

VOL. XXXVI. NO. 51.

TOPEKA, KANSAS, THURSDAY, DECEMBER 22, 1898.

SIXTEEN TO TWENTY PAGES-\$1.00 A YEAR.

BREEDERS' DIRECTORY.

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

CATTLE

DOCK HILL HERD OF SHORT-HORNS — Cross-bred Sectch and Waterloos, handsome and beety. Have for sale twenty-four head thoroughbred red bulls, 8 to 15 months old, ten of which are by the great Linwood Lord Mayor. Also have a car-load very high-grade Short horn bulls and sixty-eight high-grade Hereford bulls for sale, 8 to 12 months old. J. F. True & Son, Newman, Kas., on the U. P. R. R., 12 miles east of Topeka.

TATEVIEW STOCK FARM.—Registered Short-horn cattle. Royal Bates 2d No. 124404 at head of herd. Young stock for sale. E. H. Littlefield, New-kirk, Oklahoma.

INGLISH RED POLLED CATTLE—PURE-BRED.
I Young stock for sale. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.
Mention this paper when writing.

NEOSHO VALLEY HERD OF SHORT-HORNS.

Imported Lord Lieutenant 120019 at head of herd.

Young bulls and helfers for sale. Address D. P.

Morton, Council Grove, Kas.

HORSES.

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

SWINE.

J. U. HOWE, Wichita, Kas., Maple Ave., Herd Du-oroo-Jersey hogs Choice stock for sale. Reason-able prices. Personal inspection and correspondence invited.

Sliver Spring Herd Poland China Hogs, Headed by HADLEY'S MODEL T. Bred sows, glits and boars of choleest breeding for sale. Address WALTER ROSWURM, Beman, Morris Co., Kas.

S. F. GLASS, Marion, Kas., breeder of thoroughbred S. Jersey cattle, Poland-China and Large English Berkshire hogs, M. B. turkeys, B. P. Rock and S. C. White Leghorn chickens, peacocks, Pekin ducks and Valle Leghorn.

KANSAS HERD OF POLAND-CHINA SWINE.—
Has five choice yearling sows bred to my black
U. S. boar, and one "coumseh boar and thirty-five
fall pigs by Model Saniers (20492) by Klever's Model.
They have typical ears and show fine markings. Address F. P. Maguire, Haven, Kas.

V. B. HOWEY, TOPEKA, KAS.

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

POULTRY.

150 BARRED PLYMOUTH ROCKS and FOR SALE
Buy now and save higher prices next spring. They
are from birds that have won prizes wherever shown.
For prices, etc., address J. P. Johnson, JUNCTION
CITY, KAS.

PURE-BRED POULTRY.

Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, White Cochins, Buff Cochins, Light Brahmas, Silver Wyandottes, White Wyandottes, Black Jayas, Brown Leghorns, White Leghorns, Buff Black Javas, Brown Leghorns, White Leghorns, Buir Leghorns, Silver Spangled Hamburgs, Pekin Ducks and Pearl Guineas. Single Birds, Pairs, Trics and Breeding-Pens. Extra Fine Breeding and Exhibition Birds. Also, Pet Deer. Prices reasonable. Write me your wants.

A. H. DUFF, Larned, Kas.

ROCKS BLUE BARRED

Empire, Lash and Conger Strains. Elight years experience in breeding Rocks exclusively. Have the best young stock this year I have ever raised. Perfect, high-scoring, prize-winning birds. Two hundred pullets and cockerels now ready for shipment. A few cockerels from E. B. Thompson eggs for sale. Write for descriptive circular and prices. Printed recipe for making and using Liquid Lice Killer, 25c. Address prices. Printed reciperations. Lice Killer, 25c. Address
T. E. LEFTWICH, Larned, Kas.

EXCELSIOR POULTRY AND FRUIT FARM

We are now well established in our new location, with plenty of free range, and the finest lot of young chicks we ever had. Stock growing finely, and will be ready to offer October 1, 1898. Write your wants and I will quote prices. A full line of Poultry Supplies.

C. B. TUTTLE, Proprietor.

Sond 10 cents in silver or 2-cent stamps for Guide to Poultry Culture and price list.

SWINE.

D. TROTT, ABILENE, KAS., famous Duroc

KAW VALLEY HERD POLAND-CHINAS—One of the best sons of Chief I Knew at the head. Pairs and trios not akin; of all the leading strains. M. F. Tatman, Rossville, Kas.

BOURBON COUNTY HERD BERKSHIRES

J. S. MAGERS, Proprietor, Arcadia, Kas. Correspondence invited. Satisfaction guaranteed

M. H. ALBERTY, Breeder of Registered DUROC-JERSEY SWINE. CHEROKEE, KAS. Baby Pig Teeth Clippers, 35 cents by mail.

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

VERDIGRIS VALLEY HERD PEDI-GREED POLAND-CHINAS.

Two hundred head, four herd boars, 150 spring pigs. An extra lot of September boars and glits for sale. Prices reasonable. Farmers and Stock Hog Raisers cordially invited to write or visit us.

WAIT & EAST,
Altoona, Wilson Co., Kas.

PURE-BRED POLAND-CHINAS.

Spring crop of pigs by Wren's Model, What's Wanted Wilkes and Tanner by Hidestretcher. Dams by Black Corwin, Wren's Medium, Protection Boy, Moss Wilkes Teoumseh, Hadley M. Washington. Get a Corwin Sensation, Darkness ist, or Moss Wilkes Maid boar before my sale this fall. Some extra fine gitts for sale now. Tanner pigs are marked perfectly and have fine finish. Write me for particulars.

J. R. WILLSON, Marion, Kas.

Poland=Chinas

BRED AND FOR SALE

At thome of Model Boy 18545 and A.'s Chief 21014. Unoice spring pigs, either sex. Also a few well-bred sows and gilts, bred to either of above boars, at reasonable prices. Brood sow sale January 3, 1899. E. E. AXLINE, Oak Grove, Jackson Co., Mo.

Mains' Herd of Poland-Chinas.

Chief Teoumseh 2d, Klever's Model, U. S. Model, Moorish Maid and Chief I Know strains. A selected lot of bred sow; and young stock for sale at very reasonable prices. Over thirty years in the business. Stock equal to any. Satisfaction given. JAMES MAINS, Oskaloosa, Jefferson Co., Kas.

M. C. VANSELL,

Muscotah, Atchison, County, Kansas, Breeder of Pure-bred Poland-China Swine and Short-horn Cattle of the most desirable strains.

For Ready Sale Thirty Poland-China

Bred Sows
One and two years old, bred for fall farrow; very
choice; price low if ordered soon; must make room
for 170 pigs now on hand. Come and see or write.

THE WILKES QUALITY HERD OF POLAND - CHINA SWINE.

Thos. Symns, Prop., Hutchinson, Kas. "Herd boars, Darkness Quality and Reno Wilkes. For ready sale 45 very choice pigs out of Bessie Wilkes, Beauty Sedom, Chief I Know, Standard Wilkes, Ideal Black U. S. and Chief Tecumseh 2d sows. Farm one mile west of Hutchinson, near Star Salt works.

F. L. and C. R. OARD, Proprie

HEDGEWOOD HERD OF POLAND-CHINAS VASSAR, KANSAS.

Frogular Blood. — Individual Merit.

Brood sows of the most popular strains and individual merit. The best that money can buy and experience can breed. Farm one and one-half miles south and half mile east of Vassar, Kas., on Missouri Pacific railroad.

BLUE MOUND HERD BERKSHIRE SWINE.

Herd boars, Victor Hugo 41799 (sire imp.), Barkis 20040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also breed Shropshire sheep, M. B. turkeys and B. P. Bock chickens. Write.

Allen Thomas, Blue Mound, Linn Co., Kas.

PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

For sale, King Perfection 4th 18744 S. and Lambing Ideal 14050 S. Also sows bred to above boars or Dandy U. S. by Frazur's U. S. by Frazur's Black U. S., dam Black Beauty by Ben Harrison, sire Charley F., brother to Look Me Over. Write for particulars. Ad dress either W. E. JOHNSON, E. A. BRICKER, Westphalia, Kas.

SWINE.

CRESCENT HERD POLAND-CHINAS.

S. W. HILL, Hutchinson, Kas.



DIVERDALE HERD of Chester White swine and Light Brahma poultry. J. T. Lawton, Burreron, Kas., proprietor. All stock guaran-teed. I can also ship from Topeka, my former place.



D. L. BUTTON, North opeka, Kas., breeder of Improved Chester Whites. Stock for sale. Farm 2 miles

Standard Herd of Poland-Chinas

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

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

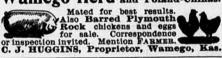
of the fashionable prize-winning Chief I Know train. Cheney's Chief I Know at head of herd. Pigs for sale. Prices low.



T. A. HUBBARD Rome, Kansas,

POLAND-CHINAS and LARGE ENGLISH
BERKSHIRES. Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

Wamego Herd Imp. Chester White



THE SEDGWICK NURSERY CO.,

Sedgwick, Harvey Co., Kas., -Breeders of-

Short-horn Cattle and Poland-China Swine Of the Best Strains.

Stock for sale. Correspondence and inspection in-

SUNNYSIDE HERD

PEDIGREED POLAND-CHINAS.

