They wore short skirts, but as hockey is  
bad for the shins, each girl had clumsy  
leather guards over that portion of her  
anatomy, so that their appearance in the  
field was rather clumsy.

The province of British Columbia has  
coast lines on the North Pacific of nearly  
1,000 miles, and an average width of over  
400 miles. Its area is nearly 400,000  
square miles. It is nearly four times as  
large as Great Britain and Ireland, and  
twice as large as either Germany or  
France, Austro-Hungary or Spain. It is  
the same size as Egypt or German East  
Africa, nearly six times greater than the  
State of Washington, nearly five times  
greater than the two Dakotas, Minnesota,  
or Idaho, and over three times greater  
than Montana or Oregon. This immense

territory is intersected by four distinct  
and nearly parallel mountain ranges  
called the Rocky, Gold, Coast and Van-  
couver ranges.

A clergyman preached a rather long  
sermon from the text, "Thou art weighed  
in the balance and found wanting." Af-  
ter the congregation listened about an  
hour some began to get weary and went  
out; others soon followed, greatly to the  
annoyance of the minister. Another per-  
son started, whereupon the preacher  
stopped his sermon and said: "That is

identical with the Illinois, Wisconsin,  
and Alabama. They will carry four 18-  
inch breech-loading rifles, paired in ellip-  
tical turrets forward and aft, fourteen 6-  
inch rapid-fire guns in broadside bat-  
teries, and twenty-four rapid-fire and  
machine guns in the secondary battery,  
mounted at various points throughout the  
ship. For armoring these ships the origi-  
nal 16½-inch Harveyized armor plating  
will be superseded by 10-inch Kruppized  
plating which admits of a broader and  
longer belt for the same weight of steel.

right, gentlemen; as fast as you are  
weighed, pass out!" He continued his  
sermon some time after that, but no one  
disturbed him by leaving.—London Judy.

The fact has recently been pointed out  
by a Russian geographer that the shores  
of Siberia are not flat and water-soaked  
as represented in text books, and even  
on the latest maps, but, on the contrary,  
are high, and in many places even hilly.  
With the exception of the Obi region and  
the deltas of a few rivers, Siberia meets  
the Arctic ocean with a bold and lofty  
coast line.

No Spanish territory can be relin-  
quished without the consent of the Cor-  
tes, or Congress. The Cortes was called  
together September 5th to authorize the  
government to abandon sovereignty over  
the colonies, according to the stipula-  
tions of the peace protocol. At the de-  
mand of the Ministry it was voted to pro-  
ceed in secret session. Stenographers  
were excluded, and a rigorous censorship  
was exercised upon the newspapers.

The old story that if a peacock is di-  
vested of the beautiful feathers that con-  
stitute its tail he will hide far from the  
sight of man and beast, in sheer shame  
and disgrace, was tested over on Owen's  
Island not long since. Capt. Jimmy  
Owen is the proud possessor of a peacock.  
Some of the colored farm hands heard  
the story about pulling out the tail  
feathers, and one day decided to test it.  
They caught the strutting fowl and one  
by one plucked out the feathers. The fol-  
lowing morning the peacock was miss-  
ing. He came no more for his meals and

Grimy finger marks  
seem to grow on the woodwork  
about the house. They come easily and  
they stick, too—unless you get rid of them with

# GOLD DUST Washing Powder

It makes all cleaning easy.

THE N. K. FAIRBANK COMPANY,  
Chicago. St. Louis. New York.  
Boston. Philadelphia.

was mourned as dead, until a few days  
ago, when he reappeared in all his pris-  
tine glory, with a full complement of tail  
feathers. He has now rehabilitated him-  
self in his old spectacular position, and  
the darkeys who played the trick to test  
the tradition are satisfied the story is  
correct.

The number of languages into which  
the Bible has been translated has been  
somewhat exaggerated, owing to the fact  
that partial translations have been in-  
cluded. It is now authoritatively stated  
that there are 108 translations of the en-  
tire Scriptures, forty in the languages  
of Europe, forty-one in the languages of  
Asia, fourteen in the languages of Africa,  
ten in the languages of Australia and  
Oceania, and three in the languages of  
America.

Berlin has now women guides for the  
city. They are partly elderly, partly  
middle-aged women, with a certain  
amount of knowledge of the world, some  
acquainted with languages and an as-  
sured and amiable demeanor, to whose  
care lone female travelers or the lady  
traveling parties recently imported from  
Scandinavia and America intrust them-  
selves. Most of these resolute persons  
are Russians or Austrians. They also do  
shopping and other business for people  
living out of town.

A return relating to mortality in the  
French army (in time of peace, of course)  
has just been published by the Journal  
Officiel. It covers the period between  
1872 and 1897, inclusive. It appears that  
the annual percentage of death for the  
first three years was 8.88 per thousand,  
in the next two 10.30 per thousand. Be-  
tween 1877 and 1897 the average has var-  
ied between 4.46 in 1880 and 7.84 in  
1881 and 1882, while last year it was 4.56.  
The mortality from typhoid since 1888  
has greatly decreased, while smallpox  
has been virtually stamped out by vac-  
cination.

When you are out of sorts, feel tired,  
languid and dull you need Hood's Sas-  
saparilla. It will brace you up and give  
you strength and energy, vigor and vi-  
tality.

Hood's Pills are the best family cathar-  
tic and liver tonic. Gentle, reliable, sure.

### Mothers! Mothers!! Mothers!!!

MRS. WINDLOW'S SOOTHING SYRUP has been used  
for over FIFTY YEARS by MILLIONS of MOTHERS  
for their CHILDREN while TEething, with PER-  
FECT SUCCESS. IT SOOTHES the CHILD, SOFT-  
ENS the GUTS, 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. Windlow's Soothing Syrup,"  
and take no other kind. Twenty-five cents a bottle.



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prices. Save agents' large profits.  
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chine \$23.50. Equal to others sold by  
agents at \$35. Arrangements at \$14.50  
E. B. 50 retail value \$25 to \$35. Other  
Machines \$25, \$31.50 and \$45. All attach-  
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#### Affection

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Gives Relief at once.

Opens and cleanses the  
Nasal Passages.

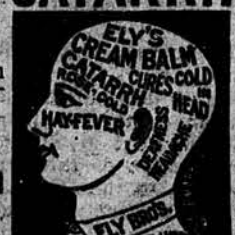
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Membrane. Restores the Senses of Taste and Smell.

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### CATARRH



### COLD IN HEAD



**The Kansas Farmer,  
Topeka, Kas.**



# KANSAS FARMER

ESTABLISHED IN 1863.

Published Every Thursday by the

## KANSAS FARMER COMPANY.

E. B. Cowgill, Pres. J. B. McAfee, Vice Pres.  
D. C. Nellis, Sec'y and Treas.

OFFICE:

No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

E. B. COWGILL, Editor.  
H. A. HEATH, Advertising Manager.

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Every advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders—  
**KANSAS FARMER CO., Topeka, Kas.**

Great Britain's poultry bill to foreign countries is about \$20,000,000 per year. Pretty expensive chicken, that. Doubtless there is some goose in it, however.

The Annual Report of the Bureau of Animal Industry for the year 1897 is a stout volume of 727 pages. It ought to be in the hand of every stock owner in the United States, and it would pay every stock owner to diligently read it.

Congress convened last Monday. The present session can continue only until March 4, because the terms of the members expire at that date. Those who were re-elected will enter upon their new term March 4. So also will new members commence to be Congressmen March 4.

A movement against adulterated food products in Kansas is led by the creamerymen. Mr. J. E. Nissley, of the Kansas Creamery Co., Topeka, is Secretary of the Legislative committee of the State Dairy Association. He urges every one interested to see that his Senator and Representative be fully informed of the need of legislation for pure food.

The President submitted his annual message to Congress last Monday. It is a lengthy document, dealing with the causes, commencement, conduct and termination of the war with Spain and the policy as to Cuba. Nothing is said of the questions which must soon be met as to the Philippines. There is much disappointment on this account. But it would have been manifestly improper to have entered, in the message, upon a consideration of questions of this kind until after the formality of at least signing the treaty now under consideration at Paris. The Philippines are ours but we have not the deed yet. The President's consideration of other subjects is in line with the well-defined principles of his party and will probably excite little comment. The message is a valuable state paper, in that it gives an official and very clear statement of the essential features of the late war.

### TO BREEDERS, FEEDERS AND FARMERS.

The week of January 8-14, 1899, is to be a most eventful and important week for every breeder, feeder and farmer in Kansas who desires to keep abreast of the times and prosper in his business. During this week, at Topeka, the Kansas State Poultry Show will be held, covering the entire week, the Kansas Swine Breeders' Association will begin on January 9, the Kansas Improved Stock Breeders' Association will convene January 10, and the State Board of Agriculture will meet on the evening of January 11. These different conventions will occupy the entire week and all subjects of leading importance will receive consideration. Every one who comes to Topeka for the week will certainly invest his time wisely and receive manifold benefits that will extend throughout the entire new year. All railroads in the State give an open excursion rate for round-trip ticket, so that every inducement possible is offered to encourage the attendance of all interested. For detailed information and programs for any of the different State conventions, address

either of the following Secretaries: F. D. Coburn, Secretary Kansas State Board of Agriculture, Topeka; O. P. Updegraff, Secretary Kansas Swine Breeders' Association, Topeka; H. A. Heath, Secretary Kansas Improved Stock Breeders' Association, Topeka; J. W. F. Hughes, Secretary Kansas State Poultry Association, Topeka.

### KANSAS HARD WINTER WHEAT FLOUR.

Several years have passed since a brand of Kansas flour, made from Kansas hard winter wheat, was awarded first honors in some of the contests in European markets. It has required a long campaign since that award by experts for Kansas hard winter wheat flour to attain merited recognition by the buying public. Recognition is coming at last, however. The *Modern Miller*, of St. Louis, had, in its issue of November 5, a showing that its London, England, contemporary had, by paying a tribute to Kansas patent flours, placed itself in line with the now unbroken list of United Kingdom journals which are singing the praises of Kansas hard winter wheat flours. The foreign paper says:

"Kansas patents are finding considerable favor this year because of their quality, and being appreciated by the London baking trade they participate fully in the improvement in price in all positions, especially on spot and near at hand."

The most important question that confronts a majority of the people of the world is, "What shall we eat?" The fact that the struggle for existence is, to most people, a fierce one, lends an importance to the question of the nutritive values of foods which often transcends the questions of flavor and appearance. When attractiveness was the ruling element in making relative prices of flours, the requirement of the trade was for snowy whiteness. This depended largely on the completeness of the separation of other matters from the starch of the wheat. Advancing science showed that, while a valuable food ingredient, starch is less valuable than some other and darker ingredients of the wheat. The introduction of the hard wheats brought to the millers a grain richer in the more valuable protein. But the mills were ill prepared to handle the hard wheat. It was not long, however, until processes were perfected for using these valuable hard wheats. While the flour produced was of a creamy yellow instead of the dead white which had formerly been demanded, the superior flavor and the greater food value of the hard wheat product made for it a place in the world's markets.

Most of this hard wheat was spring wheat. The great milling interests at Minneapolis, Minn., placed their energy behind its introduction and hard spring wheat flour became a staple of the foreign markets.

When the Russian Mennonites came to Kansas they brought with them seed of hard wheat, sowed it in the fall or winter, and it flourished better than our formerly prevalent red winter wheats. It brought unsatisfactory prices because the mills were not prepared for it, nor did the millers know how to treat it. Analyses showed it to be rich in protein. It was fed to stock, and some was shipped to Minneapolis, where it went as hard spring wheat. As rapidly as the mills got ready to use it, good flour was produced, and, as before stated, this flour was awarded great distinction several years ago. But Kansas millers had a reputation established for their snow-white soft wheat flour; their Southern trade demanded this flour; soft wheat was still produced in great quantity in Kansas; their hard wheat flour was overshadowed in quantity by the hard spring wheat article. The recognition now accorded Kansas hard wheat flour is the almost unsought result of its superior quality. It is increasing in amount and is likely to entirely supplant the soft wheat product in this State. Its standing in the market is gratifying to Kansas pride and will be advantageous to Kansas farmers' bank accounts.

As the demands of consumers for food crowd more nearly upon the capacity of the arable acres of the earth to produce, it cannot be otherwise than that the superior food value of hard wheat flours will become more clearly recognized in the price. Whether hard winter wheat will prove more valuable than hard spring wheat, is one of the unanswered questions of the food problem. At present Kansas stands nearly alone as a great producer of hard winter wheat. Her interest in the question of comparative value should prompt a thorough investigation of the problem.

### A WAIL THAT MAY CAUSE REJOICING.

In New York State, and especially in New York city, an alignment of political parties is taking place with reference to the liquor question. No new temperance party is coming into the field, but the question of saloon dominance is becoming a leading issue between Republicans and Democrats. The late election went against the saloon and the wall sent up by the *Wine and Spirit Gazette* contains a good deal of encouragement for temperance "cranks."

The liquor organ's editorial is headed "Killing the Cow That Gives the Milk," and is as follows:

"When the Whigs, some time in the 50's, were merged into the Republican party, the latter absorbed an element in our population which has always been bitterly hostile to the liquor traffic. The Republican party since that time has been built up by fathering all sorts of 'isms,' which have always exerted a powerful influence in shaping the policy of that party."

"From that time on the liquor traffic has had to contend with the spirit of intolerance and narrow-mindedness with which the Republican party had become imbued since it absorbed these incongruous elements. Republican legislation in our State bears evidence of the repeated attempts that have been made to harass, restrict, and, if possible, to suppress entirely, the traffic. We need not go back very far to find proof of this. The liquor dealers will still remember the high license bills and taxation schemes that were embodied in bills and passed by a Republican Legislature when David B. Hill was Governor of the State, to whose action alone the liquor trade of the State is indebted for its deliverance from these burdens and restrictions."

"The Republican party, perceiving that by direct legislation the liquor industry could not be suppressed, has now hit upon a plan which means to accomplish the same object in an indirect way. An examination of State and national legislation recently enacted by Republican majorities irresistibly leads to the conclusion that the liquor industry has to face the danger of total annihilation by taxation. What the Republican party has not been able to accomplish by direct legislation it is now trying to accomplish in an indirect way by loading the liquor dealers' down with the most onerous and oppressive taxes."

"We are betraying no secret in saying that fully four-fifths of the saloonkeepers of this State are to-day in a condition of financial collapse, and that it is only a question of a very brief period of time when the majority of those whose stores are to-day still open will be closed. In this State, according to Commissioner Lyman's own statement, the enormous sum of \$33,000,000 has, within three short years, been drawn from the liquor industry. Had it not been for the backing and support which the saloonkeepers received from the brewers, wholesalers and distillers this enormous sum could not have been paid by the trade. Add to this the onerous taxes imposed upon the traffic by the exigencies of a war that could well have been avoided, which, as we are told from Washington, are to be continued for at least one or two years, and one can form an idea of the heavy burden placed upon the traffic."

"If no relief comes to the liquor dealers there will be but one result, and that is the wiping out of probably three-fourths of the retail liquor dealers of the State."

"What will the consequence to the State be of such ill-advised policy? Will Commissioner Lyman, three years hence, be able to boast of another \$33,000,000 drawn from the trade? And if he will not be able to do that, and the revenues that the traffic now yields will have been reduced four-fifths, will not an additional burden of taxation have to be laid on the farmers and other industries of the State in order to meet the much-increased expenditure of our government? Does not the mistaken policy of the Republican party on the liquor-taxing question necessarily lead to a state of things of killing the cow that gives the milk?"