Herd Boars are Grand Sons of J. H. SANDERS and SHORT STOP, the World's Fair Prize Winners. Bred to 20 large mature sows of Corwin Black U. S. and Black Hess blood. We aim to produce the moneymakers, not sacrificing size and feeding qualities to fancy points. Choice young stock for sale at reasonable prices. M. L. SOMERS, Altoona, Kas.

Fifty boars and glits for this season's trade. My herd boars consist of Darkness Quality 14851, Princeton Chief 14545, Col. Hidestretcher 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding Personal inspection and correspondence invited.

LAWRENCE NATION, Hutchinson, Kas.

RIDGEVIEW FARM HERD OF

BERKSHIRES

Young boars old enough for service, also sows and gilts bred and unbred for sale. Sired by 2d Seven Oaks, Col. Mills 45718, Prince Majestic 45600 and others. Write for prices, or come and inspect stock. MANWARING BROS., Lawrence, Kas.

BOARS. BOARS. BOARS

July to September 1897 farrow, good condition and ready for service. All eligible. Poland-Chinas sired by Wren 17172, choice \$15.

J. W. HIGGINS, JR., Hope, Kas.

"HIGHLAND" POLAND-CHINAS

Ten choice fall boars and a number of fine spring boars sired by Knox All Wilkes 18179 S. and Highland Chief 1834 S. by Chief Tecumsch 2d. Young sows of same blood bred or open. Write us. od or open. Write us.

DIETRICH & SPAULDING,
Richmond, Kas.

OHEEP FOR SALE CHEAP—Ten head of Cots-November of the Ver-mont Merino ewes, \$5.00; three fine heavy shearing Vermont rams—\$25.00 takes the three head. Write oon to M. H. Hague, Walton, Kas.

CATTLE.

CENTRAL KANSAS STOCK FARM.—F. W. Ross, Alden, Ries Co., Kas., breeds pure-bred Short-horns, Poland-Chinas and Barred Plymouth Rocks. Stock for sale.

NORWOOD SHORT-HORNS—V. R. Ellis, Gardner, Kas. Rose of Sharons, Lady Elizabeths and Young Marys. Richest breeding and individual merit. Young bulls by Godwin 11676 (head of Linwood herd). Sir Charming 4th now in service.

MAPLE LAWN HEREFORDS.

E. A. Eagle & Son, Props., Rosemont, Osage Co., Kas. For sale, five young pure-bred bulls of serviceable age. Also one car-load of high-grade cows and one car bull calves.

Geo. Groenmiller & Son,

Centropolis, Franklin Co., Kas., BREEDERS OF RED POLLED CATTLE
COTSWOLD SHEEP and
FANCY POULTRY.

For Sale-A few bulls; also young bucks.

SILVER CREEK HERD SHORT-HORN CATTLE.

Scotch and Scotch-topped, with the richly-bred Champion's Best 114571 in service. Also high-class DUHCC-JERSEY SWINE. Can ship on Santa Fe, Frisco and Missouri Pacific railroads.

J. F. STODDER, Burden, Cowley Co., Kas

CLOVER CLIFF FARM.



Registered Galloway Cattle.
Also German Coach, Saddle and
Trotting-bred horses. World's
Fair prize Oldenburg Coach stal
lion, Habbo, and the saddle
stalilon, Rosewood, a 16-hand,
1,100-pound son of Montrose, in
Visitors always welcome. Address

BLACKSHERE BROS., Elmdale. Chase Co., Kas.

DEER PARK FARM. H. E. BALL, Proprietor.

Registered Jersey cattle. Young bulls and heifers for sale. Registered Poland-China / swine. Young boars for sale.

Farm two miles east of To-T. P. CRAWFORD, Mgr., Topeka, Kas.

SUNRISE STOCK FARM.



C. A. STANNARD, Prop. Hope, Kas. Breeder of

Hereford Cattle and Large English Berkshire Hogs 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 helfers and seven bulls 3 to 7 years old for sale.

RIVERSIDE STOCK FARM.

Percheron and Roadster Horses and Shetland Ponies; also one Denmark Saddle Stallion; also Shorthorn Cattle. Stock of each class for sale. Also a car-load of young Shorthorn bulls for sale. Pedigrees guaranteed. Address

O. L. THISLER, Chapman, Kas.

AMERICAN GALLOWAY BREEDERS'

ASSOCIATION.

Composed of breeders of Galloways in all parts of the United States and Canada. Stephen M. Winslow, President, - Oskaloosa, Me Frank B. Hearne, Sec'y-Treas., - Independence, Me For any information relating to the breed, write to the Becretary.

When writing advertisers please mention Kansas Farmer.

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.)

THE DIGESTIBILITY OF FOOD.

"We live not upon what we eat, but upon what we digest." In other words, the value of food for nutriment depends not only on how much of nutrients it contains, but also upon how much of these the body digests and uses for its

By digestibility of food several different things are, or may be, meant. Some of these, as the ease with which a given food material is digested, the time required for the process, the influence of different substances and conditions on digestion, and the effects upon health and comfort are so dependent upon the in illness, to live on gruel or beef tea. peculiarities of different individuals, and are so difficult of measurement as to make the laying down of hard-and-fast rules impossible. For our present purpose, the most important factor is the amount digested. This, fortunately, is more easy to determine. Understanding by the digestibility of a food the proportions of each of the nutrients which portions of each of the nutrients which be actually directed by healthy nor can be actually digested by healthy persons, the question can be answered more

or less accurately by experiment.

Briefly expressed, the method consists in weighing and analyzing both the food consumed and the solid excrement. Since the latter represents the amount of food undigested and unassimilated, the dif-ference is taken as the amount digested. A large number of such tests of the digestion of feeding stuffs by domestic animals have been made in European, and of late in American experiment stations. The number of experiments upon the digestibility of food of man is small. Scarcely more than a hundred reliable series have been reported. The very large majority of them have been made in Germany, most of them with healthy men.

The results may be briefly summar-

ized as follows:

(1) The protein of our ordinary meats, fish, and milk is very readily and completely digested. The protein of vegetable foods is much less completely digested than that of animal foods. Of that of potatoes, whole wheat, and rye flour one-fourth, or even one-third, may escape digestion, and thus be useless for nourishment. Roughly speaking, one-sixth or one-seventh of the portein of wheat flour, corn meal, beans, and peas may be assumed to be undigested when cooked and eaten in the usual way.

(2) Much of the fats of animal food may at times fail of digestion. This is presumably true of vegetable fats, but the quantities are in general so small that the determinations of the proportions digested are not very accurate. The experiments thus far made imply that perhaps 5 per cent of the fat of meats, eggs, milk, butter, oleomargarine and lard will escape digestion as they are ordinarily eaten.

(3) The carbohydrates, which make up a large part of vegetable food, are in general very completely digestible. The crude fiber, or cellulose, is an exception, but the quantities of this in the materials used for the food of man are too small to be of importance. Sugar is believed to be completely digested. This is assumed to be the case with the sugar of milk. The other carbohydrates of animal foods are very small in amount.
(4) The animal foods have in general

the advantage of the vegetable foods in digestibility in that they contain more protein and that their protein is more

(5) The quantity digested appears to be less affected by flavor, flavoring materials, and food adjuncts, and to differ less with different persons than is commonly supposed.

One important thing to remember is that the food we digest is not always utilized to the best advantage. Different people differ greatly in this respect. One man may be able to do a large amount of work and another very little when both have the same diet and digest the same amounts of nutrients from it. One person will grow fat upon an amount of digested material with which another will not gain in weight at all. The getting of the most good from food is not so much a matter of digestion as of making use of what is digested.

THE FITTING OF FOOD TO THE NEEDS

OF THE BODY.

In the adjusting of diet to the demands of the body, the important matter is to

to keep it warm and do its work. Considering the body as a machine, there must be material to make it and keep it in repair and fuel to supply heat and power. If there is not food enough or the nutrients are not in the right proportions, the body will be weak in its structure and inefficient in its work. So, likewise, if there is too much, damage to health will result.

While this is true as a general principle, and while this principle is the fundamental one in food economy, there are many modifications in detail, not as many as there are different persons and different kinds of food to be fitted to their peculiarities of digestion and assimilation, but still very many.

Thus, people in poor health or with weak digestion or with certain peculiarities of the nutritive system, are often obliged to be very particular in the selection of their food. A man who can ordinarily "eat anything" may be forced, The numerous food preparations for people with weak digestion are made in response to an actual and pressing need of partially digested, or at least of easily ment and sometimes almost none. are as much medicine as food, but often their value is inestimable.

There are people who, because of some peculiarity of the alimentary system, are debarred from using foods which for people in general are most wholesome and nutritious. Some persons can not endure eggs, others suffer if they take milk, others have to avoid certain kinds of meat, and others suffer nausea or severe pain if they eat fruits which are generally agreeable to the taste and erate muscular work.

exceptions.

In such matters we are apt to be impressed by the exception rather than the rule. It is nevertheless true for a great majority of people—for nearly every one who is in good health and uses the ordinary standard, wholesome foods-that a healthful diet is that which supplies the quantities of nutrients which the body equires.

Of course there is a great difference in the requirements of different people. The kinds and amounts of food best fitted for nourishment vary not only with sex, age, size, occupation, and climate, but also with the peculiarities of the individual. But it is possible in a general way to estimate the amounts of actual nutrients needed on the average by people of different classes and occupations.

DIETARIES AND DIETARY STAND-

ARDS.

As the outcome of a great deal of observation and experiment, nearly all in Europe, standards have been proposed for the amounts of nutrients and energy in the daily food required by different classes of people. Those of Prof. Voit, of Munich, Germany, are most commonly accepted by specialists in Europe. Voit's standard for a laboring man at moderately hard muscular work calls for about 0.25 pound of protein and quantities of carbohydrates and fats sufficient, with the protein, to yield 3,050 calories of en-Taking into account the more active life in the United States, and the fact that well-nourished people of the working classes here eat more and do more work than in Europe and in the belief that ample nourishment is necessary for doing the most and the best work I have ventured to suggest a standard with 0.28 pound of protein and 3,500 calories of energy for the man at mod-

TABLE 1 .- American and European dietaries and dietary standards. (Quantities per man per day.)

	1	Nutrient	Fuel	itive	
DIETARIES.		Fats.	Carbo- hydrates.	Value.	Nutritive Ratio*
American (Massachusetts and Connecticut).	Lbs.	Lbs.	Lbs.	Cal.	1:
Family of carpenter in Middletown, Conn	0.25 0.23	0.29	.76 1.06	3,055 3,590	5.5 8.2
n cotton mills	.29 .28	.41	1.21	4,650 4,010	· 7.6
Conn.; well-paid machinists, etc., at moderate work Food eaten Blacksmiths, Lowell, at hard work	.23 .44	.34	1.75	3,490 6,905	7.3
Brickmakers, Massachusetts; 237 persons at very se-	.40	.81	2.54	8,850	11
Mechanics, etc., in Massachusetts and Connecticut; average of 4 dietaries of mechanics at severe work. Average of 20 dietaries of wage-workers in Massa-	.48	.65	1.65	6,705	6.6
Average of 5 dietaries of profes- (Food purchased	.34 .30	.50 .36	1.38 1.12	5,275 4,140	7.5 6.6
sional men and college students In Middletown, Conn Food eaten	.27	.34	1.08	3,925	6.6
European (English, German, Danish, and Swedish).	90	.09	1.16	3,055	4.7
Well-fed tailors, England, Playfair	.29 .34 .39	.09	1.37 1.47	3,570 4,115	4.8
Mechanic, Munich, 60 years old, in comfortable cir- cumstances, light work. Forster	.26 .34	.15 .12	.76 1.06	2,525 3,085	4.3
Carpenters, coopers, locksmiths, Bavaria; average of 11 dietaries, Volt	.27 .30	.08	1.28 1.40	3,150 4,195	5.3
Brickmakers (Italians), Munich, diet mainly maize meal and cheese, severe work, Ranke	.37 .25	.26	1.49	4,540 2,800	5.6
German army ordinary ration, war footing	.30	.13	1.08 1.49	3,095 3,985	4.6
Ranke Lawyer, Munich, Forster. Physician, Munich, Forster. Physician, Copenhagen, Jurgensen Average of 7 dietaries of professional men and stu-	.18	.22 .28 .20 .31	.53 .49 .80 .53	2,325 2,400 2,830 2,835	4. 6. 4. 4.
dents, Germany, Denmark, and Sweden	.25	.22	.63	2,670	4.
Dietary standards.	1200	200	17 1940	2.000	
Adult in full health, Playfair. Active laborers, Playfair. Man at moderate work, Moleschott. Man at moderate work, Voit. Man at hard work, Voit.	.29 .26 .32	.11 .16 .09 .12	1.17 1.25 1.21 1.10	3,140 3,630 3,160 3,055 3,370	5. 4. 4. 5. 4.
Man with little physical exercise, Atwater Man with light muscular work, Atwater Man with moderate muscular work, Atwater Man with active muscular work, Atwater Man with hard muscular work, Atwater	20 .22 .28 .33	.22 .20 .22 .28 .33 .55	.66 .77 .99 1.10 1.43	2,450 2,800 3,520 4,060 5,700	5. 5. 5. 6.

*The nutritive ratio is the ratio of the protein to the sum of all the other nutritive ingredients. The fuel value of the fat is two and a quarter times that of the protein and carbohydrates. In calculating the nutritive ratio the quantity of fats is multiplied by two and one-fourth. This product is adoed to the weight of the carbohydrates. The sum divided by the weight of the protein gives the nutritive ratio. Materials with large amounts of fats or carbohydrates and intile protein, like fat meats or potatoes, have a "wide" nutritive ratio. Those with a large amount of protein as compared with the carbohydrates and fats, like lean meat, coditsh, and beans, have a "narrow" nutritive ratio. In other words, the materials rich in tissue-forming substances have a narrow, and those with a large preponderance of fuel materials have a wide, nutritive ratio. This is an important matter in the adjusting of food to the demands of the body.

A well-balanced diet is one which has the right ratio of protein to the fats as d carbohydrates. A relative excess of the tissue formers makes the ratio narrow, while an excess of the fuel ingredients makes an overwide ratio in the diet. Either of these errors is disadvantageous. Our food materials and our diet are apt to have too wide a nutritive ratio. In other words, we consume on the whole relatively too little protein and too much of the carbohydrates and fats.

needed for the nutriment of the brain been much larger. physiological chemistry has yet to tell us, but it is certain that people with little from a large number reported by differmuscular exercise require less food than those who labor. Well-to-do professional men and students in Europe with less muscular exercise than mechanics have been found to be well nourished with an average of 0.23 pound of protein and provide enough protein for the building and repair of tissue and enough energy observed in the United States the list followers in Germany, and by Play- Main 3389.

Just what compounds in food are amounts eaten by professional men have

The figures of Table 1, which are taken ent investigators, will serve to show how the actual dietaries of people of different proposed as the result of observations and including day school reconvenes. and experiments. The figures for Euro-

healthful in their effect. But these are fair in England; the American figures are by the writer and his associates; all are based upon the observations of actual dietaries.

The dietary standards of the same table are intended to represent the average needs as nearly as they can be estimated from the data now at hand. Much more inquiry will be necessary to make them as reliable as is to be desired.

CALCULATION OF DAILY DIETARIES.

On the basis of the standards for dietaries, various combinations of food materials for daily dietaries may be made by calculations from standard tables. Thus if a dietary for a man at moderately hard muscular work is to be made up of round beefsteak, butter, potatoes, and bread, it may be calculated as fol-

Calon Calo	Round steak. 13 ozs. contain Butter	Real
Round steak Butter Potatoes Wheat bread	Calorries. 855 Round steak 3,615 Butter 1,280 Wheat bread.	Pro- Calo- Lbs. 855 Bound steak 01 3,615 Butter 019 255 Potatoes Wheat bread.
Round steak Butter Potatoes Wheat bread	Calorries. 855 Round steak 3,615 Butter 1,280 Wheat bread.	Pro- Calo- Lbs. 855 Bound steak 01 3,615 Butter 019 255 Potatoes Wheat bread.
Calo- ries. 855 3,615 325 1,280		Pro- tein. 18 18 .019 .088
		Pro- tein. 18 18 .019 .088

(To be continued.)

Beardless Barley.

Editor Kansas Farmer:-I would like to know something of the experience of some one in our State with the raising of beardless barley. I am thinking some of sowing it next season, and, as I never handled it, and cannot find a farmer here who has had experience with it, I write to you in hopes of finding what I want. Will you please bring this matter to the attention of some one who can answer the following questions about it through the Farmer: Does beardless barley yield well here, I mean in southeastern Kansas? How much should be sown per acre? Do chinch bugs damage it as they do wheat or oats?

M. L. SOMERS. Altoona, Kans.

Grass on the Plains.

Editor Kansas Farmer:-In reply to a question concerning Johnson grass, in your issue of the 8th inst., I will say that Johnson grass has been tried at Rainbelt Experiment Station. It makes a good growth as an annual, and occasionally a few roots live through the winter here, but not enough to amount to much during the second year. One ranchman near here tried it several years, but finally gave it up as worthless for this section. We do not know of anyone here who has tried pasturing Johnson grass the first vear.

I will say that some success has been attained in seeding eaten-out buffalo grass sod to grains and grasses without plowing the ground. The cutaway or disk harrow has been successfully used in preparing sod for millet and sorghum. J. E. PAYNE.

Cheyenne Wells, Colo.

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. classes at home and abroad compare with Tickets will be sold on date school closes the standard dietaries which have been and day following, with return limit to

Full information cheerfully given at

THE KANSAS FARMER.

The Stock Interest.

GROWING BEEF IN MINNESOTA.

Editor Kansas Farmer:-This paper contains a summary of Bulletin No. 60, Section 1, which has just appeared under the above heading. Only a few years have gone since the opinion prevailed extensively in our State that beef could not be grown at a profit on our farms because of the competition of the ranges. This experiment was undertaken to demonstrate that beef could be grown on the average farm at a fair profit, providing that it were grown on correct prin-

Two Shorthorn grade calves were secured when but a few days old. They were presented to the station by Mr. H. F. Brown, of Minneapolis. They were the progeny of common cows, and were sired by a pure Shorthorn bull of the Brownsdale herd. They were fed on such foods as can be readily grown on the average farm. These foods were valued at the average market prices which they bring in the State. All the food fed from the day of birth to the day of slaughter was accurately weighed. The steers were kept in box stalls during winter and in these much of the time they were tied. In summer they were given green food carried to them, or were kept on pasture, as was convenient. It was the aim to keep them growing right along from birth until the fattening period without making them too fat, and then to finish them with a prudent haste, and put them on the market. The effort was made to rear them and to manage them in every way just as they may be reared and managed on the average farm in the State.