"It is all very well to say, as the Republicans have done in the last campaign, that under the Raines law the liquor traffic now bears a large portion of the public burdens. How long is this to last, if there is to be no let-up in the piling on of taxes and duties on the liquor industry? Is it not time for the Republican politicians and managers to look into this whole question, not from a narrow-minded standpoint of the suppression and restriction of the 'damnable rum traffic,' but from a broader standpoint of true statesmanship and

proper consideration for the welfare of the whole people?

"We are sounding this note of warning

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cent. I believe we can succeed in increasing the yield of sugar in the juice to the requisite per cent. in another trial."

As to the value of the crop for other purposes than making sugar, and as to yield, Mr. Byers says:

"Even though nothing farther be accomplished, the experiment of this season has shown that the beet crop is a valuable adjunct to every well-regulated farm in furnishing cheap and nutritious green food for hogs, cattle and poultry. Last spring I planted a half acre of sugar beets, made an estimate of all expenses except seed and rent of land, and found that my beets cost me a little less than a dollar a ton when pitted at the close of the season. My yield per acre was twenty-two tons and 1,738 pounds. One experimenter, when he found his yield per acre by using the printed rule of the Agricultural Department, was amazed at the result—his yield was twenty-eight tons an acre."

Such yields are most encouraging. Indeed, the soil and climate of Kansas lack but little of being ideal for sugar beet production. The summer temperature is believed by experts to be rather higher than is needed for the production of the highest content of sugar. It is not improbable, however, that this deficiency might be met by judiciously breeding the beet to our conditions. For purposes of stock feed this is well worth undertaking. The uncertainty of continued adequate tariff protection against sugar from the newly-acquired tropical territories of the United States is such as to lend but little encouragement to the investment of capital in new beet sugar factories or the expenditure of time and labor in developing specific qualities in the beet with the expectation of reimbursement through the establishment of the beet sugar industry.

### How Tan Rabbit Skins?

Editor *Kansas Farmer*:—I have a flock of white rabbits and would like to make a robe of their hides, but do not know how to tan them, and would be much obliged if you would give me information on tanning, so as to get the hides soft. I have tried to tan some of them, but in spite of all my efforts they become hard.

ANDREW YORDY.

Brookville, Kas.

When Stephen Crane wrote "The Red Badge of Courage" he had never been in a field of battle and knew nothing of military affairs. His work excited great admiration. But later on he went to Cuba and was in the front at San Juan Hill, and in the December *Cosmopolitan* we have another story, this time from a real field of battle, entitled "The Woof of Thin Red Threads." It will be interesting for those who are familiar with his previous work to compare the two—the imaginary and the real. Apropos of the name *Cosmopolitan* it is rather curious to note that the December issue of that magazine contains one article having to do with Spain, another with India, another with Japan, another with Cuba, another with Jamaica, another with England, another with Rome and still another with France. This is a pretty wide range.



### LIME AND GOOD HEALTH.

In the "good old times," the spring cleaning was never considered complete without a generous use of whitewash, applied to living rooms, cellars, out-houses, etc. "It's mighty healthy," was said, and said truly, of the crisp, new, clean odor of the whitewashed premises. Paint on the outside and paper on the inside of dwellings may please the eye, but it is doubtful whether a sacrifice of healthfulness has not been made by dispensing with the whitewash brush.

"There is nothing new under the sun; what has been will be to the end of time." This is a somewhat jumbled quotation, not infrequently used to express several truths. It now comes to pass that scientists and others are finding in lime a preventive of malaria. That the discussion of the subject comes up in connection with our great solicitude as to Cuba, is no matter of surprise.

The Scientific American prints a letter from Mr. Minor C. Smith, of Norristown, Pa., in which he says:

"There can be no reasonable doubt that scores and hundreds of our younger men, especially those commanding large amounts of money, will in the near future turn their steps toward Cuba.

"The fertile lands, bringing forth rich and valuable products, one crop following another in rapid succession, a soil twelve to fifteen feet in depth, and rich to the core and through its entire depth, where it seems quite possible to grow about everything producible in a hot climate, needing nothing save the brain and brawn of American manhood to sow and reap. Then, too, the extensive forests, yet untouched, abounding in the richest and most choice woods, such as red cedars, mahogany, rosewood, celiba, and ebony, will also be a great incentive to draw enterprising men toward Cuba. There we have also mines of untold richness abounding in various minerals, always a source of wealth when properly worked.

"The above synopsis gives but a passing glance at Cuba's real wealth, but enough is definitely known to make that land a veritable Mecca for our people later on. There is, strictly speaking, but one serious drawback touching our colonization of these lands, and that is the exceedingly dangerous climate for others than immunes. As these are found only in our Southland, it practically blocks Northern and Western enterprise, and to seek for the possible solution of making Cuba a healthful, charming country for all classes of Americans will be indeed a delightful task. I say delightful, because I believe it can be done, and will be.

"The writer was born and spent many years in the southwestern part of the Delaware and Maryland peninsula. Thirty-five years ago chills and fever, and the various forms of malarial infections, were as common in that otherwise delightful climate as 'coffee for breakfast.' The medical fraternity poured quinine and other febrifuges down the throats of their unfortunate patients by the boxful; but the infection raged the more. Finally, a gentleman came into the community and purchased a farm that the neighbors said was too poor to grow sandnipes. Now, this man did not come to rid the community of chills and fever, but he invested his money, hoping to make a farm that would be the pride of the community and make eventually a good return for his original investment.

"On one portion of this farm was a meadow land, filled with blacksnakes, mud turtles, bull frogs, and the other fellows who keep company with the above-named crowd, and the mornings and evenings of each day saw rise above the meadow land a veritable cloud of miasma. No more unhealthy spot could be found for miles, and the farmer soon fell sick with fever, to keep company with the neighbors round about.

"The important part of this communication begins just here. The farmer, without thought of breaking up the fevers or driving away forever the deadly miasmas that floated about the big meadow, began to haul quicklime by the car-load, and in the early fall that meadow looked like a snow field in January. This done, the lime was applied to the entire farm, whereon fall grains were to be sown. Now, with the biggest subsoil plow ever seen in the community the progressive farmer turned under the sod to the depth of about two feet or more, and thus it lay for months.

"The early spring of the next year saw a splendid new crop of timothy growing on this pest spot, and from that time on these lands, meadows and highlands, received their annual coating of lime and

plaster; and in ten years, yes, in five years, that was the finest farm in the whole section, and no chills or fever any more. In ten years the entire community was free from this awful pest through the widespread use of lime and plaster, and only a few days ago I heard from one of the leading citizens of the section referred to, and he was commenting on this very subject.

"Now, Mr. Editor, if any of your readers know anything as to the value of calcareous land dressing along the lines referred to, let's hear from them. As to whether Cuba can be redeemed by such methods, aided, of course, by systematic drainage and more rigid sanitary rules, is indeed a very important question. One thing is very sure. It would cost this government but a trifle to make some experiments, and thus learn once for all whether such methods mean much or little or mean nothing at all. A few ship-loads of lime and plaster generously spread on a reasonable portion of the island, with proper drainage added, would not be an expensive experiment and might suffice to solve the important problem."

Mr. Smith's inquiry was submitted to the United States Department of Agriculture, and the following reply obtained from Dr. H. W. Wiley, Chief of the Division of Chemistry:

"I have your request of October 29, to express my opinion on the correctness of a statement in a newspaper article, that the application of lime to a region which was infected with malaria purified it completely, and to state whether I think that the liberal use of lime in infected parts of Cuba would have the same effect upon the malarial germs in that locality.

"In the first place, permit me to say that the evidence of an observer in a matter of this kind is very apt to be unreliable. People who observe phenomena of any kind, without a scientific study, are apt to jump at conclusions and to assume as the efficient cause in particular affairs the first cause which may be evident.

"In regard to the action of lime upon malaria, I do not know that any definite information can be given. In general, however, it may be said that this much is known. Lime promotes vigorously the decay of organic matter, chiefly by furnishing a neutral or alkaline environment in which the nitrifying germs which are most active in the destruction of organic matter exercise their most important functions. The nitrifying germs are, in many respects, the most vigorous of all which are active in the decay of organic materials. If malaria be a germ which exhibits its highest vitality in an environment of organic matter and a genial warmth, it is evident that its vitality may be greatly diminished or entirely destroyed by the action of lime in promoting the growth of the nitrifying organisms. These organisms destroy organic matter very rapidly, and thus the source of nourishment of the malarial germs might be entirely cut off.

"Last summer, near Berlin, I visited an establishment for purifying water, in which the nitrifying germs alone were employed as a purifying material. Sewage water from the city of Berlin, subjected to the action of these nitrifying organisms, was changed in two hours' time to a clear, limpid water without any odor or apparent taint of organic matter, and in which there was not enough organic material for pathogenic germs to flourish with vigor. The nitrifying organisms in their vital functions not only destroy ordinary organic matter, but may even attack other organisms and destroy their vitality.

"I think, therefore, that the liberal application of lime to all centers of infection would prove of immense benefit by promoting the vigorous development of nitrifying organisms, thus securing a rapid destruction of organic matter and the conversion of the nitrogenous part thereof into nitric acid or nitrates. Thus, indirectly lime might prove very valuable in disinfecting and destroying the germs of malaria in general and yellow fever in particular. I can express no opinion in regard to the amount of lime which would be required to disinfect the island of Cuba, but it probably would be so enormous that the application of it would have to be confined to localities where the greatest infection existed."

Madrid abounds in slums, which are even greater eyesores than those of Whitechapel. There are labyrinths of narrow old streets, bordered by the most uninviting hovels, and from the squalor of these abodes spring the components of ferocious mobs which are the bane of the city.

### Egyptian School of Agriculture.

The United States Department of Agriculture has received the regulations and syllabus of the School of Agriculture, Ghizeh, Egypt, as approved by the Minister of Public Instruction August 14, 1898. From this document it is learned that the course of study extends over four years and includes practical and theoretical agriculture, agricultural chemistry, natural science, theoretical and practical chemistry, farm bookkeeping, land surveying, hydraulics, veterinary science, physics, arithmetic, algebra and geometry, trigonometry, Arabic language and English language. Eight hours a week throughout the course are given to practical exercises in agriculture. Each pupil is allotted a plot of land which he must cultivate with his own hands, "the employment of hired labor or other assistance being absolutely prohibited." This plot consists of one-quarter of a feddan (1,038 acres) the first year, half a feddan the second year, and three-fourths the third and fourth years. "Every pupil shall be allowed to dispose of the produce of his plot, subject to the approval of the principal."

To be admitted to the school the pupils must be at least 14 years of age and must pass an entrance examination. The annual fees for tuition and other expenses are \$75 for day pupils and \$125 for boarders. The fee for day pupils covers the cost of a mid-day meal provided at the school. Pupils may be admitted to the school free of charge, at the discretion of the minister, provided they are in needy circumstances.

The instruction in theoretical agriculture includes such subjects as soils, climate, tillage, manuring, the feeding and breeding of farm animals, dairying, culture of different crops, construction and sanitation of farm buildings, and agricultural implements. Special attention is given to irrigation and the culture of crops especially suited to local conditions, among which are rice, cotton, sugar cane, berseem (Egyptian clover, *Trifolium alexandrinum*), beans, wheat, barley, maize, peanuts, flax, potatoes, sesame, indigo, fenugreek, chick peas, and alfalfa. Sugar-making and the extraction of cotton seed oil and indigo are also taught. A special topic is the treatment of the salt lands in upper and lower Egypt, including washing, reclaiming, and cropping.

### Publications of the Department of Agriculture.

Mr. Geo. Wm. Hill, Editor of the United States Department of Agriculture and Chief of the Division of Publications, in his report to the Secretary of Agriculture of the work of his division during the fiscal year ended June 30, 1898, states that 501 publications were edited and prepared for publication, and the total number of copies printed amounted to 6,280,365. These publications embodied the results of investigations for the promotion of agriculture and information acquired by the corps of scientists and experts of the department, and comprised technical reports and popular bulletins and circulars on agricultural and kindred subjects. They were distributed to people interested in or actually engaged in farming pursuits; but notwithstanding the large number of copies distributed and the care taken to prevent duplication or waste, the supply was not sufficient to meet the demands. It is evident that increased appropriations will be necessary to place the results of the work of the department in the hands of those who are justly entitled to the same under the present system of distribution. A knowledge of the department and the work done by it for the promotion of agriculture is more widely prevalent than at any time in its history, and this is due in a large measure to the great increase in the small popular pamphlets and their wide distribution and the general advance in agricultural education.

An interesting feature was added to the Yearbook of 1897. This consisted of a series of papers prepared by the various chiefs of bureaus, divisions and offices, setting forth the work of each in relation to the farmer. This was in addition to the miscellaneous papers on agricultural and kindred subjects and the condensed matter in the appendix.

The preparation of the volume for 1898 is already far advanced, and a special effort to include in the Yearbook for 1899 a resume of the achievements in the United States in every branch of science as related to agriculture during the nineteenth century for distribution at the Paris Exposition is recommended.

During the year 2,170,000 copies of

## How Women Can Make Money

A good income is assured to the woman who will act as our agent in her own and adjoining towns, and push our business with energy and intelligence. Our instructions, if followed out, will make it easy to make from \$10.00 to \$25.00 weekly.

The Curtis Publishing Company  
Philadelphia, Pa.

Farmers' Bulletins were printed at a cost of \$32,756.46. Of this number, 1,580,000 were distributed upon the orders of Senators, Representatives and Delegates in Congress. Owing to the inefficiency of the appropriation for these bulletins, the quota of each Congressman was reduced from 5,000 to 4,000 copies. Requests from members of Congress for additional copies, aggregating over 100,000, had to be refused.

During the year 577 drawings and illustrations, mostly in pen and ink, but including several in colors, were made, and 361 were produced for publication. This does not include what was done by the artists permanently attached to certain divisions, who work under the supervision of their respective chiefs.

The force employed in the document section distributed by mail and otherwise, including publications and circulars, more than 7,000,000 documents, and not less than 6,000,000 names and addresses were written.

The sales of publications turned over to the Superintendent of Documents by this department outnumbered the sales of publications of all other departments combined, and shows a considerable increase over last year.

### Publishers' Paragraphs.

The convention number of Agricultural Advertising, the official publication of the Frank B. White Company, of Chicago, is superb.

"Sure Hatch" is the name of the incubator manufactured at Clay Center, Neb. Notice the advertisement elsewhere and write for circular.

**HOW FARMERS CAN BUY AT WHOLESALE.**—In our columns nearly every issue will be found several special bargains of different goods, offered at lowest wholesale prices by Sears, Roebuck & Co., Chicago, Ill., and any of our readers who will cut this article out and send to them with 15 cents, to help pay the 30 cents postage, will receive free, by return mail, postpaid, their big 1,100-page, four-pound general merchandise catalogue, a book which costs them nearly \$1 each, on which the postage alone is 30 cents. People who have this book know the lowest Chicago wholesale prices on everything. The book contains thousands of illustrations, tells how to order, how much the freight or express is on everything to all points. We are informed that over 1,000,000 farmers and others have this catalogue and are saving from 25 per cent. to 50 per cent. on everything they buy. The firm has a capital of over \$500,000, employs over 1,500 people, occupies an immense business block and is doing a wonderful business direct with the people in every State and Territory.

### Students Returning Home

for holiday vacations can, upon presentation of proper credentials, obtain tickets via Nickel Plate road at a rate of a fare and one-third for the round trip. Tickets will be sold on date school closes and day following, with return limit to and including day school reconvenes.

Full information cheerfully given at No. 111 Adams St., Chicago. Telephone Main 3389.



## Horticulture.

### HINTS ON NAMING.

PROF. F. A. WAUGH.

I have always felt sorry for Adam, not so much that he missed the advantages of a dress suit and the protective tariff as to think what a hard time he must have had in naming all the plants and animals which the good Creator sent him. I have seen a trained botanist worry and fuss for a week trying to find the name for one little under-sized plant; and when I remember how my great-grandparent Adam, who, unfortunately had never been to college, was obliged to go through the whole garden and the menagerie and the museum and fish ponds and name every living creature in one day, why, I can't suppress a throb of sympathy for him. This naming business is hard work at the best, especially to us, when other people have worked over the field for a hundred years or so.

The selection of a felicitous name for a new variety seems to be a matter of peculiar difficulty. Only a small minority of the names actually given are to be regarded as happy and appropriate. I suppose it is not altogether for advertising purposes that some seedsmen adopt the method of offering large prizes for names of new vegetables or flowers. I have noticed with interest the clause in the announcement of such competitions providing that names which fail of prizes shall nevertheless become the property of the company, and may be used for other varieties. It shows that a good name is rather to be chosen than riches—that is, has a definite cash value. Let not the man with a new baby or fruit or vegetable enter lightly upon the duty of providing a name to last the young individual all its life.

On the other hand, it strikes me that many men feel too much the importance of a name in sending out a new variety. A name is merely a handle by which we may pass a fruit or a vegetable around the horticultural table. It is only a convenience, a label, a designation. It is not a description, still less an advertisement. When a man tries to make a name legitimate according to rule, new, short, crisp, appropriate, euphonious, and then tries to crowd the description and the advertisement into the same word, he has undertaken a hard job. He would better put the advertisement in large type at the head of the page, and the description in small type after the adopted name. It is nice to have a name suggestive of some striking quality in the variety if that can be done without sacrifice, but the temptation to use the name for advertising purposes has been yielded to too often for the good of the horticultural public. And I believe that those most guilty of this abuse have made very little by it. Let us remember, then, that a name is merely an arbitrary sign for a variety, and that the only absolute requirements are that it shall be manageable and unequivocal.

The name of the originator, discoverer or introducer of a plant is always an appropriate name. I will not even except Maximowicz. Many of our finest fruits have been named in this way to the permanent satisfaction of everybody. There are the Hale peach, Kieffer pear, Gano apple, Barry grape, Kelsey plum, and dozens of others. The propriety of such names is widely recognized among botanists, as we may see by looking over Prunus Besseyi, Lillium henryi, and Sparganium romanzoffiana. Among vegetables we see such names much more seldom. The man who originates a new tomato is not content to call it Jones, but names it instead Jones' Prodigious Rosy Red. The former is the better name, however. This method of selecting names, when properly followed, has a wide range of usefulness.

The name of a place where a variety originates is always proper and nearly always satisfactory. We may cite Arkansas, Ontario and Bethel among apples; Vergennes among grapes; Kansas, raspberry; Iowa, plum; Kalamazoo, celery. A man who is in doubt what to name a new fruit or vegetable should consider carefully the advisability of calling it after his own town or county or State. Such names are to be recommended. They are too seldom given.

Other personal and local names, while not having the obvious propriety of those already mentioned, are often quite neat and acceptable. There are the Jessie strawberry, Lone Star plum, Jonathan apple, Green Mountain grape, and Louise pear. When one is hard pressed for a name, a nearby mountain range or a

river or the eldest daughter's first name may be called into requisition.

Names constructed from descriptive adjectives have a strong attraction for most horticulturists. Their appropriateness cannot be gainsaid; only when one starts to make a selection on this line he must remember that he is choosing a name and not writing a description. The name is far the more important, and the aptness of the adjective must not interfere with the necessities of nomenclature. It is in this class of names that abuse is most common, and caution may therefore be the more strenuously recommended. The rules for naming vegetables say that "the name should not be superlative or bombastic." Examples of good names of this sort are the following: Golden Wax bean, Cosmopolitan muskmelon, Perfection tomato, Limbertwig apple, Transparent plum. But any one looking over this matter will find that really good names of this class are much more scarce than might be expected. On the whole, the descriptive adjective is not a brilliant success as a name.

One word is a great deal better than two in making up a name. Two words ought not to be used unless there is some very good reason for it. Three words are never admissible.

The use of Latin names in horticultural nomenclature is almost never good taste. There is sometimes shown a tendency in this direction, but fortunately it has not been serious in this country. Examples of this sort of thing carried to excess may be cited from foreign catalogues. For instance, I find Polygonum orientale pumilum album, Begonia semperflorens atropurpurea compacta, and Chrysanthemum carinatum atrococcineum foliis aureis.

A word needs to be said by way of caution in the matter of naming hybrids. It is a common, and not altogether bad, practice to construct the name of a hybrid from pieces of the name borne by its parents. Thus we have Mr. Williams' Bursoto plum, a hybrid of Burbank and Desoto; Mr. Kerr's Elriv peach, a cross of Elberta and Rivers; and Mr. Munson's Elvicand grape, a hybrid of Elvira with Vitis candicans. This method of manufacturing a name sometimes gives happy results, and in such cases no one can object. But if carried to excess some very abominable crazy patchwork may be made. A cross between Catawba and Delaware could not agreeably be called Catware. Neither could a cross of Hortense and Montmorency appropriately be named Hortmorency. And if one had a combination of four, five or six parents, such as Mr. Burbank has accomplished in some of the plums he has been sending me, the results of this method would be very absurd. Even with Prunus triflora, P. angustifolia, P. americana and P. cerasifera combined the name Trigustcaufera would hardly ring like good coin. This method, like all others, is to be used with caution; and the chief caution is to remember that a name is a handle for the variety, and not a record of its pedigree or a proclamation of its virtues. A name should be a public convenience, not a word puzzle.

### Kansas Sugar Beets for 1898.

Press Bulletin Kansas Experiment Station.

The Chemical department of the Kansas Experiment Station has been continuing its investigation of the adaptability of the sugar beet to Kansas climate and culture. It would seem probable, from our rather high summer temperature, that the beet would not grow with high sugar-content in most parts of the State. Analyses made through a series of years have tended to confirmation of this view. Not only analyses made by our own station, but by the Department of Agriculture at Washington, have shown that while beets of high quality may be produced at times and places, the general run of them in this State is only fair in quality. One great difficulty in this work is that farmers do not give them the specified care. The modern sugar beet is a product of seed breeding with the plants growing under the most favorable conditions, and, like fine stock, it will at once deteriorate if put into less favorable conditions.

The soil for sugar beets should be prepared the previous fall if possible, by subsoiling or deep plowing. Any persons contemplating a trial next year should get the ground ready now. This year at two localities the farmers co-operated in a test of their respective regions. This is the proper thing to do. The station will not encourage and perhaps not co-operate in tests by isolated farmers another year. But where the people of any locality recognize the value

of a sugar beet factory to local business and to agriculture, and are willing to grow the beets according to standard directions, the station will gladly make the necessary analyses.

In many cases the beets sent in this year bear evidence of having been grown on land not suited to them or not properly prepared. This is shown by their stumpy form, and large proportion above the surface of the ground. The growers in comparatively few cases followed the directions for culture as to distance between the rows. It is a well ascertained fact that to produce a beet rich in sugar it must be kept down in size. One and one-half pounds is about right. This with a perfect stand would give over thirty tons to the acre, if the rows were eighteen inches apart and the beets eight inches apart in the row. Large yields are possible, therefore, without sacrificing quality to weight. To plant and till rows as close as eighteen inches, on the large scale, special drills and cultivators are used. For experimental plots hand work must be depended on. A fair test of our State can never be made until those engaging in the work follow the methods which experience has shown to be essential to the highest success.

The past season has been unfavorable in many localities because of the extremely wet spring followed by summer drought. The number of plants destroyed by heavy rains would surprise any one knowing the State only as "Droughty Kansas."

About 100 samples have been analyzed thus far, coming from all parts of the State. Twenty-five of these were grown in Reno county and eight in Sumner county, these counties giving special attention to the test. They, being in the southern part of the State, are not well situated climatically. Twenty-five samples from Reno county gave an average result of 10.98 per cent. of sugar in the juice. The eight samples from Sumner county gave 11.32 per cent. These beets are thus of only fair average quality. Though they could be used in sugar-making, the manufacturers would be at a great disadvantage.

The average for the State is 11.41 per cent. This is somewhat lower than last year. Twelve, or about one in eight, yielded juice with over 14 per cent. of sugar. Only one of these was from the counties named above, although they furnished one-third of all the samples. The rich beets have nearly all come from northern and western counties. The richest were from Cloud county, with 17.21 per cent.

The advantages of a successful sugar beet factory to a locality are very great, but the injury of a boom collapsed is only too well known to our citizens. If the Experiment Station saves us from the latter it will repay its cost for many years; it stands ready to assist to the former if its analyses of properly-grown beets point to commercial success in that line. Let every locality hoping to establish this industry, first thoroughly test its soil capacity and the willingness of its citizens, by showing that it can raise the necessary raw material, before it puts money, or more likely bonds, into an expensive factory.

It will interest horticulturists to know that Governor-elect Stanley is interested in horticulture. He is President of the board of directors of the Wichita Nursery Association, and is an amateur grower of fruits at his home. His specialty is strawberries, which fruit he has produced in the highest perfection.

**TO CURE A COLD IN ONE DAY**  
Take Laxative Bromo Quinine Tablets  
All druggists refund the money if it fails to cure. 25c. The genuine has L. B. Q. on each tablet.

**We PAY CASH each week** if you sell Stark Trees. Outfit absolutely free. **STARK** Trees, Inc., Newark, N.J.

**SAVE YOUR ORCHARD BY USING** Jessup Tree Protectors.

Absolute protection from rabbits; keeps off pruners and bark-lice and prevents sun-scalds; indestructible and cheap. Write for circulars and prices.

**J. D. BACON & CO.,**  
Agents wanted. Mound City, Kas.

## A Feed Cooker for \$5.00

Many farmers and poultrymen have not used feed cookers in the past because they considered the price too high. To meet this case we have designed the **RELIABLE FEED COOKER AND WATER HEATER.** It is an ideal means for cooking food for stock or poultry and for heating water for scalding hogs. Made of best cast iron, with No. 22 galvanized steel boiler. 20 gal. size \$5.—burns wood only. 60 gal. size \$12. and 100 gal. size \$16. burn either wood or coal. Don't buy until you get our free circulars. **RELIABLE INC. & BROODER CO. Box 62, QUINCY, ILL.**

Many people are skeptical regarding testimonials. We offer

**\$5,000.00 Reward**

to any person who can prove bogus one letter that we publish in praise of the famous veterinary remedy

**Tuttle's Elixir.**

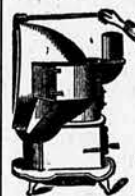
Send three 2-cent stamps for postage on sample bottle, and list of testimonials.

DR. S. A. TUTTLE, 27 Beverly St., Boston.

## Milking Instruments,

Lead Probes, Teat Openers, etc.

Circulars free. **MOORE BROS., V.S., Albany, N.Y.**



**COOK Your FEED and Save**  
Half the Cost—with the  
**PROFIT FARM BOILER**  
With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also makes Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc. Send for circulars.  
**D. R. SPERRY & Co., Batavia, Ill.**

## A Big Hay Crop

has now to be marketed. The easiest way to get it there in the form of bales. **THE BEST MACHINE to bale with is an**

**"ELI" BALING PRESS.**



46-in. Feed Opening.  
It makes the most compact, even-sized bales. You can get more hay in a car—cheaper freight. 88 Styles and Sizes—Horse or Steam Power. Made entirely of steel. It is light, strong and durable. Better send at once for our free illustrated catalogue.  
**COLLINS PLOW CO., 1120 Hampshire St., QUINCY, ILL.**

## Ideal Double Geared Grinder

New Principle  
New Results



Grinds all kind of grain.  
Double motion, immense capacity, easy draft, enclosed gear, runs in oil which absorbs friction and wear. Big advantage over all others. Ask for particulars.  
**STOVER MFG. CO., 535 River St., Freeport, Ill.**

## The Blue Valley Sweep Feed Mills



The Only Practical Mill for farmers' use. Made in two sizes. Power applied direct to grinding plates. No gears to wear, get out of order or increase the draft. The fastest grinding mill made. Grinds all kinds of grain and lasts a lifetime.  
**THE BLUE VALLEY MFG. CO., Manhattan, Kas.**

## GOODHUE



Self-acting, Best Governed, Acknowledged to be the most powerful and durable made. We have everything the farmer needs in this line.

**Towers, Tanks and Pumps,**

**Outlets, Grinders, Shellers, etc.**

**POWER AND MILLS**

Catalogue, full of valuable points, free.

**Appleton Mfg. Co.,**

**19 Fargo St., BATAVIA, ILL.**



## In the Dairy.

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

### STUDY OF CREAMERY PATRONS.

During the summer of 1898, the Kansas Experiment Station undertook to investigate the creamery business of the Meriden creamery, Meriden, Kas., from the patron's standpoint, in order to find out the income realized per cow and if possible discover means of improvement.

The creamery records of 300 patrons were consulted for the amount of milk delivered, the per cent. of butter fat, the pounds of butter fat, and the cash receipts for 1897. Circular letters were sent out to the patrons, stating the object of the investigation and asking for information upon the various phases of their dairy work. Out of the 300 patrons only eight sent in replies, and even these were not entirely satisfactory. One man, when asked in regard to the questions, replied that if he could answer those questions he would run for Congress. It thus became necessary to seek personal interviews with individual patrons, and draw out from them the information desired. Through the kindness of the creamery management, and with the limited time allotted to the work, it was possible to obtain records and notes from eighty-two patrons. We expect to continue the work by correspondence or otherwise, so as to complete as many more of these records as possible.

The following table gives a condensed account of the best five herds and the poorest five herds from which we have records:

No. cows kept.	Milk per cow. Pounds.	Butter per cow. Pounds.	Income from milk per cow.	Total income per cow.
20	5,546	317	\$42.09	\$54.38
3	6,371	243	34.29	45.87
9	5,159	244	31.46	45.11
4	5,229	236	30.87	40.33
6	5,075	226	30.00	39.95
Av'ge	5,476	253	33.74	\$45.13

### A YEAR'S RECORD—POOREST FIVE HERDS.

No. cows kept.	Milk per cow. Pounds.	Butter per cow. Pounds.	Income from milk per cow.	Total income per cow.
27	1,117	57	\$7.54	\$20.69
12	1,466	67	8.04	18.04
10	1,678	70	8.84	23.42
3	1,901	84	10.70	19.12
8	2,057	91	12.08	36.71
Av'ge	1,644	74	\$9.44	\$23.59

### YIELD OF MILK.

With these eighty-two patrons, the average annual yield of milk per cow was 3,441 pounds. The average of individual herds varied all the way from 1,117 pounds for the lowest to 6,371 pounds for the highest, a difference of 5,254 pounds of milk, or 470 per cent. It should be noted that the herd that gave the highest yield of milk per cow did not give the highest yield of butter. Another herd that averaged 74 pounds more of butter made it on an average yield of 825 pounds less of milk. Taking the best five herds, there was an average yield per cow of 5,476 pounds. The poorest five herds averaged 1,644 pounds per cow, a difference of 3,832 pounds, or 233 per cent.