The two steers, named Jack and Prince, respectively, were dropped August 1 and September 28, 1895. The first was a good type of a Shorthorn grade, with plenty of bone and substance. The second was also fairly good, but was a little lacking in roundness of rib and a little long of limb. Both were good average feeders, hence they are to be taken as fairly representative types for beef-making.

During the milk period they were fed new milk for about two weeks, then they were fed skim-milk and adjuncts. The milk period covered about six months. One week was occupied in making the change from all new milk to all skimmilk. The skim-milk fed averaged 20 and 18 pounds, respectively. The meal adjuncts were bran, oats and oil cake. The bran and oats were fed in the proportions of 1 and 3 parts, and the average amount fed during the first year was about 3 pounds daily. The oil meal never exceeded one-fourth of a pound per day, and at the first only a very small quantity was fed. The other adjuncts during the first year were hay, green food and corn, ensilage when in season and mangels in the winter. The first summer the steers were not pastured as the facilities for pasturing them were not at hand.

The foods the second winter was much the same as the first winter, only more grain was fed and of course no milk was given; oil cake also was withheld. The average amount of meal fed per day the second year was a little more than 5 pounds—an amount that was perhaps higher than was necessary. age amount of mangels fed during the second winter was about 14 pounds.

The second summer the steers were kept on grass for about three months. They were not given grain while on the grass except for a short time after they were first turned out. They made very little progress while on the grass, although it was plentiful. The reasons are not clearly apparent. It may be that that is grown by the ordinary slow ation from birth grain ra should have it continued, to some extent, at least, even when they are out on grass. This question will have to be

further studied.

The finishing period began early in October, 1897, when the steers were about 24 to 26 months old, and it ended on January 31, 1898. Substantially the meal fed during the finishing period consisted of wheat bran, barley, corn, and oil cake, fed in the proportions by weight of 3, 3, 3 and 1 parts, respectively. Later the bran was reduced and the oil cake increased. Although they were given practically all the meal they would eat up clean, at no time could Jack be made to consume more than 15 pounds per day and Prince more than 13 pounds. This fact is significant when we remember that many feeders give from 25 to 30 pounds of corn to a cattle beast per day while they are feeding the same.

The cost of the food the first year was \$15.23 for Jack and \$14.81 for Prince.

The weight of the first was 670 pounds and of the second 693 pounds. The daily increase was 1.84 pounds and 1.90 pounds respectively. The cost of the food the second year was \$16.43 for Jack and \$14.84 for Prince. The total gain was 400 pounds for the former and 402 pounds for the latter. These gains were very low, amounting to only 1.09 and 1.1 pounds per day respectively, and they were caused chiefly by the peculiar behavior of the steers while on grass. During the finishing period the cost of the food was \$13.51 for Jack and \$10.56 for Prince. The gains were 365 and 228 pounds respectively or 2.03 and 1.81 pounds per day.

The steers were sold to the supply department of the School of Agriculture, and were slaughtered for the same by Mr. Andrew Boss, the instructor in dressing meats, that their carcasses could be compared in the dead form. Before being slaughtered they were valued by two experts from the St. Paul stock yards, one of these, Mr. C. Engemoen, the live stock salesman for E. M. Prouty & Co., and the other Mr. J. C. Crosby, live stock buyer for Swift & Co. They were requested to put the value on them which they would be willing to pay. They valued Jack at \$4.75 per 100 pounds and Prince at \$4.40. These values were certainly not high and they were of course made the basis of the financial computa-tion. The total cost of rood fed in growing Jack was \$45.17 and in growing Prince \$40.21. The shrunk weights with a shrinkage of 3 per cent were 1,392 and 1,280 pounds respectively when the steers were slaughtered early in February. The value of the first therefore was \$66.12 and of the second \$56.32. The net profit on the first was \$20.95 and on the second \$16.11. The manure made is supposed to offset the cost of labor and bedding, and also the interest on the capital invested. Such a value put upon the manure may seem high to a Western farmer, but it will seem low to a farmer in the Eastern States. And the fact should not be lost sight of that the food was charged at average market values. The market value of food is nearly always higher than the cost of growing the same. Now the cost of growing food would be the proper basis at which to charge it. But since it is almost impossible to estimate exactly the correct cost of growing food, conditions vary so, it has been thought best to take the market value as the basis of computation in all these experiments. But in doing so it represents the gain as being less than it really is.

From the results obtained in this experiment it is patent that the farmer need not be much concerned about range competition. If he can make \$16 to \$21 profit on a 28 or 30 months steer which he has grown, he is in good business. There is but little doubt in the mind of the writer but that the best way to grow steers for beef is to keep them growing right along from birth without any periods of stagnation, and to market them when not more than 30 months old. Steers thus grown, if they have been properly bred, make the very best class of beef, and if properly finished will bring top prices.

The dressed carcasses of the steers were cut up in the usual way at the request of Col. Liggett, the director of he station, and certain portions of the carcass were carefully compared. Photographs were taken of some of these, which appear in the bulletin. The meat in the loin, and, indeed, in other parts, was beautifully flecked. The flecks of fat intermingled with the lean were small and numerous, hence the meat was juicy and tender whether eaten in the warm or the cold form. Such meat is so pardly in nan that such a contrast could exist without having sampled both.

Many particulars are given in the bulletin which cannot be referred to in a paper of this character. But enough has been said to show what an immense field lies before the Minnesota farmer in the growing of beef. And it is a field that is likely to continue large through all time. The ranges are now pretty well filled up and our population is growing apace. The demand for beef, therefore, is likely to be more rather than less with the pass-THOS. SHAW. ing of the years. Minnesota University Experiment Farm.

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.

If trees are heeled in care must be taken to see that good drainage is provided.

Opportunities on the Plains.

Editor Kansas Farmer:—In your issue of the 8th inst. I notice an advertisement -"Wanted—A system of creameries and skimming stations in the best field in Kansas.

I am not in the real estate husiness and have no ax to grind, but I feel like putting in a similar advertisement reading: 'Wanted-Forty men under 30 years of age with from 50 to 200 head of cattle each to settle in Cheyenne county, Colorado, and make themselves homes.

This country is, in a great measure, unoccupied. A young man can take a homestead in almost any part of the county. The settlers are so far apart now that, in many places, neighbors are 15 miles away.

My acquaintance with the rent rates prevailing in central and eastern Kansas makes me think that a young man can do better here with stock than he can do for himself by farming rented farms. If he is able to farm a 160-acre farm he can put his capital into cattle here and in a few years be able to buy one of the choice farms in Kansas; this, providing the young man is a good hand with stock, and is willing to live as a stockman must live here, exposed to the weather, caring for stock and enduring the hardships encountered in such work.

To give some idea of the extent of unoccupied territory: Traveling south to Sheridan Lake, which is 25 miles from here, we find one settler with a small bunch of sheep. No settlers are found within 25 miles southwest from here. Two settlers live within 28 miles on the road northeast from town. In this county, which is 60 by 30 miles, are about 600 people, and 150 of these live in the town of Cheyenne Wells.

This lack of population is due mainly

to the lack of surface water. If a man wants to keep stock he must dig for water for it, as only for a part of the year can the surface water be depended upon to supply water enough for stock. Water can be found at from a few feet to 300 feet below the surface, and there is usually enough water to run a windmill for raising the water to the surface.

A few years ago a great many settlers were in the country, but most of these have since left. Those who have stayed are now doing well. Since the country was first settled several varieties of sorghum have been introduced, so that now fodder is a sure crop and can be raised with very little labor. In some seasons native hay has been cut in large quantities. During the past four seasons, native hay, consisting of Colorado bluestem and tall gramma grass, has been cut every year. One kind of millet, known by several names as hirse, broomcorn millet, Manitoba millet, Japanese millet, hog millet, Prussian millet, etc., does well here. It has made a fair crop of seed and hay during each of the past three seasons. Brown Durra and Jerusalem corn can be depended upon to make a crop of seed every year. I have raised from 25 to 40 bushels of Brown Durra seed per acre during each of the past three seasons. Last season, 1898, I cut one ton of alfalfa hay per acre from a plat of ground where water is between 260 and 300 feet below the surface. There is a field of alfalfa 6 miles from here which yielded nearly 5 tons per acre during the season of 1898. It grows where water is from 5 to 12 feet below the surface. One variety of cow peas has been grown in this region for several years, making from 6 to 10 bushels per acre. Sweet potatoes have been successfully raised here. Irish potatoes do moderately well on carefully selected ground when the potato beetles are not too numerous. Ill., a catalogue giving full description, In 1897 we raised a fair crop of Irish may be obtained. They are made in all potatoes, but in 1898 the beetles took early all our vines in spite of us, and we kept the vines covered with paris green throughout the season, making it the "suicide resort" for the beetles of the whole country.

Trees are growing here, making a slow growth each year. Black locusts, honey locusts, Russian mulberry and ash trees are almost sure to grow if planted and cared for properly. We have cherry trees which have been set out four years which are bearing small crops of fruit. The plum trees bore their first crop in 1898. Gooseberry bushes bore a good crop in 1897, and again in 1898. The apple trees planted in 1895 and 1897 are growing well. A few of them blossomed in 1898, but none of them set fruit. All trees have to be cultivated carefully during the growing season.

Those who intend to settle in this country should prospect for water before locating, and then settle where they find a good supply, no matter what are the other conditions. Men who settled General Agent, 111 Adams St.