### YIELD OF BUTTER.

Next to the financial account, the yield of butter stands out as the most interesting point of the comparison. The annual average from the eighty-two patrons is 123 pounds. The lowest yield is from a herd of twenty-seven cows, which made an average of 57 pounds of butter per cow. The highest yield is from a herd of twenty cows that made an average of 317 pounds of butter per cow. The difference between the poorest and the best herd is 260 pounds of butter per cow, or an increase of the best herd over the poorest of 456 per cent. The average for the best five herds is 253 pounds, and for the poorest five herds 74 pounds, a difference of 179 pounds, or 241 per cent. It is interesting to note that the average yield of the poorest five herds is exactly the same as the difference between the best herd and the second best herd. It has been estimated that when you figure the cost of feed, labor and the interest on the money invested, it will take at least 150 pounds of butter to pay for keeping a cow and that the profit comes from those cows that yield over and above this amount. If this be true, and certainly the estimate appears to be a conservative one, the cows that belong to these poorest herds are, so far as milk is concerned, running their owners in debt, and were it not for the redeeming features of the calves produced these men might just as well go into bankruptcy at once.

### CASH INCOME FOR MILK.

The strictly dairy value of these va-

rious herds is shown in the cash income per cow for milk. The eighty-two herds averaged \$19.79. The best herd averaged \$42.09, while the poorest one averaged but \$7.54, a difference of \$34.55 per cow. The difference between the average of the best five herds and the poorest five herds is \$24.30 per cow. With a herd of ten cows, this difference would amount to \$243 per year, and in ten years would be over \$2,400.

### VALUE OF CALVES.

But some will say that it is not fair to make this comparison on income from milk alone, that there are many creamery patrons who milk their cows as a secondary matter and pay more attention to raising a good calf. Let us look a moment at the calf account. The patrons' estimate of the value of the calves at weaning time varied all the way from \$4 to \$20 per head. The value of the calves from the best five patrons averaged \$8 per head, and the poorest five patrons \$12 per head. Here is a difference in favor of the poor milkers of \$4 per head, which, however, would not go very far to compensate for the great loss in milk. Counting the value of milk, the value of the calf and the value of the skim-milk fed to pigs, we have the following interesting and instructive information:

The total annual income per cow for the eighty-two patrons is \$32.86, for the best herd \$54.38, and for the poorest herd \$18.04, a difference between the best and poorest of \$36.34 per cow. The average for the best five herds is \$45.13, and for the poorest five herds \$23.59, a difference of \$21.54, or 91 per cent. It will thus be noticed that the income per cow varies to a very considerable extent, and that in spite of the fact that one of the patrons that received the lowest income per cow values his calves at \$20 per head. Suppose we estimate the cost of keeping a cow at \$15 per annum for the poorest herds, which sum is doubtless below actual cost, and one-third more, or \$20 per cow, for the best herds. There would then be \$34.38 annual profit per cow from the best herd and \$3.04 profit per cow from the poorest herd, a difference of \$31.34 per cow. This means that one cow from the best herd brings as much clear cash to a man as eleven cows from the poorest herd. If we take the average of the best five herds, there is a profit of \$25.13, while from the poorest five herds the profit amounts to \$8.59 per cow, a difference of \$16.54. In other words, one cow from the best herds will bring a man as much clear cash as three cows from the poorest herds.

It is interesting in this connection to note the income per cow realized by dairymen in other States, where they have made a special and life-long study of the dairy business. The records as recently published by Hoard's Dairyman show that these men are reaping an annual income of \$75 to \$95 per cow and that from \$40 to \$60 of this is clear profit.

In all the above records and comparisons it should be noted that only averages of herds are given. It is to be expected that there are proportional variations among individual cows of the same herd, but upon this point we have no means of obtaining information. This can only be secured by the dairy farmer himself, weighing and testing the milk from individual cows. In a record received from a patron of Rhinehart Cheese Company, it was found that the income realized from the best cow, on the basis of butter at 15 cents per pound, was \$16 above the average of the herd. No individual record was kept of his poor cows, and so the comparison can only be based on the average of the herd. This, as well as the experience of many others who have tried it, goes to show that it will pay any man to keep individual records.

### WHY THE DIFFERENCE?

To some these figures are no doubt startling, and the question very naturally arises as to what is the cause for this great difference, which varies all the way from a handsome profit to a positive loss. In seeking a solution of this question, it is first necessary to study the farmer himself. His cows will seldom exceed his ideas of what cows should be. If he is a scrub farmer he will have scrub cows, if a general-purpose man he will have general-purpose cows, and if he makes a specialty of dairying he is likely to have the dairy type of cows. Out of seventy-nine patrons who expressed themselves on the subject, fifty-six were general-purpose men, thirteen beef men, and ten special dairymen. Two of the dairymen were dissatisfied with special dairy stock, one having already changed to Short-horn and the other keeping Jerseys only because his wife wanted him to. Among the general-purpose men there were three who said that the dairy business

was a good thing if there were children to attend to the milking, and one of these even went so far as to say that when the children were not at home at milking time he would allow the cows to go unmilked. Such a class of people would not make a success of dairying, even with the best of cows and under the most favorable conditions. There are, nevertheless, others whose milk yield is low that are eagerly seeking a "better light." To such there are two general principles to be considered.

### THE COW MACHINE.

No matter how much power or how much oil we may use in connection with a lawn mower, it is incapable of cutting more than a certain amount of grass. When its capacity is reached it is no use to try to go farther. The man who would attempt to cut his hay with a lawn mower would not only be ridiculed and called "crazy," but he would be actually running himself in debt. Now, this is precisely what some of these patrons are doing with their cow machines. The only difference is that the patron does not know it and the hay-maker does. There are some cows that simply do not have the capacity to convert feed into milk, no matter how much or how well they are fed. And yet some of these creamery patrons are keeping just this kind of cow machines, and think that because they are getting a little milk they are that much ahead, not realizing that the feed and work required to get it costs more than the milk is worth. Such animals should be disposed of as soon as possible for beef, sausage, bologna, anything—except oleomargarine. A man needs to be constantly studying his cow machines, weeding out the poor ones and raising the standard of those that remain. To successfully do this, special attention must be paid to the head of the herd, and right here lies one of the secrets to the low yields of some of these patrons. Among the eighty-two patrons there were nineteen that were using pure-blood sires. These were distributed as follows: Short-horn 14, Jersey 6, Hereford 2, Red Polled 1, and Aberdeen-Angus 1. The majority were breeding to grades of some beef type. A few patrons said they bred to anything they could find to get fresh cows. One man bred to a Red Polled because he was working for red color, and another man did not know what kind of a bull he had last year, but had a fine animal this year. When asked the breed, replied: "Don't know; guess he is a Red Polled." Profitable dairying will allow no guess-work about the head of the herd. It is impossible to give too much attention to this point, and no man should be satisfied until he has secured the best to be had. Failure on this point will result sooner or later in a contracted pocketbook.

### FEED AND CARE.

The feeding problem is doubtless the most perplexing one that confronts the intelligent dairy farmer of to-day, and the way a man feeds his cows is a pretty good index of the amount of brains he puts into his work.

It is interesting to note that the corn in the winter grain ration fed to the best five herds was usually balanced with bran or oats or both, and the roughness of corn fodder and prairie hay balanced with alfalfa and clover. In case of the poorest five herds, one received no grain whatever, three were fed on ear corn alone, and only one herd was so fortunate as to have oats in connection with corn meal. The roughness consisted of a stalk field, corn fodder, prairie hay or millet, only one herd being fed a little clover hay. A few illustrations will serve to show why some of these patrons had such low yields:

Formula.	Protein.	Carbo-hydrates.	Fat.
25 lbs. corn fodder.....	.50	8.35	.15
10 lbs. ear corn.....	.78	6.67	.43
Total .....	1.28	15.02	.58
Required .....	2.50	12.50	.40

Formula.	Protein.	Carbo-hydrates.	Fat.
20 lbs. prairie hay.....	.70	8.36	.28
10 lbs. ear corn.....	.78	6.67	.43
Total .....	1.48	15.03	.71
Required .....	2.50	12.50	.40

In contrast to the above, we will take

## CREAM - SEPARATORS

De Laval "Alpha" and "Baby" Separators.  
First—Best—Cheapest. All Styles—Sizes.  
PRICES \$50 TO \$800.  
Save \$10 per cow per year. Send for Catalogue.  
**THE DE LAVAL SEPARATOR CO.**  
Randolph & Canal Sts., CHICAGO. 74 Cortlandt Street, NEW YORK.

a ration in which alfalfa is used as the roughness:

Formula.	Protein.	Carbo-hydrates.	Fat.
15 lbs. corn fodder.....	.30	4.98	.09
10 lbs. millet .....	.45	5.17	.14
8 lbs. ear corn.....	.62	5.33	.34
Total .....	1.37	15.48	.57
Required .....	2.50	12.50	.40

Formula.	Protein.	Carbo-hydrates.	Fat.
19 lbs. alfalfa .....	2.01	7.09	.27
7½ lbs. ear corn .....	.59	5.00	.32
Total .....	2.60	12.09	.59
Required .....	2.50	12.50	.40

The first three rations contain feeds that are commonly and often exclusively used among these patrons. It will be noticed that in each case there is a deficiency of protein and an excess of carbohydrates and fat. This tends to fatten and dry up the animal rather than to cause her to give milk. Protein is what makes milk, and these patrons need to supply it in larger quantities.

With the exception of succulence and variety, the last ration is an ideal one. It shows very clearly the value of alfalfa for dairy cows. The man who makes the best record among the best five herds mentioned, says that he would not think of carrying on the dairy business without alfalfa, and yet, with all of its advantages, this man is the only one among the eighty-two patrons mentioned who raises it.

Aside from the feed, more pains are needed in caring for the cows. One man said he sheltered his cows by two wire fences, another by a wood lot, and still others by wind-breaks, and there are eighteen out of the eighty-two that compelled their cows to drink ice-water from a creek or pond in winter. The dairy cow is a very sensitive animal and should be treated as a man would treat his best friend.

Taking these records as a whole, there are some features that appear rather discouraging, and yet when compared with patrons of other creameries, the Meriden patrons have reason to rejoice. The money paid out to the Meriden patrons in 1897 amounted to \$148 per patron, while other creameries paid in the neighborhood of \$85 per patron, and in one instance as low as \$31 per patron. The very fact that the yields of many of these patrons are low only goes to show the greater possibility for improvement.

By giving more attention to the cow machine, by studying the most economical ways of feeding, and by taking more care of the cow, their income may be materially increased. Dairymen in other States have set a noble example in raising the income of their herds to 400 pounds of butter annually per cow, and individual cases as high as 600 pounds per cow. What has been done can be done, and the Kansas creamery patron with his cheap feeds, mild winters, good pasture and abundant supply of stock water ought and will, with proper education, be able to compete with creamery patrons of any State in the Union.

D. H. O.

SOMEHOW AND SOMEWHERE  
AMONG THE MUSCLES AND JOINTS

The Pains and Aches of

**RHEUMATISM**

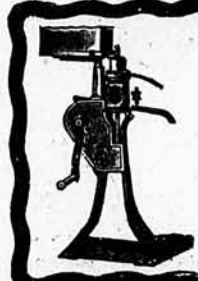
CREEP IN.

Right on its track

**St. Jacobs Oil**

CREEPS IN.

It Penetrates, Searches, Drives Out.



### The Improved U. S. Cream Separators

In thoroughness of separation take the lead.  
In completeness of design and ease of operation excel all others.  
Are more substantially made and are superior in all points to all others.  
All Styles and Sizes. \$75.00 to \$625.00.  
Agents in all dairy sections.

Send for latest illustrated catalogues.

VERMONT FARM MACHINE CO., - Bellows Falls, Vt.



## The Apiary.

Conducted by A. H. DUFF, Larned, Kas., to whom inquiries relating to this department should be addressed.

### Cellar Wintering.

Bees may be wintered in cellars or underground depositories with the best of results if all the details in this line of winter management be strictly carried out. Perhaps the best underground arrangement of this kind is a cave, made out by itself, entirely away from any building, and used for the bees exclusively. Bees cannot well be kept in safety in a cellar that is frequently opened up and entered, as in case of ordinary cellars used for all purposes. It would be a mistake to put bees in such places. An ordinary cellar might be so arranged by partitioning off a part of the same, and separating it entirely from the other part, but nothing but a good solid wall of some kind would answer.

A large number of hives may be placed in comparatively small space in a cellar, and the only proper way to do it would require but small space. For the common frame hives in use, I would make a frame or bench of 2x4 scantling, spaced about fourteen inches apart, and as long as may be necessary to accommodate the number of hives, or the length of the room will admit. This frame should stand on a solid foundation a little distance up from the floor. The hives are placed on this, leaving a space of about eight inches between each two hives. The hives are left open at the bottom, the bottom-board being left off, but the lid of hive is used in its place. The hives may be tiered up thus, and the next tier set directly on top, and each hive over this eight inches space between the two hives of the first row. The next tier is thus placed in the same manner, and so on up as high as desired. The hives being open at the bottom, gives the required ventilation, and the space below allows dead bees and all accumulations to drop down and entirely out of the way of the bees, and being arranged in this manner these accumulations can easily be removed and everything kept clean and in good order.

The cellar must be kept in darkness at all times, and great care must be taken when the bees are carried in and put in place to have it dark at the time, especially if the weather is not very cold, or many of the bees may come out and take wing and, of course, be lost. We should select a pretty cool day, one that is too cool for bees to come out, and we should prepare the hives for removal in the morning of the same day, by prying each one loose from the bottom-board, and putting in shape everything, so that the hives may be taken up as easily as possible, to prevent arousing the bees. This is of much importance, and our success to a great extent depends upon getting the bees placed in the cellar in good condition.

It requires two persons to handle a hive, and they should be provided with tongs to hook under each side of hive, so that it may be kept perfectly level and that the frames may not swing out of place. After the hives have been loosened from the bottoms they should be set up on small blocks, thus giving a good opportunity to take hold of them.

If bees are to be wintered in cellars, they should not be put into winter quarters until just at the approach of steady winter. We cannot take chances on having much warm weather after bees are placed in the cellar, and in localities where there is much warm weather during winter, the cellar will not answer so well. It is only in climates where the winter is of severity, and of even temperature, that cellar wintering is the most successful. The temperature in cellars where bees are kept should be held as near 45° as possible—and not less than 40° nor over 50°.

When bees are doing well in the cellar they remain very quiet, but when in any way affected they become very noisy, and frequently some particular hive will thus notify you of the fact. When a colony becomes uneasy from some cause and begins to keep up a loud roaring in the hive, it is best to remove it away from the other hives, and if the weather will permit, on a warm day, it may be set out and allowed to take a fly, after which it may be again placed back in the cellar. Bees should remain in the cellar until settled warm weather returns in spring, and it is a fatal mistake to put them out sooner. Bees when wintered in a cellar are very tender and will not stand the cold after being set out as well as those wintered out of doors, and it requires great care on approach

## Horse Owners! Use

GOMBALTE'S

## Caustic Balsam

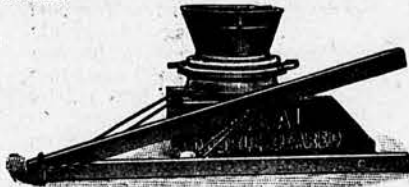
The Safest, Best, and Most Effective Cure for all kinds of sores, cuts, and bruises. Removes all Blisters or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

of spring, for they should be retained in the cellar until all danger of severe cold snaps have passed. When set out in spring it is not necessary that each hive occupy its former location, but if desired this can easily be arranged by numbering the hives and the stands they occupied to correspond.