Was Never Well

But Hood's Sarsaparilla Has Civen Her Permanent Health.

"I was a pale, puny, sickly woman, weighing less than 90 pounds. I was never well. I had female troubles and a bad throat trouble. I came across an advertisement of Hood's Sarsaparilla and had faith in the medicine at once. I began taking it and soon felt better. I kept on until I was cured. I now weigh 103 pounds, and never have any sickness Hood's Sarsaparilla will not cure. My blood is pure, complexion good and face free from eruptions." Mrs. Luna Far-NUM, Box 116, Hillsgrove, Rhode Island.

Hood's Sarsaparilla

Is the best-in fact the One True Blood Purifier.

Hood's Pills are tasteless, mild, effec-

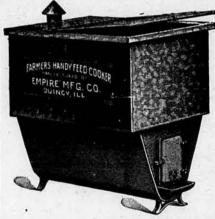
a few years ago where there is water convenient are still in the country while the men who chose fine, level land, thus putting the water question aside, are all in some other place now. It is important that the men with small herds get into the country soon, as the boom in the cattle industry which is just beginning will soon put the country into the hands of large cattle companies who will hinder the development of the country until cattle-raising on a large scale ceases to be profitable. If small herds could occupy the country, better cattle could be raised, because each man could raise feed for the calves, and for the whole herd during the storms of winter while the large cattle company, considering feeding unprofitable, would allow their cattle to go through the winter without feeding. It has been the experience of feeders that steers that have been starved on the range after weaning are likely to cause loss to those handling them in the feed lot, so the calves of the small cattleman will be found more profitable because of his ability to feed them when necessary.

We write this to merely suggest what is possible, not what every one can do, as we are likely to find men failing on the best propositions. J. E. PAYNE.

Cheyenne Wells, Colo.

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 ani-mals cooked food during winter at least



one-third of the feed is saved; also having stock in a healthy condition, prevent-ing hog cholera among your hogs and insuring the hens laying freely during the winter months. On application to the Empire Manufacturing Co., Quincy,

Oheap Rates for the Holidays, 1898-99.

The Missouri Pacific will sell tickets on December 24, 25, 26 and 31, 1898, and January 1 and 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.

Christmas is Coming

and the Union Pacific will sell tickets on its lines at greatly reduced rates. For dates of sale, limits and points to which ticekts will be sold apply to F. A. Lewis, City Ticket Agent, or J. C. Fulton, Depot Agent, Topeka.

Reduced Rates for Ohristmas and New-years Holidays.

The Nickel Plate road will sell tickets December 23, 24, 25, 30, and 31, 1898, and January 1, at rate of a fare and a third for the round trip, to any point on their line, good returning to and including January 3, 1899. Address J. Y. Calahan,

OUR FARMING.

Secretary of Agriculture James Wilson, in his annual report, made public December 1, in addition to discussing domestic problems, reviews our agricultural relations in foreign fields. He calls for an emergency appropriation of a lump sum for future requirements that cannot all be anticipated specifically. Exploration by scientists of territorial acquisitions and the sudden appearance of pests are some of the possible emergen-

Discussing agricultural resources in our new island acquisitions, Secretary Wilson says:

IN "THE COLONIES."

"In the territories recently brought under the control of the United States government, agricultural interests urgently call for attention by this department. Hawaii and the West India islands depend almost exclusively for their prosperity upon their agricultural products. It behooves the department, therefore, to place itself, at the earliest moment possible, in a position to extend to the agriculturists of those territories which have or may come under the United States flag the services and benefits which it renders to the farmers of the United States. The increased trade rela-tions which may be looked for between the United States and its insular dependencies, moreover, render the conditions of agriculture in the latter and the character and extent of their productions matters of profound interest to the people of the United States. In the interest of respective governments.

farmer is now selling cheap grains and mill feeds to European dairymen, who meet us in European markets with products made from raw material furnished by us. But there is reason to believe that there is a growing tendency toward the consumption of grains and mill feeds at home and exporting the products of skill and intelligence.

AGENCIES.

The trade in American farm products is growing in the China seas, and, in order that markets may be opened up in Japan, China and other countries of the Pacific ocean, an agent is now in that region establishing agencies, to which the department will make trial shipments and gather all information possible for the American producer.

INSPECTION

The Secretary recommends the extension and adoption of the provisions of the law regarding the inspection and certification of meats and meat products for export, so as to make them apply to butter and cheese. The brands, "pure butter" and "full cream cheese" should then be affixed by United States inspectors to such products as come up to the required standard of quality. This would place the good butter and cheese of this country on foreign markets under the identifying label and guaranty of the United States government.

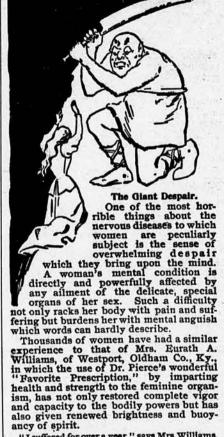
The dairy products of Denmark and Canada, which are the chief competitors of the United States in the markets of Great Britain, bear the inspection certificate and guaranty of quality from their

would enable him to control conditions, produce more from an acre and contribute more to the general welfare.

With the exception of the very few persons who have found their way into our agricultural colleges, the education of our people has not been designed to prepare them for producing from the soil. Nothing is being done in most of the common schools of the States to cultivate a taste and lead the mind to inquire into and store up facts regarding nature, so that the young farmer may be directed into the path that leads to education concerning his future lifework. The teacher should be educated for this work.

The report suggests that the greatest difficulties are to overcome the conservatism of the local boards managing country schools and to get competent teachers. This scientific educational subject is exhaustively discussed, and while there is no university where young farmers may pursue post-graduate studies in all the sciences relating to production, the scientific divisions of the department of agriculture, it is urged, to some extent can provide post-graduate facilities.

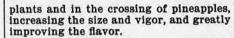
The capacity of the department is limited, but assistants are often tempted to accept higher salaries in State institutions and the opening of the laboratories to post-graduate work would provide an eligible list to fill vacancies as they oc-cur, supply temporary agents and also furnish scientific assistants in State institutions. The distribution of young plants to various parts of the country reached a total for the year of 190,000, in-cluding bulbs. This experimental garden



ancy of spirit.

ancy of spirit.

"I suffered for over a year," says Mrs. Williams, "with indigestion and nervous prostration. I was unable to eat or sleep. I tried several physicians, but they only helped me for a short time, A friend advised me to take Dr. Pierce's Favorite Prescription, Dr. 'Pierce's Golden Medical Discovery and 'Pellets,' I commenced taking the medicines last May. Took three bottles of the 'Favorite Prescription,' three of the 'Golden Medical Discovery,' and three vials of the 'Pellets,' and am now feeling better than I have for two years. Have a good appetite, sleep well, and do not suffer from indigestion or nervousness. I have gained seven and a half pounds since taking these medicines. I have recommended Dr. Pierce's medicine to several ladies, one of whom is now taking it and is being greatly benefited."



Observation and forecast weather stations have been extended around the Caribbean sea and increased through the interior of this country, especially in the Mountain States. The natural life zones of the United States are being surveyed and the areas best adapted to various crops determined. Four scientific explorers of the department are abroad getting seeds and plants in Russia, the Mediterranean region, the China sea and South America. Strenuous efforts are making to perfect crop statistics, and Statistician Hyde has successful measures to preclude accurate premature statements of the official figures. The Alaskan interior will be explored next summer to learn its capacity to support population, while coastal resources already have been determined.

Steel rails are stated to be the coming material for good roads where hard rock is not convenient.

Regarding forestry, species adapted to dry regions are now being introduced, better methods of handling forest lands in public and private ownership are being introduced by government agents and fire prevention and fire fighting are being studied. The report also refers to the value and popularity of the official farmers' bulletins and to soil and tobacco resources.



our own agriculture, not only must the agricultural resources of these islands then be studied closely and intelligently, but the dangers which threaten agriculture in these territories in the form of plant diseases or insect pests must be made the subject of special investigation, with a view to providing agriculture there with preventive or remedial agencies, and also to securing our own agriculture from the possibility of their introduction into this country. gently necessary, therefore, that Congress should, as speedily as possible, provide a sufficient fund for the use of this department in making such investigations as may be necessary to the agricultural resources and conditions in Hawaii, Porto Rico. Cuba and the Philippines.

EXPORTING DAIRY PRODUCTS.

On the practicability of exporting dairy products the Secretary says that, owing to a better home demand, it is not commercially profitable to send but-ter to Europe just now, as the home demand at present absorbs the supply. For the purpose of obtaining the dairymen all the facts relating to the exports of this product, the department sent an agent to Paris to ascertain what encouragement there would be to ship butter to that port, and an agent to Hamburg to ascertain the facts regarding customs duties, as well as prohibitions and other difficulties that might meet exporters of butter to Germany. It was found that no line of steamers sailing to French ports direct could furnish refrigerator space, so shipments could not be made during hot weather. Whenever our home supply exceeds our home demand, the Secretary says, it can be profitably sent to both ple favor it. More knowledge by the ports. Good work has been done in farmer of what he deals with every day hybridizing the orange and other citrus

"There is an evident necessity," the report says, "for the inspection of many articles imported from foreign countries KILLS TEXAS FEVER TICKS. that contain substances injurious to the public health. The department chemists are doing work along this line that suggests a more comprehensive inquiry. The department now buys samples for analysis in the open market. It may be necessary, however, where there is ground for suspicion and a necessity for the identification of source, to open packages at ports of entry, as it is proposed in foreign countries to do with our exports in certain cases.'