Dr. Bull's Cough Syrup always cures coughs and colds. It is poor economy to neglect a cold when a bottle of this reliable remedy will relieve and cure it at once. Price only 25c.

### Good Grinding Machinery.

One of the most important pieces of farm machinery is a mill for grinding grain and corn on the cob for feed, and the selection of a good mill is quite difficult and very important.



The Stover Manufacturing Company, of Freeport, Ill., have used their experience of seventeen years in perfecting the Ideal Double-Gear Mill, a cut of which is shown herewith. The machine, with its many improvements is new, but the experience of its makers enabled them to thoroughly test its strength, capacity, etc., before putting it on sale. It is simple in its construction and operation, and although its parts are heavy and strong, it is remarkably light draft and is capable of doing all the grinding that can be done by two horses with any mechanical device ever invented. The grinding parts have double motion, and the gear being enclosed is run in oil, thus reducing friction to almost nothing. Anchor rods, a perfect patented device for securing stability, are furnished free with each mill. The makers of the Ideal Double-Gear will send descriptions and prices on application.

According to the Matin, there exist in France 71,000 Jews in a population of nearly 38,000,000. The active capital of France is estimated at 80,000,000,000 francs, and of this the Jews possess one-fourth, or 20,000,000,000 francs.



### \$1.95 BUYS A \$3.50 SUIT

2,000 CELEBRATED "KANTWABOUT" double seat and double knee. Regular \$3.50 Boys' 2-Piece Knee-Pant Suit going at \$1.95. A NEW SUIT FREE for any of these suits which don't give satisfactory wear.

Send No Money. Cut this Ad. out and send to us, state age of boy and say whether large or small for age, and we will send you the suit by express, C.O.D., subject to examination. You can examine it at your express office and if found perfectly satisfactory and equal to suits sold in your town for \$3.50, pay your express agent our special offer price, \$1.95 and express charges.

THESE KNEE-PANT SUITS are for boys from 4 to 15 years of age, and are retailed everywhere at \$3.50. Made with double seat and knee, latest 1899 style as illustrated, made from a special wear-resisting, heavy, serge lining, Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing, fine tailor-made throughout, a suit any boy or parent would be proud of. FOR FREE CLOTH SAMPLES of Boy's Clothing (suits, overcoats or undersuits) for boys 4 to 15 YEARS, write for Sample Book No. 90C, contains fashion plates, tape measure and full instructions how to order.

Men's Suits and Overcoats made to order from \$5.00 up. Samples sent free on application. Address, SEARS, ROEBUCK & CO. (Inc.), Chicago, Ill. (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

### SEND ONE DOLLAR...

Cut this ad. out and send to us and we will send you this HIGH-GRADE ACME 600 lb. PLATFORM SCALE by freight, C.O.D., subject to examination, you can examine it at your freight depot and if found perfectly satisfactory, exactly as represented and equal to scales that retail at \$25.00, pay the railroad agent our special price, \$9.35, less the \$1.00 freight, \$8.35 and freight charges. The shipping weight is 155 lbs. and the freight will average 75c for each 500 miles and we guarantee safe delivery. The same for farm, store or warehouse is the best platform scale made, guaranteed five years and will last a lifetime. Will weigh 600 lbs. by using all weights furnished. Brass beam weighs 50 lbs., has Stevens' Brass Sliding Poise. Platform is 15x22 inches, resting on adjustable ball bearings, has Denton steel pivots, most sensitive, accurate and durable scale made, mounted on four large wheels, they are nicely painted and ornamented and beautifully finished throughout. Every farmer will save twice the cost in one season by weighing the grain he sells and buys. ORDER AT ONCE before the price is advanced. Catalogue of scales free for the asking. Address, SEARS, ROEBUCK & CO., (Inc.) Chicago, Ill. (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)



GUARANTEED 10 YEARS.

# Blackleg Vaccine

Write for new and complete pamphlet containing official indorsements and testimonials covering three years' successful use in the United States.



## PASTEUR VACCINE CO.,

52 Fifth Ave., CHICAGO.

EACH PACKET OF OUR GENUINE VACCINE BEARS OUR TRADE MARK

### LIVE STOCK AUCTIONEERS.

GEORGE W. BARNES, Auctioneer, Valencia, Kas. Lowest terms. Extensive experience both as breeder and salesman. All correspondence given prompt attention.

G. W. STORES, AUCTIONEER, BURLINGAME, KAS. THIRTY years' experience. Extensive acquaintance. Correspondence solicited.

THOMAS J. CLARK, AUCTIONEER, HOYT, KANSAS. Many years experience. Extensive acquaintance. Correspondence solicited.

J. N. HARSHBERGER, LIVE STOCK AUCTIONEER, LAWRENCE, KAS. Years of experience. Sales made anywhere in the United States. Terms the lowest. Write before claiming date.

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.

### A BUSINESS INCUBATOR.

The Sure Hatch is Business. Incubators and Brooders with the Sure Hatch. Over 500 in use. Thermata tatio Heat Governors. Low in price and guaranteed. All sizes. are what you need. Send 2-cent stamp for catalogue worth dollars if you run or want to run an incubator. It contains information not found in other catalogues or books. Address The Sure Hatch Incubator Co., Clay Center, Neb.

## Climate Cure

For Weak Lungs, Weak Throats, Weak Bodies.

### The Health Resorts of New Mexico and Arizona

are unrivaled. Pure, dry air; an equable temperature, the right altitude, constant sunshine.

Send for descriptive pamphlets issued by Santa Fe Route Passenger Department.

General Passenger Office, The Atchison, Topeka & Santa Fe Railway, TOPEKA, KAS.

### Administrators' Sale of Real Estate.

Pursuant to the will of the late David R. Youngs, I offer at private sale all the real estate belonging to his estate, as follows:

1. The "Home Place," w. hf. of nw. qr. sec. 26, and e. hf. of ne. qr. sec. 27, t. 12, r. 15, 160 acres. Contains good house, barn and sheds, outhouses, corrals, wells and cisterns, wagon scales, three orchards, and all appurtenances constituting a first-class farm. About 130 acres plow land, 12 acres clover, 5 acres alfalfa, remainder pasture land, timber land and creek, all well and conveniently fenced. Price, \$3,000. Terms, one-third cash, one-third in two years and balance on long time. Interest on deferred payments 7 per cent. per annum, secured by mortgage.

2. Also the e. hf. of nw. qr. of said sec. 26, 80 acres. About 40 acres first-class plow land and about 40 acres hay land. Well and separately fenced. Price, \$3,200. Terms same as above.

3. Also about 101 acres of pasture land in one body, well fenced and well watered, being nw. qr. of ne. qr. frl. and sw. qr. of ne. qr. frl. of said sec. 27, and about 34 acres off the east side of the nw. qr. frl. of said sec. 27. Price, \$20 per acre. Terms same as above.

4. Also about 101 acres of good prairie hay land, being w. hf. of nw. qr. frl. of said sec. 27, and about 34 acres off the west side of the e. hf. of nw. qr. frl. of said sec. 27. Price, \$25 per acre. Terms same as above.

5. All of the above described land lying contiguous and constituting one large and complete farm and situated about seven miles southwest of Topeka near the Burlingame road, will be sold together for \$15,000, on the same terms already stated.

6. Also 42 acres in se. qr. of sec. 9, t. 12, r. 15, near Six Mile creek. Mostly first-class plow land; well fenced. Small house and some other improvements. Price, \$1,250. Terms same as above.

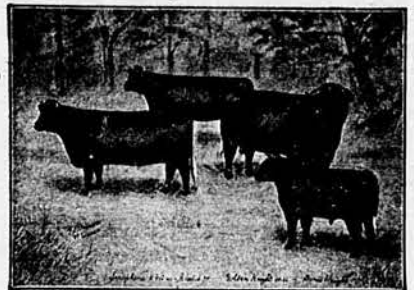
For further information write or call on the undersigned at his office, Bank of Topeka building, Topeka, Kas.

CHAS. F. SPENCER, Administrator, with will annexed, of said estate.



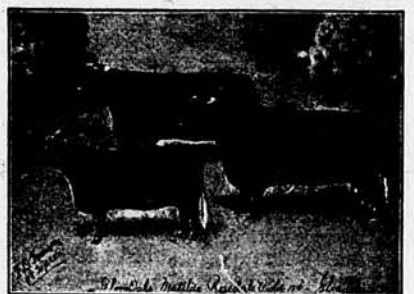
### SPRING VALLEY HEREFORDS.

Lincoln 47095 by Beau Real and Klondyke 42001, at the head of the herd. Young stock of fine quality and extra breeding for sale. Personal inspection invited. ALBERT DILLON, Hope, Kas.



### CEDAR HILL FARM.

Seventy head richly-bred Short-horns. The leading families represented. Golden Knight 108068 and Baron Dry 2d 124970 in service. Twelve young bulls of serviceable age for sale. Also 100 head high-grade bulls, 100 black-grade heifers and fifty head yearling heifers, 100 well-bred roadster horses. Address C. W. TAYLOR, Pearl, Dickinson Co., Kas.



### GLENDALE SHORT-HORNS, Ottawa, Kas.

Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls. Glendon 119370, by Ambassador, dam Galanthus, and Scotland's Charm 127264, by Imp Lavender Lad, dam by Imp Baron Cruickshank. Young bulls for sale. C. F. WOLF & SON, Proprietors.

### ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, GALLANT KNIGHT 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 qualities the standard. A few good cows for sale now, bred to Gallant Knight.

Address T. K. TOMSON & SONS, DOVER, KANSAS.



### SHORT-HORN CATTLE.

I have combined with my herd the Chambers Short horns and have the very best blood lines of the Bates and Cruickshank families. Herd headed by Baron Flower 114352 and Kirklevington Duke of Shannon Hill 126104. The Cruickshank Ambassador 110811 lately in service.

Best of shipping facilities on the A. T. & S. F. and two branches of Mo. Pac. Rys. Parties met by appointment. B. W. GOWDY, Garnett, Kas.



## MARKET REPORTS.

**Kansas City Live Stock.**  
Kansas City, Dec. 3.—Cattle—Receipts, 540; calves, 25; shipped yesterday, 4,916 cattle, 518 calves. The market was dull and nominally steady. The following are representative sales:

NATIVE COWS.		Ave. Price	
No.	Price	No.	Price
1.....	955 \$2.60	5.....	900 \$2.50
2.....	530 1.75		

**STOCK COWS AND HEIFERS.**  
Hogs—Receipts, 9,210; shipped yesterday, 251. The market was generally steady considering the quality. The following are representative sales:

54...294 \$3.45	57...219 \$3.40	62...300 \$3.40
55...255 3.40	58...208 3.37½	61...280 3.37½
56...234 3.37½	59...222 3.37½	60...288 3.37½
57...209 3.35	60...230 3.35	63...285 3.35
58...209 3.35	61...234 3.35	64...238 3.35
59...251 3.35	62...231 3.32½	65...208 3.32½
60...230 3.32½	63...242 3.32½	66...242 3.32½
61...235 3.30	64...212 3.30	67...172 3.30
62...197 3.30	65...218 3.27½	68...170 3.27½
63...202 3.27½	66...192 3.27½	69...208 3.27½
64...168 3.25	67...185 3.25	70...169 3.25
65...157 3.25	68...165 3.25	71...156 3.22½
66...139 3.22½	69...170 3.20	72...158 3.20
67...198 3.20	70...147 3.17½	73...127 3.15
68...177 3.15	71...115 3.15	74...130 3.10
69...110 3.05	72...137 3.05	75...131 3.05
70...305 3.05	73...114 3.05	76...81 3.00
71...90 3.00	74...100 3.00	77...266 2.50

Sheep—Receipts, 1,000; shipped yesterday, 854. The market was generally steady.

Horses and mules—The trade in both horses and mules during the last six days has been quiet. There is no urgent demand for any class or kind. There was some trading in mules and dealers succeeded in moving the receipts, without a break in prices. The future offers little encouragement in the way of higher prices. The following is the present range of prices:

Extra draft, 1,500 to 1,800 pounds....	75.00@100.00
Good draft, 1,300 to 1,500 pounds....	60.00@ 75.00
Saddlers, common.....	25.00@ 50.00
Saddlers, gaited, extra.....	61.00@100.00
Southerners, extra.....	30.00@ 50.00
Southern mares and geldings.....	15.00@ 30.00
Plugs.....	5.00@ 10.00

The following is the range of sales for mules. They must be sound and fat:

14 hands.....	\$27.50@ 37.50
14½ hands.....	37.50@ 42.50
15 hands.....	45.00@ 55.00
15½ hands.....	61.00@ 75.00
16 hands.....	75.00@ 95.00
16½ hands.....	95.00@115.00

## Chicago Live Stock.

Chicago, Dec. 3.—Cattle—Receipts, 600; market dull; beefs, \$4.00@5.80; cows and heifers, \$2.00@4.65; Texas steers, \$3.15@4.25; stockers and feeders, \$2.85@4.40.

Hogs—Receipts, 29,000; market fairly active, generally steady; light, \$3.20@3.42½; mixed, \$3.25@3.45; heavy, \$3.00@3.47½; rough, \$3.20@3.30; yorkers, \$3.35@3.40.

Sheep—Receipts, 8,000; market steady; natives, \$2.60@4.45; westerns, \$2.90@4.30; lambs, \$3.75@5.50.

## St. Louis Live Stock.

St. Louis, Dec. 3.—Cattle—Receipts, 500; market steady; native shipping steers, \$1.25@5.20; light and dressed beef and butchers, \$1.00@4.95; stockers and feeders, \$2.70@4.25; cows and heifers, \$2.00@4.35; Texas and Indian steers, \$2.90@4.25; cows and heifers, \$2.15@3.20.

Hogs—Receipts, 4,000; market steady; yorkers, \$3.15@3.25; packers, \$3.20@3.35; butchers, \$3.30@3.50.

Sheep—Receipts, 100; market steady; natives, \$3.00@4.25; lambs, \$4.00@5.40.

## Chicago Grain and Provisions.

Dec. 3	Opened	High'st	Low'st	Closing
Wht—Dec....	65½	65½	65½	65½
May....	66½	66½	66½	66½
July....	64½	64½	64½	64½
Corn—Dec....	33½	33½	33½	33½
May....	34½	34½	34½	34½
July....	35	35	35	35
Oats—Dec....	26½	26½	26½	26½
May....	26½	26½	26½	26½
Pork—Dec....	7 90	7 90	7 90	7 90
Jan....	9 27½	9 27½	9 20	9 20
May....	9 47½	9 47½	9 40	9 40
Lard—Dec....	4 97½	4 97½	4 97½	4 97½
Jan....	5 15	5 15	5 10	5 10
May....	5 30	5 30	5 25	5 25
Ribs—Dec....	4 45	4 45	4 45	4 45
Jan....	4 67½	4 67½	4 60	4 60
May....	4 80	4 80	4 75	4 75

## Kansas City Grain.

Kansas City, Dec. 3.—Wheat—Receipts here to-day were 107 cars; a week ago, 107 cars; a year ago, 109 cars. Sales by sample on track: Hard, No. 1, nominally 63¢@64¢; No. 2 hard, 64¢; No. 3 hard, 62½¢@63¢; No. 4 hard, 56¢@61¢. Soft, No. 2, 66¢@67¢; No. 3 red, 64¢@66¢; No. 4 red, 59¢@60¢. Spring, No. 2, 61¢; No. 3 spring, 56¢@60¢; rejected, 54¢.