This brief statement is the only reference the Secretary makes to restrictive measures adopted by certain foreign governments respecting our products.

The experimental exports of butter by the agricultural department to Great Britain were resumed at the opening of the season of 1898 on an enlarged scale, and Secretary Wilson says a decided gain is evident in the favorable impression made by butter of the first quality from the United States creameries on the better class of butter trade in London and Manchester.

TEACHING.

Lack of proper attention to economic chemistry is complained of, and the report says that we pay foreign countries large sums for coal tar products, for example, while we have skilled chemists, capital and raw material at home.

The Secretary enlarges upon the need of nature teaching in the common schools. He says there is a growing interest in education that relates to pro-

The report announces that the Bureau of Animal Industry has perfected a dip which takes the fever ticks from cattle. so that they can be moved north at any season, that it has continued experiments with anti-toxin serum to prevent and cure hog cholera, and it is recommended that this discovery, having been made by public officials at public expense, should not be diverted to private cost, and that the serum manufacture should be continued under government control, at least for some years to come. The Texas fever dipping stations will be established at convenient points before the next quarantine season. The results from the black leg vaccine indicate the percentage of loss in herds has been reduced from 10 to 20 per cent. to less than 1 per cent. This indicates that if generally used it will tend to eradicate the disease completely. Detailed figures as to microscopic inspection of meat are submitted. BRIEFLY MENTIONED.

Other features of the report briefly fol-

Quick and timely information has been gained of foreign markets, under the direction of Chief Hitchcock, and our knowledge of the islands of the Caribbean and China seas largely increased. Our foreign trade in agricultural products is shown to be over two-thirds of our domestic exports and is steadily growing, while the production of field products introduced from foreign countries is rapidly increasing, causing a cor-

Oatarrh Cannot Be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the diseasc. Catarrh is a blood or constitutional distake internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers. acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O. Sold by druggists, price 75 cents.

Cheap Rates for the Holidays, 1898-99.

The Missouri Pacific will sell tickets on December 24, 25, 26 and 31, 1898, and January 1 and 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.



OF FIRING. Impossible to produce scar or demassi-Every bottle sold is warranted to give satisfactors. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges pass, with full directions for its use \$ Send for descriptive circulars. THE LAWRENCE-WILLIAMS CQ., Cleveland O.

Hatching Ducks.

Mr. and Mrs. A. Clark, of Clay Center, Neb., had been having big luck hatching hen's eggs, and thought to try some ducks' eggs. They filled the machine half full of ducks' eggs. The result was a machine chock full of little ducks. Ducks are very much bigger out of the shell than it it, and if they had filled the machine with eggs there would have been some duck squeezing. The Sure Hatch Incubator with thermostatic heat governor is the lowest-priced and most successful machine on the market. The new catalogue contains a new theory on artificial incubation that meets the apartificial incubation that meets the approval of all poultry raisers. Whether you own an incubator or want to buy one, this book is worth several times the approved of improved stock who falls to be present at the annual meeting of the Kansas Improved Breeders' Association and the Kansas Swine Breeders' Association

is to be congratulated. Mr. Good, the man-ager, felt as though the general average of up-to-date Hereford character possessed by the offerings merited a little better average, yet he stated that, it being their first public sale and following all the others, he was very well satisfied, and returned his thanks to the patrons and visitors at the

The Kansas buyers were in evidence at The Kansas buyers were in evidence at this sale, as is shown by the following list of purchasers: J. M. Crouse, Medicine Lodge; A. W. Whitmer, McLouth; F. H. C. Hampson, Hillsdale; R. Stinson, Phillipsburg; H. A. Nabor, Wallula; B. F. Dickson, Everest; A. H. Bird, Axtell; J. E. Conroy, Manhattan; Wm. Moss, Alma; W. E. Campbell, Volve, J. R. Smith, Doublant, Geo. bell, Kiowa; J. R. Smith, Doniphan; Geo. Hupfer, Bunker Hill; C. Delahunt, Olathe; James Stone, Cedarvale; W. C. Miller, Med-icine Lodge; Burt Shaver, Cedarvale; and P. C. Parker, Waterville.

SUMMARY OF TWO DAYS' SALE. 69 bulls brought......\$10,260.00 Average 186.15 95 head brought 15,120.00 General average 159.05

Gossip About Stock.

The seventh annual meeting of the National Duroc-Jersey Record Association will be held in the Clifton House, Chicago, Thursday, January 12, 1899. All breeders of Duroc-Jersey swine and representatives of the stock and agricultural papers will be welcomed. Members are especially urged to attend. Robt. J. Evans, Secretary, El Paso, Ill.

From Various Sources

A census was lately taken in Algeria, and it was found that the youngest Arab married man was 12 years old, and that there were very many boys who were married at 13 and 14, while some at 15 had several wives. There is a youthful Al-gerian widower of 15 and a divorced hus-band of the same age. Girls are still more precocious, and are sometimes married when only 11 years old, though 12 is the more usual age. There are 189 widows of 15 and 1,176 divorcees of the

A story which, if not true, is not badly told, appears in the Boston Transcript, to the effect that while the bark Cape City was at Hong Kong a Chinaman was engaged to paint the necessary name on each bow

He produced on one bow the legend "Capecity," without a space between the two words. Then he noted that the "y" was nearest the ship's stern, and re-membering this fact, he afforded an ex-cellent example of how severely logical his race can be; for in a little while he had painted on the other bow the strik-ing permutation, "yticepaC," to his own delight and the crew's amazement.

An Iowa Judge was telling stories in a hotel lobby, and he related an amus-ing incident which had occurred in his court when a colored man was brought up for some petty offense. The charge was read, and as the statement "The State of Iowa against John Jones" was read in a loud voice, the colored man's



Send your address on a postal and we will send you our 158 page illustrated catalogue free.

WINCHESTER REPEATING ARMS CO., 188 Winchester Ave., NEW HAVEN, CONN. 3333333333333333333333333

of the dam of the great young Abotsburn. This youngster goes to Rocky Hill to compete for premier place with Waterloo Duke of Hazelhurst 11th.

Dr. Bull's Cough Syrup helps consumptives and cures incipient consumption; it loosens the phlem and heals. It is without doubt the best cough medicine. Price 25c.

Pancakes and Honey Are Now in Order.

Comb honey is rather expensive for eneral use, and from this time on it is liable to be more or less granulated. Pure extracted or liquid alfalfa honey is the best, and if ordered direct from the bee-keeper it can be had as fresh and good as ever the year around, and in quantities to suit, at wholesale prices. Write for delivered prices to Oliver Foster, proprietor of "The Arkansas Valley Apiaries," Las Animas, Colo.



YOU CAN MAKE 510 TO \$30 Per day exhibiting our Panoramic Cuban War Panoramic Custo.

uvervising rosters, Admission Tickets, etc. for a little fut this ad, out and send for circulars with full ars and copies of testimonials from exhibitors making big money with our outfits. Address, Roebuck & Co., Inc., Chicago, III.

NEXT TO A DAILY.

The Semi-Weekly Capital

FOR THE FARMERS OF KANSAS.

The war with Spain has emphasized the fact that a weekly newspaper, for general news, is too slow for the up-to-date, progressive farmer. Thousands who could not take a daily have secured in

The Semi-Weekly Capital

a complete summary of the news of the war, besides all the other news of the world, especially everything happening within the borders of Kansas. The settlement of the controversy with Spain and the introduction of American government in the newly acquired territory will afford a great fund of interesting news and information. Subscribers to the Semi-Weekly Capital will receive it all at the same cost as an ordinary weekly paper. Sample copy free upon request.

\$1.00 per Yr.

THE LEGISLATURE.

A subscription to the SEMI-WEEKLY CAPITAL now will seport of the proceedings of the coming Kansas Legislature which will appear in any paper published in er out of the state.

The Semi-Weekly Capital and

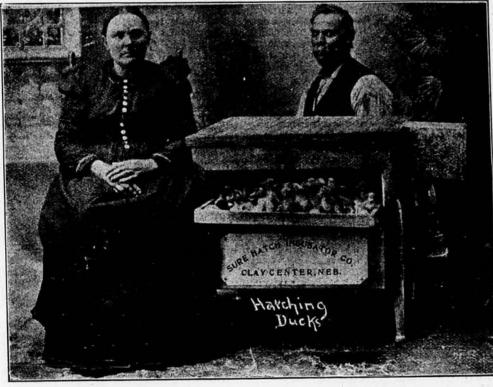
The Kansas Farmer Will be sent to any address for one year for

\$1.50.

ADDRESS

The Kansas Farmer. Topeka, Kas.

BLOCKS OF THREE.-Two new scriptions for one year for \$2, and, in addition, a renewal for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer



cost. The cost is only a 2-cent stamp. Look up their "ad." elsewhere and send for the catalogue. Mention the Kansas

SURE HATCH INCUBATOR CO., Clay Center, Neb.

The Comstock Hereford Sale.