Corn—Receipts here to-day were 15 cars; a week ago, 10 cars; a year ago, 110 cars. Sales by sample on track: Mixed, No. 2, 31¼¢@31½¢; No. 3 mixed, 30¼¢@31¢; No. 4 mixed, nominally 30¢; no grade, nominally 29¢. White, No. 2, 31¼¢; No. 3 white, 31¢; No. 4 white, nominally 30¢.

Oats—Receipts here to-day were 4 cars; a week ago, 2 cars; a year ago, 10 cars. Sales by sample on track: Mixed, No. 2, nominally 27½¢; No. 3 mixed, 26¼¢@27½¢; No. 4 mixed, nominally 26¢. White, No. 2, 28¼¢@29¢; No. 4 white, nominally 27¢.

Rye—No. 2, 47¼¢@48¢; No. 3, nominally 46¢; No. 4, nominally 45¢.

Hay—Receipts here to-day were 84 cars; a week ago, 39 cars; a year ago, 32 cars. Quotations are: Choice prairie, 7.00; No. 1, 6.50@6.75; Timothy, choice, 7.00. Clover, 66.00@65.00. Alfalfa, 7.00.

## Kansas City Produce.

Kansas City, Dec. 3.—Eggs—Strictly fresh, 20¢ per doz.

Butter—Extra fancy separator, 20¢; firsts, 17¢; seconds, 15¢; dairy, fancy, 16¢; country roll, 12¢@14¢; store packed, 11¢; packing stock, 9¢@11¢.

Poultry—Hens, 5¼¢; springs, 6¢; roosters, old 15¢ each; young roosters, 20¢; ducks, 5¼¢; geese, 5¼¢; turkeys, 6¼¢; pigeons, 50¢ per doz.

## THE STRAY LIST.

## HOW TO POST A STRAY.

THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of 50 cents for each animal contained in said notice. And such notice shall be published in the KANSAS FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested in strays. A penalty of from \$5 to \$50 is affixed to any failure of a Justice of the Peace, County Clerk, or proprietors of FARMER for a violation of this law.

Broken animals can be taken up at any time in the year.

Unbroken animals can only be taken up between the first day of November and the first day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray.

If an animal liable to be taken up, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take the same.

Any person taking up a stray, must immediately advertise the same by posting three written notices in as many places in the township, giving a correct description of each stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

If such stray is not proven up at the expiration of ten days, the taker-up shall go before any Justice of the Peace of the township, and file an affidavit stating that such stray was taken up on his premises, that he did not drive nor cause it to be driven there, that he has advertised it for ten days, that the marks and brands have not been altered, and he shall give a full description of the same and its cash value. He shall also give a bond to the State of double the value of such stray.

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting) make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than \$10, it shall be advertised in the KANSAS FARMER in three successive numbers.

The owner of any stray may, within twelve months from the time of taking up, prove the same by evidence before any Justice of the Peace of the county, having first notified the taker-up of the time when, and the Justice before whom proof will be offered. The stray shall be delivered to the owner, on the order of the Justice, and upon the payment of all charges and costs.

If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker-up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker-up; said appraisers, or two of them, shall in a respectful manner describe and truly value said stray, and make a sworn return of the same to the Justice.

They shall also determine the cost of keeping, and the benefits the taker-up may have had, and report the same on their appraisal.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray.

Any person who shall sell or dispose of a stray, or take the same out of the State before the title shall have vested in him, shall be guilty of a misdemeanor and shall forfeit double the value of such stray and be subject to a fine of \$20.

## FOR WEEK ENDING NOVEMBER 24, 1898

Osborne County—F. A. Dawley, Clerk.

HEIFER—Taken up by Hannah S. Applegate, in Jackson tp. (P. O. Cheyenne), October 27, 1898, one dark red heifer (yearling), no marks or brands; valued at \$15.

Cherokee County—S. W. Swinney, Clerk.

MARE—Taken up by L. A. Johnson, in Spring Valley tp., October 21, 1898, one dark bay mare, fourteen hands high, star in forehead, scar on left fetlock, branded T on left shoulder, weight 750 pounds.

## FOR WEEK ENDING DECEMBER 1, 1898

Morris County—M. J. Kimmel, Clerk.

HEIFER—Taken up by Frank Fyfe, three-quarters mile northwest of Comiskey, November 1, 1898, one pale red heifer, 3 years old, "P. S." on left side, R. on left hip, right horn off; valued at \$15.

Labette County—E. H. Hughes, Clerk.

MARE—Taken up by A. B. Whiteside, in Canada tp. (P. O. Angola), November 1, 1898, one bay mare, 15 hands high, star in forehead, left hind foot white, 12 years old, shod in front.

HORSE—By same, one brown horse, 15 hands high, star in forehead, shod in front, and about 7 years old; valued at \$40.

Wallace County—Olaf N. Thorene, Clerk.

MARES—Taken up by Herry Fogelstrom, in Sharon Springs tp. (P. O. Sharon Springs), September 24, 1898, five bay and one gray mares, fair sized, all branded with diamond with perpendicular bar through center.

COLT—By same, one yearling horse colt, branded same as mares; appraised value of mares and colt \$50.

## FOR WEEK ENDING DECEMBER 8, 1898.

Wilson County—C. W. Isham, Clerk.

MULE—Taken up by A. J. Reynolds, in Cedar tp. (P. O. Dunn), November 8, 1898, one light bay horse mule, about 4 years old, no marks or brands.

Chase County—M. C. Newton, Clerk.

HORSE—Taken up by A. E. Coote, in Falls tp. (P. O. Strong City), November 12, 1898, one brown horse, about four feet four inches high, spot in forehead, 3 years old; valued at \$20.

Osage County—Wm. H. Thomas, Clerk.

COW—Taken up by Wm. Carr, in Olivet tp. (P. O. Olivet), November 13, 1898, one red cow, 3 years old, inverted T on left hip, 1 on right hip; valued at \$25.

Neosho County—B. W. Garvin, Clerk.

PONIES—Taken up by H. L. Reeves, in Tioga tp. (P. O. Chanute), October 23, 1898, one bay horse pony, 6 years old; and one black mare pony, 6 years old, with fresh harness marks when taken up; both valued at \$30.

Smith County—John A. Crabb, Clerk.

CALVES—Taken up by Perry Frazier, in Lane tp. (P. O. Athol), October 27, 1898, two heifer and one steer calves, about 6 months old, heifers red with white spots, steer red, all have round holes in right ears, no other marks or brands; valued at \$36.

Crawford County—F. Cunningham, Clerk.

STEER—Taken up by D. S. Williams, in Sherman tp., one light red steer, under- and up-bred in right ear, up-bred in left ear, indistinct, all of brand on left hip, has bad lump on left jaw, 2 years old; valued at \$10.

Leavenworth County—J. W. Niehaus, Clerk.

STEER—Taken up by E. B. Keck, in Tonganoxie tp. (P. O. Tonganoxie), one red yearling steer, has some white on end of tail, lump on back part of throat and lump on back part of jaw.

Coffey County—Dan K. Swearingen, Clerk.

STEER—Taken up by P. H. Smith, in Key West tp. (P. O. Hall's Summit), November 15, 1898, one red-

two-year-old steer, dehorned, white spot in forehead, small white spots under belly, two hog rings in left ear, no brands visible; valued at \$35.  
STEER—Taken up by R. O. Gawthrop, in Ottumwa tp. (P. O. Burlington), November 15, 1898, one red steer, 1 year old, line-backed, white face and belly, branded with letter L on right hip; valued at \$15.

## MONEY

Is made speculating in wheat. We will operate for you in grain, stocks or provisions. \$10 and upwards handled. Weekly returns; 50 to 100 per cent. profit. Send trial order. Correspondence confidential. MILLER & CO., 910-105 LaSalle St., Chicago.

## CHOICE POLAND-CHINA GILTS FOR SALE.

Poland-China gilts sired by Wren 17172, Eberley's Model 2854, and Duke of Weston 16974, 1898 farrow. If you want a choice young animal, send for one of these—\$5 to \$10. I guarantee satisfaction on this kind. J. W. HIGGINS, JR., HOPE, KANSAS.

## 200 — PURE-BRED POLAND-CHINA SWINE FOR SALE — 200

By GEO. CHANNON, Hope, Dickinson Co., Kas., Breeder of Poland-China Swine and Short-horn Cattle.

I must reduce my herds to the minimum on account of short feed and insufficient accommodations for winter, therefore will sell at prices that should be a big object to purchasers. My offering consists of tried brood sows, gilts and boars, all ages. Will sell singly or in lots to suit. The young stock is by my herd boars Prince Bismarck 1867, Seldom U. S. 18318, Duke of Weston and Corwin. Come now and get a bargain. Also, for sale thirty extra fine young Short-horn bulls, sired by Glendower 10838. None better in Kansas.

## R. S. COOK, WICHITA, KAS., Poland-China Swine

BREEDER OF  
The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 28441, Black Joe 28608, World Beater and King Hadley. For Sale, an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly-bred sows. Inspection or correspondence invited.

## PURE-BRED HEREFORDS

FOR SALE. THIRTY-FIVE HEAD OF BULLS AND HEIFERS.

They are extra good ones. Prices as low as any responsible breeder. Farm adjoins the city. Address H. L. LEIBFRIED, Emporia, Kas.

## Nelson &amp; Doyle

Room 220, Stock Yards Exchange Building, KANSAS CITY, MO.,

Have for sale at all times, singly or in car lots... Registered Herefords and Short-horns. Cross-bred Hereford, Short-horns and grades of other breeds. Bulls and females of all ages.

Stock on Sale at Stock Yards Sale Barn, Also at Farm Adjoining City.

N. B.—We have secured the services of John Goelling, well and favorably known as a practical and expert judge of beef cattle, who will in the future assist us in this branch of our business.

## POLAND-CHINAS.

In order to sell out my surplus, I will sell boars, bred or open sows and fall pigs—either breed, registered or eligible—at prices that will make buyers

## BERKSHIRES.

Write before buying to

## O. P. UPDEGRAFF, TOPEKA, KS.

## VALLEY GROVE SHORT-HORNS.

THE SCOTCH BRED BULLS

Lord Mayor 112727 and Laird of Linwood 127149

HEAD OF THE HERD.

LORD MAYOR was by the Baron Victor bull Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. Lord Mayor heifers bred to Laird of Linwood for sale. Also bred Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

Address T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.

## ELI ZIMMERMAN,

Proprietor of the Brown County Herd of Poland-China Swine and General Live Stock Auctioneer, is prepared to make sales anywhere. He is a first-class salesman and keeps posted on the prices of live stock and the best time when to sell and when not to sell. Registered Poland-China Swine of both sexes of the best strains of blood always on hand. Address him at

## FAIRVIEW, KANSAS.

## THE KANSAS CITY STOCK YARDS

—ARE THE—  
FINEST EQUIPPED, MOST MODERN IN CONSTRUCTION AND AFFORD THE BEST FACILITIES

For the handling of Live Stock of any in the World.

## THE KANSAS CITY MARKET

Owing to its Central Location, its Immense Railroad System and its Financial Resources, offers greater advantages than any other in the Trans-Mississippi Territory. It is the Largest Stocker and Feeder Market in the World, while its great packing house and export trade make it a reliable cash market for the sale of Cattle, Hogs, and Sheep, where shippers are sure to receive the highest returns for their consignments.

	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1897 .....	1,921,962	3,350,796	1,134,236
Sold in Kansas City 1897 .....	1,847,673	3,348,556	1,048,233

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



## The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kas., 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.

### KANSAS STATE POULTRY ASSOCIATION.

President, A. M. Story, Manhattan.  
Secretary, J. W. F. Hughes, Topeka.

Poultry Show—At Topeka, January 9 to 14, 1899. C. H. Rhodes, Judge.

### POULTRY FOR PROFIT.

If rightly handled, hens will lay from 150 to 175 eggs in a year, and as our average price for the year is about 25 cents a dozen in New England, our hens should produce from \$3.12 to \$3.87 worth of eggs alone. Sell her to market before she moults, and you add 50 cents more to the gross income, making \$3.62 to \$4.37 for each hen. Deduct \$1.25 for cost of food, and we have the comfortable profit of \$2.50 to \$3 for each hen. Keep in mind that it is the winter eggs that pay the profit, and it is the pullets that we must look to for eggs in winter. In order to get pullets to lay in the fall, and have them produce a goodly supply of eggs all winter, they must be early hatched and rightly handled. The late maturing and late laying pullets of this year means late breeding birds next spring, and consequently more late hatched chickens to mature late next autumn, and not begin to lay until late another winter, one season lapping over and crowding another, those late maturing birds producing the bulk of their eggs at a time when everybody's hens are laying, and eggs can hardly be sold at a price at which they pay any profit.

The converse of this is equally true. Early-hatched pullets, got to laying before cold weather, and kept laying, will be abundantly broody in March, which enables another supply of early-hatched chickens, the pullets of which will be laying before cold weather comes on, and lay freely all through the winter, giving us another generation of early brooders and more early-hatched chickens. The whole story of profitable poultry raising can be summed up in three short rules: First, hatch the chickens early; second, keep them growing, so the pullets shall come to laying maturity before cold weather; third, keep them laying by good care and good food.

When I say hatch the chickens early, I do not mean too early. The first of April is the best time to hatch chickens for fall and winter layers.

In New England we get the best results by combining eggs and poultry.

A most important factor in steady growth is sweet, wholesome food. Feed often, and feed but a little at a time, is the rule with young chicks. Every two hours between daylight and dark is none too often, and see that no food is left standing in the sun to sour. Remove all of the food that remains, uneaten ten or fifteen minutes after feeding. Nothing causes more bowel looseness and dysentery in little chicks than sour food.

The chief foods for the first six weeks are coarse oat meal, slightly moistened with sweet milk if we have it, and waste bread from hotels and restaurants, which is thoroughly dried and ground to coarse crumbs in a bone mill. Fresh water and grit must be provided. When six weeks old the chickens are separated from their mothers, and put on the grass fields; we usually feed them but four times a day, giving them instead of the bread crumbs in the morning, a feed of mixed meal, which is equal parts of corn meal, ground oats, shorts, fancy middlings (or "red dog," as it is called in some localities). To this we add about 10 per cent. (or one scoopful in ten) of meat meal, or beef scraps. This mixture is moistened with sweet milk or water, care being taken that it is only so much moistened that it will be crumbly, not a soft mush.

The second feed, just after the middle of the forenoon, is the coarse oat meal mentioned above; early in the afternoon, a light feed of cracked wheat is given them, and towards night a feed of whole wheat or cracked corn, one on one day, the other the next. Twice a week we have fresh meat (butchers' trimmings), cooked and chopped fine, which is mixed with the coarse oat meal for the second feeding. We have also a bone-cutter, and on two days in the week the chicks have a good time wrestling and tumbling over each other in their eagerness to get the fresh-cut bone, the cut bone taking the place of one of the regular feeds.

Our coops have no floors, which we

think is the best plan if the ground is dry. Our floorless coops are easily cleaned by removing them to a fresh bit of ground every other day.

We separate the cockerels from the pullets as soon as we can tell them apart, shut the cockerels up in fattening pens, and send them off to the market at the earliest possible moment. The coops of pullets are scattered out in the grass fields, directly the grass has been cut off, and given full range and every opportunity to grow. It is our intention to bring them into the houses which are to be their permanent quarters early in October. From that time they are fed for eggs. We feed three times a day the year round, feeding a cooked mash in the morning, barley or oats at noon and wheat at night, feeding corn very sparingly, one or two nights in the week only during the cold weather. Wheat is the best grain food we have, and barley the next best. Oats is a good food, but somewhat fattening; hence should be fed sparingly to fowls that are well fed. A fowl needs a variety of food to supply her various physical wants and give her a surplus out of which to make eggs. Cabbage is the best green food, but anything in the vegetable line is good and greatly relished.

Of equal importance with the food ration is the housing of stock. Elbow room

## A Guardsman's Trouble.

From the Detroit (Mich.) Journal.

The promptness with which the National Guard of the different states responded to President McKinley's call for troops at the beginning of the war with Spain made the whole country proud of its citizen soldiers. In Detroit there are few guardsmen more popular and efficient than Max R. Davies, first sergeant of Co. B. He has been a resident of Detroit for the past six years, and his home is at 416 Third Avenue. For four years he was connected with the well known wholesale drug house of Farrand, Williams & Clark, in the capacity of bookkeeper.

"I have charged up many thousand orders for Dr. Williams' Pink Pills for Pale People," said Mr. Davies, "but never knew their worth until I used them for the cure of chronic dyspepsia. For two years I suffered and doctored for that aggravating trouble but could only be helped temporarily."

"I think dyspepsia is one of the most stubborn of ailments, and there is scarcely a clerk or office man but what is more or less a victim. Some days I could eat anything, while at other times I would be starving. Those distressed pains would force me to quit work."

"I tried the hot-water treatment thoroughly, but it did not affect my case. I have tried many advertised remedies but they would help only for a time. A friend of mine recommended Dr. Williams' Pink Pills for Pale People, but I did not think much of them."

"I finally was induced to try the pills and commenced using them. After taking a few doses I found much relief. I do not remember how many boxes of the pills I used, but I used them until the old trouble stopped. I know they will cure dyspepsia of the worst form and I am pleased to recommend them."



The First Sergeant.

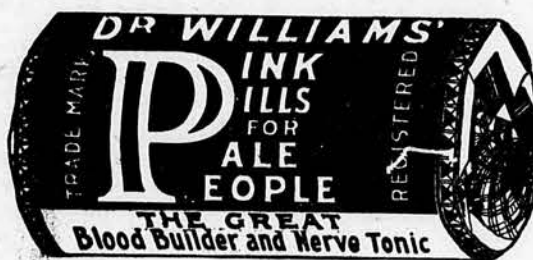
## AN AFFAIR OF THE NATION

It has been said of Americans that they are "a nation of dyspeptics" and it is true that few are entirely free from disorders of the digestive tract, Indigestion, Dyspepsia, Stomach and Bowel trouble, Catarrh of the Stomach, or Constipation. The treatment of these diseases with Cathartic medicines too often aggravates the trouble.

## THE LOGICAL TREATMENT

is the use of a remedy that will build up the system, thereby enabling the various organs to act as Nature intended they should. Such a remedy is found in

## Dr. Williams' Pink Pills for Pale People



The genuine are never sold loose by the dozen but always in packages like this, the wrapper being printed in red ink on white paper. For sale by all druggists or sent postpaid on receipt of price, 50 cents per box, by the Dr. Williams' Medicine Co., Schenectady, N.Y. A copy of our diet book free on request.



"SUCCESSFUL"

### MONEY MAKERS ARE FOUND IN

## GOOD INCUBATORS AND BROODERS

We manufacture a greater variety of standard machines than any other incubator firm. Capacity, 50 to 500 eggs; price, \$8.50 to \$68. Over 1,000,000 chickens hatched by our incubators last season. Send 6c. for 148-page catalog. Tells how to raise poultry and contains designs for poultry houses and other useful hints to the poultryman.

DES MOINES INCUBATOR CO., Box 83, Des Moines, Ia.



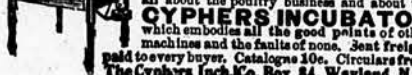
THE IMPROVED VICTOR Incubator

Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class hatcher in the market. Circulars FREE. GEO. ERTLE CO., QUINCY, ILL.



HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating EXCELSIOR INCUBATOR

Thousands in successful operation. Lowest priced 1st-class hatcher made. GEO. H. STAHL, 214 to 122 S. 6th St., Quincy, Ill.



MAKE HENS PAY! If you want to know how others do this, send for our Catalogue and Poultry Guide. It tells all about the poultry business and about the CYPHERS INCUBATOR which embodies all the good points of other machines and the faults of none. Sent freight paid to every buyer. Catalogue 10c. Circulars free. The Cyphers Incub. Co. Box 84, Wayland, N.Y.

### KANSAS ECONOMY INCUBATOR.

This incubator is a home product and has been in successful operation for ten years. It is still made and sold in No. 1, or 300 egg size, by the inventor and manufacturer, Jacob Yost, Arkansas City, Kas. Send for circular.



### INCUBATOR SUCCESS

depends upon the following named essentials—proper distribution of heat and moisture and perfect regulation and ventilation. These points attain perfection in the

### PETALUMA INCUBATOR

Add to these points superior construction and finish and you have a perfect machine. They deal only in high percentages of hatch. Sizes from 50 to 550 eggs. Prices \$10. up. WE PAY FREIGHT ANYWHERE in the U. S. Catalogue free. Petaluma Incubator Co., Box 80, Petaluma, Cal.

### ITALIAN BEES.

Bred from queens imported from Italy. Full colonies; two, three and four frame nucleus shipped anywhere and safe arrival guaranteed. We ship Bees any time from March to November. Queens, hives and supplies generally.

A. H. DUFF, Larned, Kas.



is the most important consideration. I believe in eight to ten square feet of floor space for each fowl kept. Having a grass run the fowls can help themselves to all the green food they desire, and if this is not obtainable, spade up or plow up the ground in the yards two or three times each summer, and sow it with rye or oats, the spading or plowing turning under the droppings and disinfecting the ground.

A scratching shed should be all open front to the south, provided with waterproof curtains attached to frames hinged at the top, so that they can be swung up to the roof where a hook and staple secures them. Six or eight inches of straw or coarse hay or leaves is to be thrown upon the floor of this shed, and all the grain feeds thrown into the scratching litter, so that the birds are constantly exercising in the open air, but sheltered from the northwest winds of winter.

We have found it comparatively easy, by raising early-laying pullets and keeping them laying, to get from 150 to 175 eggs apiece within a year of laying maturity; then turn the birds off to the butcher and put other early-laying pullets in their places.

If we get our pullets to laying early and keep them laying, we have got the cream of our egg yield within a year of laying maturity; hence, the advantage of selling them before they moult, and replacing them with the next generation of early-laying pullets.

There are many other arguments in favor of raising a yearly stock of pullets for layers, such as that of the old fowls being too fat to lay, and being much more susceptible to disease. We all know that if we find a bird dead under the roost, it is an old hen. A poultry farm properly managed gives an all-the-year-round profit. A farmer keeping a thousand head of laying stock can easily have a gross income of \$4,000 a year, and a net profit of \$2,500 to \$3,000 a year. It is only a question of good housing, good care and good feeding.—A. F. Hunter, Editor of Farm Poultry.

#### About the "Big Show."

The "big show," January 9 to 14 inclusive, at Topeka, is going to be a "hummer." I have letters from Emporia, Garden City, Wichita, Seagwick, Newton, Abilene, Salina, Horton, Belleville, Ottawa, Chanute and Blue Mound, that they are coming, and even sleepy old Missouri has waked up, and I have advices from over a half a dozen different breeders at Kansas City and Westport that they are coming up in full force. I do not blame them for wanting to come, as we will have the best lighted and the best heated hall in the State, and \$800 worth of special premiums to go into somebody's pockets. Our premium list will be out about the 5th of December. Premiums are not reserved to the Topeka fanciers, Shawnee county or the State of Kansas; hence our competition is open to the world. Agumalao may send us some Malays from the Philippine islands; in fact, Miss Rose, Topeka's Queen of the Fall Festival, has promised to send us a pen of long-tailed Phoenix (you know the Phoenix tail is from ten to fifteen feet long, done up in curl papers) birds, from Honolulu.

Candidly, the people of Topeka are aroused as they never were before, the breeders of the State are awakened to the fact that the best show in the West will be held at Topeka. We want everybody to come, and not only come in person, but send the birds, and if you cannot come, send the birds anyhow. They will get justice, impartiality and magnificent treatment. If the weather is good our 12,000 feet of exhibition room will be filled with birds from all over the West, making this the biggest show west of the Mississippi this season.

The Legislature will be in session at this time, and it is our desire to get them to give us an appropriation for a State show every year on a circuit basis. All members of the Legislature will have complimentary tickets to go and come as they please, and if we can make a good turn out and a big show of birds, it will not only help to make our tenth annual poultry show, but help to secure our appropriation. So, brother "cranks," turn out in full force and help this State secure what Illinois and Nebraska already have, which is \$2,000 for an annual show.

I am advised by the Chairman of the Western Passenger Association, under date of yesterday, as follows: "An open rate of one and one-third fare for the round trip from all points in Kansas, and from Kansas City and St. Joseph, Mo., to Topeka, excursion tickets will be sold January 7 to 12, inclusive, good to return until and including January 16, 1899. Tickets to be good for going passage commencing date of sale, and for continuous passage in each direction." This is the first rate we have ever had

and requires no certificates and is almost equal to one fare for the round trip.

Yours for good birds, a big show and a State appropriation.—J. W. F. Hughes, Secretary Kansas State Poultry Association, in Poultry West.

#### Coming Poultry Shows.

Kansas State Poultry Association.—J. W. F. Hughes, Secretary. At Topeka, January 9 to 14, 1899. C. H. Rhodes, Judge.  
Garden City Poultry and Pet Stock Association.—A. S. Parson, Secretary. Garden City, Kas. Show December 27-30, 1898. John C. Snyder, Judge.  
Abilene Poultry and Pet Stock Association.—Roy O. Shadinger, Secretary. Abilene, Kas. Second annual exhibit, at Abilene, January 25-28, 1899. Theo. Sternberg, Judge.  
Butler County Fancy Poultry and Pet Stock Association.—C. H. Pattison, Secretary and Treasurer. El Dorado, Kas. Second annual exhibit at El Dorado, Kas., December 20-23, 1898. C. H. Rhodes, Judge.  
Topeka Fanciers' Association.—L. V. Marks, Secretary. Topeka. Exhibit January 9-14, 1899, in connection with State show.  
Garfield County Poultry Association.—A. F. Rusmiser, Enid, Okla., Secretary. Enid, Okla., December 24-25, 1898. C. H. Rhodes, Judge.  
Chase County Poultry Association.—C. M. Rose, Cottonwood Falls, Kas., Secretary. Cottonwood Falls, December 27, 1898, to January 1, 1899. C. H. Rhodes, Judge.  
Rooks County Poultry Association.—N. N. Neher, Stockton, Kas., Secretary. Stockton, Kas., January 2-5, 1899. C. H. Rhodes, Judge.  
Glasco Poultry Association.—M. E. Potts, Glasco, Kas., Secretary. Glasco, Kas., January 5-7, 1899. C. H. Rhodes, Judge.  
Central Oklahoma Poultry Association.—H. F. Stephenson, Kingfisher, Okla., Secretary. Kingfisher, Okla., January 16-21, 1899. C. H. Rhodes, Judge.

#### POULTRY SUPPLIES.

The Peerless brand of Crushed Oyster Shells, Bone Vills, Tarred Roofing, poultry foods and remedies, Poultry Netting, etc., etc. Write for price list to T. Lee Adams, 417 Walnut street, Kansas City, Mo.

## Port Arthur's Prosperity Is Based on Business

Over 12,000 tons of export and import freight now being handled over its docks per month.

Three steamship lines now running to British, Continental and Mexican ports.

Over one-half the canal completed to a depth of sixteen feet.

One hundred thousand dollars' worth of property sold in March.

Go to Port Arthur and see what the backing of a 1,227 mile trunk line means.

For information write to

**F. A. HORNBECK,**

General Manager  
Port Arthur Townsite Co.,

KANSAS CITY, MO.

## CANCER

The following and many other reliable persons testify that I thoroughly cure Cancer without the knife. Hon. E. W. Jackson, president board of education Lima, Ohio, was cured seven years ago of lip Cancer. Prof. H. McDiarmid, Hiram College, Hiram, Ohio, cured seven years ago of face Cancer. Had undergone several operations before with knife. Address, Dr. C. Weber, 121 W. 9th St., Cincinnati, Ohio, for further particulars and free book.

When writing advertisers please mention Kansas Farmer.

# What's the Matter With Kansas?

Kansas owns (in round numbers) 900,000 horses and mules, 550,000 milch cows, 1,600,000 other cattle, 2,400,000 swine and 225,000 sheep.

Its Farm Products this year include 150,000,000 bushels of corn, 60,000,000 bushels of wheat and millions upon millions of dollars in value of other grains, fruits, vegetables, etc.

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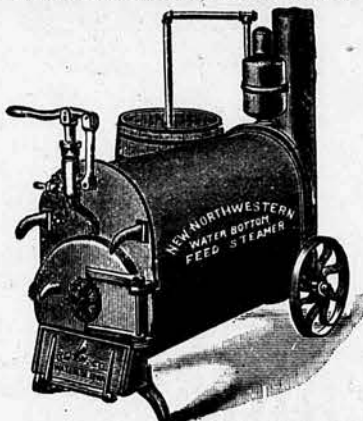


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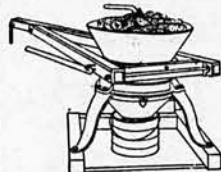


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**SPECIAL.**—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with order. Stamps taken.

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## ..PUBLIC SALE OF.. Grandview Herefords, AT THE STOCK YARDS PAVILION, KANSAS CITY, MO., December 15 and 16, '98.

Seventy bulls and thirty-five cows and heifers will be sold. These animals are of particularly desirable ages, are of the leading Hereford families, and are selected with care with the view of making an offering that will maintain the reputation of the Grandview herd. The bulls are large, smooth, grass-grown, fleshy animals, and three-fourths of them will be over seven months old at the time of sale. The heifers will either all be bred or old enough to breed at that time. Catalogues now ready.

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At the farm of E. H. Littlefield, two miles south of Newkirk, Okla.,  
TUESDAY, DECEMBER 20, 1898.

The stock consists of eighteen head of pure-bred Short-horn cattle, three Jersey cows, one Clydesdale stallion, twelve horses and colts, harness, wagons and farming tools, the property of E. H. Littlefield, of Newkirk, Okla. Terms of sale—Cash.

Fifty head of pure-bred Poland-China hogs—twenty-five boars old enough for service; twenty-five sows and gilts. Part of the sows are bred to King U. S. 3d 18128. And 100 graded calves, the property of F. B. Hutchinson, of Newkirk, Okla. Terms of sale on the hogs—Sums of \$15 or less, cash; over \$15, six months' time with approved security.

Sale to commence at 10 a. m. Conveyance will be furnished from the station at Newkirk. Lunch will be served at noon. Send for catalogue.