The two days' sale of registered Herefords, bred and owned by C. G. Comstock, of Albany, Gentry county, Missouri, at the stock yards sale barn, at Kansas City, December 15 and 16, was well attended. Buyers and breeders were out from Illinois, Iowa, South Dakota, Nebraska, Colorado, Oklabora, Indian Territory, Kansas, and Oklahoma, Indian Territory, Kansas and Missouri. While the prices realized were not phenomenal ones, they were, as the reader will note, strongly indicative of the esteem held by the beef cattle breeding public for the Hereford. Several of the better bulls hardly brought enough. This, in part, may be accounted for from the fact that the offerings had not been specially fitted for the sales ring, yet they were in good breeding condition and as richly bred as one could wish. The bull, lot 50, John L. 70911, topped the sale at \$350. He is a son of the premier herd bull, Captain Grove 2d 51325 and out of Moonlight 29743, a granddaughter of Tredegar 3385. Individually John L. is above the average good ones, and J. H. Fellows, of Fairfax, Mo., may consider himself lucky in getting him for \$350, as many rated him fully worth an even \$500. Lots 28, 42 and 65 brought \$250, \$200 and \$220, respectively, and the writer considers that each of them should have brought more money, comparing their breeding and individuality with others that have passed through the sale ring here dur-

The results of second day's sale of Herefords averaged better than the first day. Fourteen head, it will be observed, brought \$200 or better. Taking into consideration that the offerings were mainly yearlings

tion, January 9-11, 1899, will regret it every day of the new year, when, after these im-portant conventions, he finds what he has missed. Remember, that during the same week the Kansas State Board of Agriculture meets and the Kansas Poultry Show will be on. Let every breeder come and bring his friends.

The Richland herd of Poland-Chinas, property of F. W. Baker, Council Grove, Morris county, Kansas, is one of the feremost herds of Polands in the State, both in point of breeding and in individual merit. It is headed by the great boars, Klever's 1st Model 18245 S. and What's Wanted Jr. 2d 18534 S. These hogs are too well known to need description here. Mr. Baker's sows are of the most fashionable strains and are first-class individuals. He has been culling closely and using the knife freely on male pigs, and of course has not hurt the appearance of his herd by that means. The writer can say that he has never seen a blacker herd of hogs than the Richland herd. At present there are for sale a few spring boars and about twenty sows and Write Mr. Baker for prices and information.

A Farmer representative last week visited the Silver Spring herd of Poland-Chinas, owned by Mr. Walter Roswurm, Beman, Morris county, Kansas, and found the herd in good working trim. at present numbers about sixty head, all young hogs, headed by the grand young boar, Hadley Model T., a son of Hadley Jr. and out of Klever's Model Tecumseh by Klever Model. Hadley Model T. is as black as ink, with good markings, extra good in head and ear, shoulder, back and quar ter, stands straight on his legs, has plenty of bone, and should give a good account of himself. Mr. Roswurm's sows are principally of the Model and Corwin strains. are all black and are a very uniform lot of good quality. At present he is offer-ing several head of bred sows, a few gilts, and five head of spring boars. that the offerings were mainly yearlings and without any special sale ring fitting, the sale was a success and Mr. Comstock Breeders' card appears in this issue.

eyes bulged nearly out of their sockets, and he seemed perfectly overcome with terror and astonishment. When he was asked if he had anything to say, or pleaded guilty or not guilty, he gasped

"Well, yo' honah, ef de whole State o' Iowa is agin this one pore nigger, I'se gwine to give up right now."—Chicago Journal.

This penny Mauritius stamp was issued, together with a twopenny of similar design, in 1847, its extreme rarity being due not only to the time which has elapsed since its appearance, but also to the very small number printed. It is the rarest stamp in the world, and has been recently purchased by an Englishman for over \$5,000, which is the highest England. Only one other copy on the original envelope is known, and that is in the British museum.

It is believed that nearly all these stamps were used up on the day of issue in franking invitations to an official ball. and, as the envelope is small and suitable only for inclosing a card or single sheet of paper, and also as the date of the postmark and the handwriting on the envelope are precisely similar to that of the only other known copy, a certain amount of probability on these grounds alone is attached to the above theory .-Kansas City Journal.

J. F. True & Son have purchased of L. L. Gregg, of Hicks City, Mo., the Cruickshank yearling bull, Golden Victor Jr. He is out of 16th Linwood Victoria, by Galahad, out of a dam by Imp. Baron Victor and was sired by Crown Victor 114899. This sire, Crown Victor, was out of Victoria Rose 2d, by Imp. Scotland's Hero, this old bull being out | Co., Topeka, Kas.

The Bome Circle.

A CHRISTMAS CAROL.

Listen; the bells in the steeples
In jubilant gladness ring
To welcome the coming of Christmas.
And the birthday of the King
Who was born in the lowly manger of
Bethlehem, long ago,
When the song of the herald angels
Was sung to the world below.

Thou hast clad thyself in raiment
Of spotless white, O, earth,
Like a bride on her marriage morning,
To celebrate Christ's birth.
O, were our lives as spotless,
Our hands unstained with sin,
And the latch of each heart were lifted
To let the Christ-child in.

Bring of thy pine and holly,
O, earth, this Christmas day,
And wreathe in their green the altar
Whereon our gifts we lay;
Gifts of most grateful homage
Laid low at the feet of the King
Who leans from his throne to listen
To the sound of our worshipping.

Bring to the dear Lord's altar
The soul's white flowers to-day.
Let the rose of thy love shed incense
Sweet as the breath of May.
Let the lily of faith eternal
Lift its cups of myrrh to him
Whose love is the star that leads us
Through ways that are dark or dim.

O, earth, send back to heaven
The grand and the glorious strain
That startled the wondering shepherds
On far Judea's plain.
Glory to God in the highest,—
Sing it again and again,—
On earth be peace, on earth be peace,
Good will, good will to men.
—Ladles' Home Journa

-Ladies' Home Journal.

Cor Correlli.

Editor Home Circle:—The communication from "Englishwoman" has given me an "uplift." I feared our "Home Circle" was defunct, and am rejoiced to find it only dormant. Let the "I's" be numerous as Governor Stanley's callers. I am sure the editor will welcome the bombardment.

The old contributors to the "Circle" will endorse the suggestions of Englishwoman, and will, no doubt, welcome the higher topics, especially those who are unable to identfy themselves with a club

or society.

I sincerely hope that the topics mentioned-cake recipes, crochet, etc., may be exhausted. To wrestle with the real thing, in the privacy of the kitchen laboratory, tries one's soul sufficiently without a public airing of one's success or failure.

The name of one of the city clubs struck me forcibly as being a sensible appellation. The W. T. K. Club. Now, we all "want to know" about everything of worth going on in the world, and must study books, newspapers and people. We ited this earth that did not have some must rub shoulder to shoulder with the world, as Harry Larimer puts it, and that means culture.

I do not mean to disparage nor under-value the duties of the wife and mother, duties which call for the best her heart and mind can give. No education can be too far-reaching to equip one for that noblest of woman's duties, a Home-keeper. I capitalize it for a reason obvious to the "Circle." Domestic science high vantage ground look down on your is an invaluable aid in simplifying the whole life. If you were a giant, you say, necessary labor to which every house-It need not be less efficient that it does not dominate her life. It does not pay to be always the bustling Martha, debroadens and uplifts the home life.

family can resort, for social recreation, The ambition in your heart cannot be the one which has proved most efficient, gratified. You feel its throbbings, but kindly on the other's shoulder, speaking from many years experience, is must suppress them with a sigh. You surprise you to learn that I have not the Grange. The one I have in view, are hampered by circumstance, you are eaten a single scrap of food—I, myself, Oak Grange, Mission Center, has been unable because of chance or fate—might who am talking to you—for more than for twenty-five years a haven of refuge, it not be well to call it Providence?—to wherein peace and the good-will which show, to develop the ability which you makes a neighborhood a shining example, are safely anchored. It stands, today, a monument to the enterprise and Wednesday of every month, a Day Grange is held, to which friends of the order are invited. Such a meeting occurred on Thanksgiving, seventy-five or more sitting down to tables loaded with Thanksgiving dainties. Wit, and perhaps frivolity, dominated the feast, but, at its close, toasts, appropriate to the occasion and the gathering, were announced. The responses bespoke culture and refinement. An original poem was read, and the toast, "Our nation's flag," was honored, standing, while the entire assemblage joined in singing one stanza havoc with your happiness. Of all of the "Star-Spangled Banner." Patriotism, temperance and education are fea-

tures embodied in the Grange ritual. There have been many things during

the year to engross one's attention, to the exclusion of the "Home Circle." The war, more especially, with its uncertainties, its carnage, and its splendid victories, and now, no less, the problematic future of the "Greater United States." Our humble selves may plan and ar range the future on our home chessboards, but the wisdom of the nation is needed in the successful solution of the problem. The trip to Europe with that bright young traveler, Miss Marie Nellis, has been so entertaining that, in my case, a scrap-book, containing a full account of it, is the result. How kind of the editor to anticipate our wishes, and give us a souvenir picture with which to preface said scrap-book.

"O, the loneliness of the drear December days! My friends, do they now and then send a wish or a thought after me?"

Dear "Home Circle" friends, there will be no dreary December days for us when we find the true sunshine of life.

KITTIE J. McCRACKEN.

The Value of a Life

Ye are of more value than many spanrows.—Matthew x, 31.

There are people in the world who seem to the onlooker, to the careful observer of affairs, to be of very great importance to the progress of society, and there are others who apparently will not be missed when they disappear. The first class we call our great men. We chronicle their doings while they live, and build monuments to them when they die. No one ever gives a thought to the second class except the Lord. They come without a herald and they go without leaving the echo of a footfall. This vast aggregate whose little lives are reckoned as of no consequence includes you and me and nearly all the people we are acquainted with.