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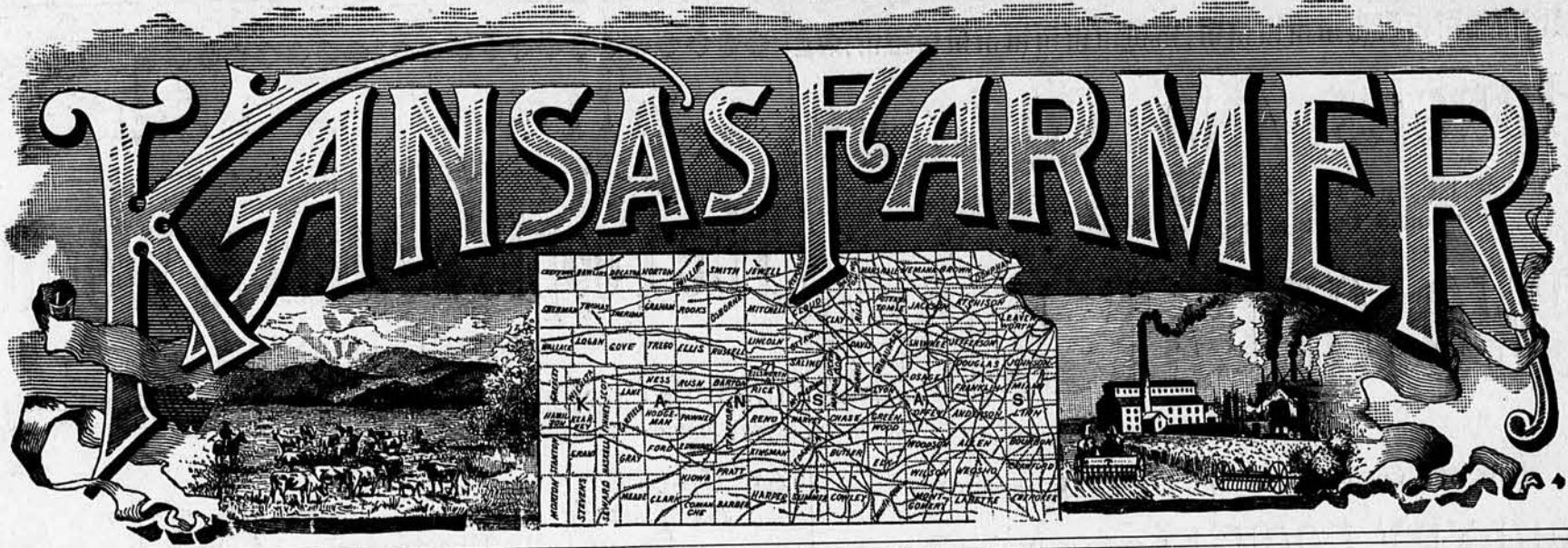
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ESTABLISHED 1893.  
VOLUME XXXVI.

TOPEKA, KANSAS, DECEMBER 8, 1898.

{SIXTEEN TO TWENTY  
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Peru, Kas.—Enclosed find \$2 for the Kansas Farmer for last year and as far as it will go on the next. I appreciate your kindness in sending me the paper all this time. I love to read the Farmer. It is Kansas' farm paper. F. C. Hatch.

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#### GOT THE MONEY'S WORTH.

Anthony, Kas.—I have moved to town and shall not need an agricultural paper longer, so you will please discontinue after this date. When I was on the farm it was always the first paper I looked over among several which I was taking. It always received a glad welcome in my household. I feel that I am amply repaid for the money I have sent you in the several years during which I have been a subscriber. Wishing you success. W. Mattox.

#### A CLUBBING LIST.

Ottawa, Kas.—I sent you my list last year and they all came satisfactory. This year I wish sent Kansas Farmer and New York Weekly Tribune to Mrs. J. L. Bass, Ottawa, Kas., and the Nursery and Our Little Ones to my little girl, Ella Bass, Ottawa, Kas. Jno. L. Bass.

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Colby, Kas.—Enclosed find \$2 to pay up and extend my subscription to the Kansas Farmer. Accept my thanks for sending the paper after my subscription expired. Times are hard, but they have to be harder yet before I would think of doing without the Kansas Farmer. Henry T. Kumbson.

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Cherry Vale, Kas.—When the twenty-sixth issue containing our advertisement has been issued please drop it out. The Farmer has rendered us very satisfactory service as an advertising medium and we shall expect to resume in about next December, when we have poultry stock for sale. P. C. Bowen & Son.

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Homer City, Pa.—Enclosed find \$1.20 for Kansas Farmer and poultry and horse books, as described on page three of the supplement. G. H. Cribbs.

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Monitor, Kas.—Enclosed find \$20, for which please send me one of your Kansas Farmer sewing machines, oak, and renew my subscription to your paper one year. Send the machine to Inman, Kas., my nearest railroad station. J. J. Yoder.

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Richmond, Kas.—Please find \$1.20, for Kansas Farmer and Kansas City Weekly Star one year. I like all the departments of your paper and especially weather and crop reports. Isaac M. Taylor.

#### PLEASED WITH THE SEWING MACHINE.

Hackney, Kas.—We received the Kansas Farmer sewing machine in due time and good shape. Are well pleased with her. She is a daisy and real good looking. They all say so. The neighbor women say they will have one as soon as they can get the \$20. She (the machine, not the women), we think, makes a little too much noise for a new one. Perhaps a screw is loose somewhere and needs adjusting. My little girl 13 years old made herself an apron in less than two hours after she (the machine) arrived. We like the old reliable paper very well and will not pass an opportunity without saying a good word for it and you. We took our claim here in 1870 and have farmed and lived on it ever since. We like Kansas and her prosperity. Don't “blame” McKinley with it. Yes, we like the machine. If it didn't sew well the name would carry it through. G. A. Rambo.



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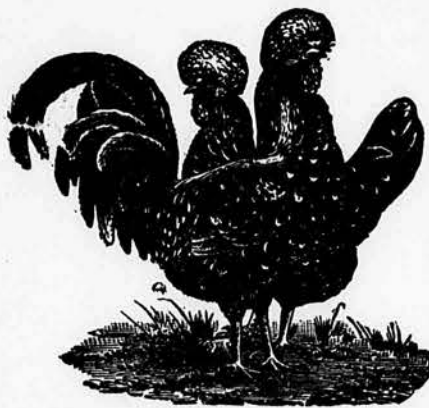
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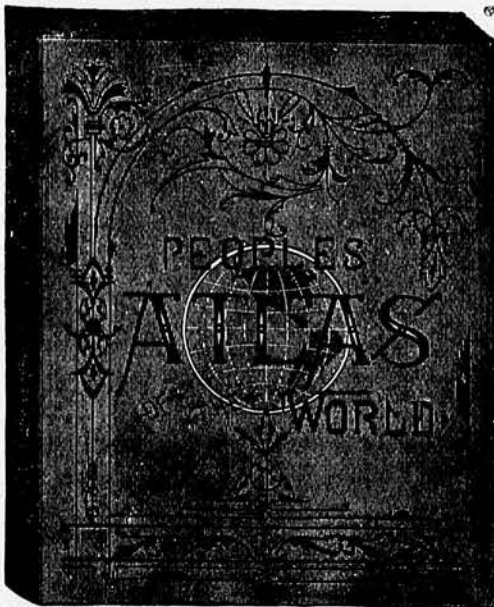
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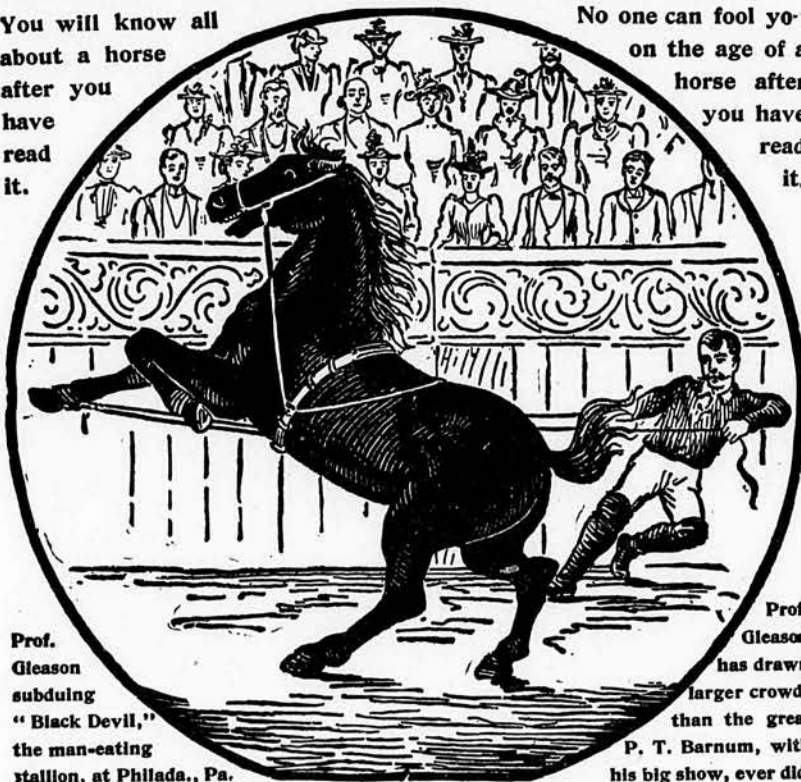


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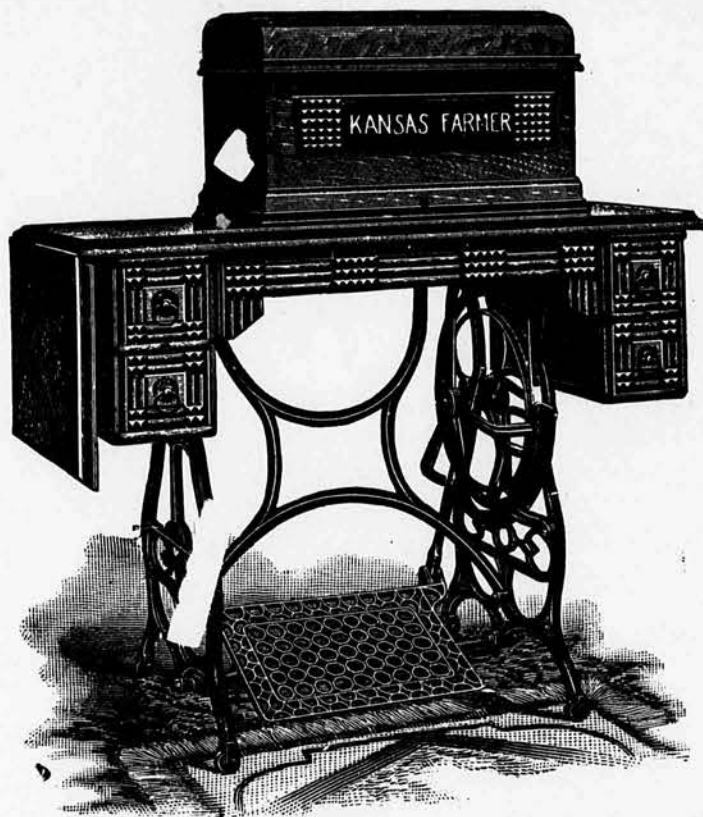
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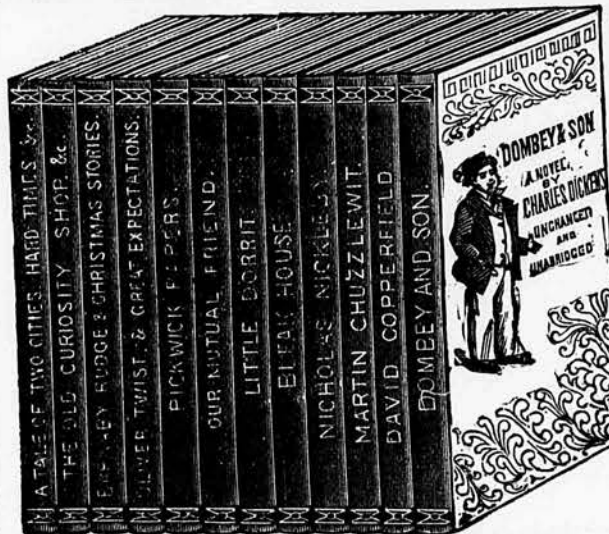
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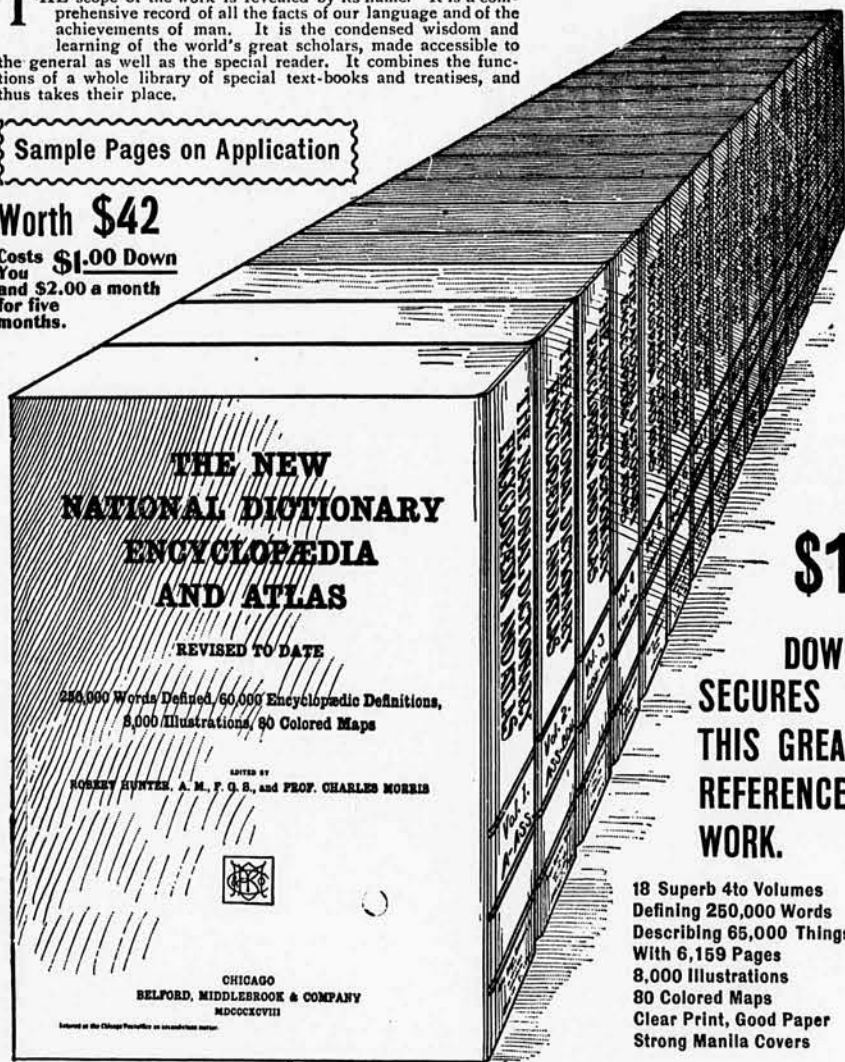
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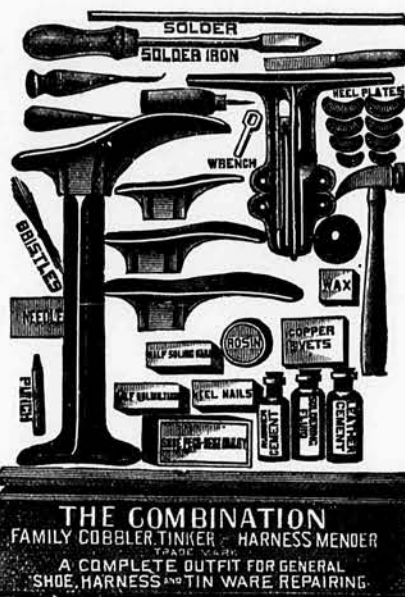
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