One of the things which I admire in the Christian religion is its relation to these two classes of persons. It tells us that God can get on without the greatest as well as without the smallest. His resources are not exhausted by the death of poet, scholar or statesman. Even while we mourn our loss and feel that universal progress has been blocked, some one, some new and gifted soul larger. comes into the light and does such grand work that in a few months our buried provided you are doing your duty. hero is half forgotten. The treasury of the Lord is full of men whom an emergency or a fitting opportunity will throw

to the front as competent leaders. But I am more interested in the fact that each one of us, however humble our sphere may be, weighs something in the scales of God. A human life is always special work to do. You may not think this of your own life, for you have often thought that you are of no use to any body. Your circle is so small, your influence is so slight, your opportunities are so few. That is the way you reason, because there are some things which you do not know. If you did know them you would see the weakness of your argument, just as the angels see it who from their and could shake society to its center keeper must give her personal attention. with your warning voice, could tear the evils out of the body of the community and put nobler usages and customs in their place, then life would be worth livvoting all one's time and strength to household tasks. The highest culture to do that, but since it is beyond you you sink back discouraged. Your utmost en-As to some of the "helpful and elevating gatherings," to which the farmer's circle or to a few friends and neighbors. are conscious of possessing, and there is likely to be no change for the better in the future. You are living and you will fidelity of its members. On the third die in chains, and you grow restless, discontented, unhappy. You have been de prived of your chance to do something worthy of yourself, and unless you are careful your nature will become soured by that thought.

There are many people who suffer in this way. While it is a glorious thing that they are conscious of power which is dormant and which will never be allowed to exhibit itself, the fact of being tied down is extremely disturbing.

It is a false philosophy which has got possession of your mind and is making you're feeling well in your mind?" heresies that is the most dangerous, and laughed outright. if religion teaches anything it teaches that your position is a mistaken one.

examined it carefully you have discovered that it is made up of pieces, most of which are very small. The picture could not have been made with large pieces only. Small pieces, some of them extremely small, were necessary in order to make the work perfect. When you look on the picture as a whole you forget all about those little bits, but the artist who made it knows them all, and knows that without them he could have done nothing of any great value. Were these bits of no consequence, in view of what has been accomplished with them? Can any one of these bits rightfully grumble because it is not larger? Is not each one in its proper place contributory to the magnificence of the whole?

saic in some old cathedral. If you have

"Lend

a Hand!"

Washing Powder

So is it in human life. It matters not much to a true soul what its environments may be; if it is really a true soul it makes the best of the lot that has fallen to it or been assigned to it-does its duty in its narrow circle and so gets ready for a wider sphere hereafter.

It is better to fill your place full than to spend your time grieving that it is not

God is your God wherever you are

All work is noble, and even hardship may make your soul grow to grander proportions.

It is not so much what you are doing as how you are doing it that tells on your welfare.

The highest kind of religion is that which prompts you to be Christ-like in small things, that in the future you may be made "ruler over many things." H. Hepworth, in New York Herald.

Fasting Fifty Years.

"These stories," said the hale and hearty old gentleman, "of extraordinary starving or fasting feats make me very weary.

The spick and span young man winked at the others present.

"That's because you have always, evidently, been in the habit of never neglecting your own meals when they came

due," he said, with a chuckle. The hale and hearty old gentleman gazed at the spick and span young man with a severe expression in his eyes.

"How old are you?" he asked suddenly.
"Twenty-five," said the spick and span oung man, taken somewhat by surprise

at the question. "Well, my boy," remarked the hale and hearty old gentleman, laying his hand twice as many years as you have lived?"

The spick and span young man laughed derisively. "Eaten no food for more than fifty years!" he cried. "Why, what kind of a story is that? You can't be more than

60 years old, anyway, and it's absolutely impossible."

"I spoke the truth, and the literal truth," rejoined the hale and hearty old gentleman, impressively. "Believe me or not, as you may. It's true, also, that I'm not more than 60 years of age, and yet for more than fifty of those years I have eaten nothing.

The spick and span young man looked rather uneasy.

"I don't want to be offensive," he observed, "but, really, are you sure that The hale and hearty old gentleman

f religion teaches anything it teaches hat your position is a mistaken one.

Perhaps you have seen a piece of mo
Perhaps you have seen a piece of mo-

is the cry of women whose housework is beyond their physical powers. Such women need to know that all cleaning is It's as good as an extra pair of hands in the household. It saves time and worry. Largest package—greatest economy.
THE N. K. FAIRBANK COMPANY,
Chicago. St. Louis. New York
Philadelphia.

of the day I never spend more than three all told, for my breakfast, lunch and din-ner, and often not as much as that. But let us say three. That leaves twenty-one during which I take no food; that is to say, seven-eighths of my time. Seveneighths of sixty years is fifty-two and one-half; so, you see, it is literally true that for more than fifty years I haven't eaten a thing, and"

But the spick and span young man had gone off as fast as legs could carry him. Baltimore Sun.

A much-felt want is filled at last. Every mother knows how much faster the foot portion of a stocking wears than the upper part. Re-vamping stockings with feet cut from the legs of old ones was never an entirely satisfactory expedient, as the seams were uncomfortable. New separate feet may be bought, ready to be sewed to the legs of worn stockings. This is a boon which few mothers of large families will fail to appreciate. The feet may be had in cotton and merino wool. The former are sold at 10 cents and the latter at 15 cents per pair, a reduction being made when the feet are bought by the half dozen pairs.

The celebrated watchmaker, Lobner, of Berlin, has perfected a mechanism capable of measuring and recording the thousandth part of a second.



Mothers! Mothers!! Mothers!!!

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

Ask your Druggist 10 CENT TRIAL SIZE.

Ely's Cream Balm contains no cocaine, mer-cury nor any other inju-rious drug.

The Balm is placed into the nostrils, spreads over the membrane and cold is absorbed.

Relief is immediate and a cure follows.
It is not drying—does not produce sneezing. Large
Oc. Trial Size iOc.; at Druggists or by mail.
ELY BROTHERS, 56 Warren Street, New York.

\$1.95 BUYS A \$3.50 SUIT

\$,000 CELEBRATED "KANTWEAROUT" double
eat and double knee. Regular \$3.50 Boys' \$2.50
Piece Knee-Pant Sulfs 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. ou.
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. Hade with double seat
and knees, latest 1899 style as illustrated,
made from a special wear-resisting, heavtorn, fine serge lining, Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing, fise
tailor-made thronchout, a suit any boy or parent would
be proud of. FOR PREE CLOTH SAMPLES of 80 yt Clething
(suits, overcoats or uisters), for boys 4 70 19 YEARS,
write for Sample Beck No. 90¢, contains fashion plates,
tape measure and full instructions how to order.

Een's Salits 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.—Edites.)

19312

The young folks.

A BOY.

Oh, come my muse, and help me write A sentiment of joy, And let my fancy take a flight— Imagine me a boy.

This pleasant village is my home. I am contented here, And have no vain desire to roam From all I love so dear.

I want to tell some boys I know, About our Christmas tree, And try to get them all to go To Sunday school with me.

We are the happy boys you find Where Christians sing and pray; We leave our idle sports behind, To walk in wisdom's way.

You'll find us in a Scripture class— They let us read and sing— And you can hear us when you pass; Our voices fairly ring.

We're going to have a Christmas tree, With presents for us all. There's room enough for that, you see, Our church is like a hall.

We hail the advent of the day, The joyous morning when Our Savior came, and angels say, "Peace and good will to men."

Now let us boldly take our stand, That each of us may prove member of the loyal band Who know a Savior's love. Wakarusa, Kas. JAY VEE.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 52.

KRONBORG.

The little fishing and shipbuilding town situated on the Danish coast at a point nearest to Sweden is named Helsingor by the Danes; but having been made illustrious by Shakespeare under the name of Elsinore, it now rejoices in both appellations.

From the depot we made our way on foot over the rough cobblestone streets to the principal point for which the town is noted. A ten-minute walk brought us to the first moat over which we must pass to gain admittance to Kronborg palace, which is also a castle and fortress. This ancient castle was built in its present form in 1580 by Frederick II., and is situated on a point of land extending into the waters of the Sound, so that it is enclosed on three sides by the sea, while the fourth side is protected by moats filled with water, making the location practically an isl-

It was long since disused as a palace for royalty, and is now occupied in part by Danish soldiers as a barracks, while a few of the many rooms are shown to visitors who may care to inspect them.

At every entrance are sentinels in uniform, and many soldiers and officers are to be seen about the pretty grounds outside the palace, as well as in the inner court, where they usually form for parade and reviews.

We passed over the several moats and through large iron gateways until we reached the inner court, and here we saw a sign which directed visitors to turn to the left and ring the bell. We obeyed the sign and a maid appeared at the door and supplied us with tickets, for which we paid her a few ore.

We were shown through a few rooms, which are entirely unfurnished, but the walls are decorated with many very good paintings by Danish artists. Following our guide (the Danish maid who admitted us) we ascended one of the many towers, and from an open door at the top of the main walls we passed out on a flat roof or elevated promenade, which is thirty feet wide by about fifty feet long, overlooking the sea, A wall, shoulderhigh, protects the observer and prevents the mishap of falling over into the wa-

The view from this elevated point is very fine, indeed. The little villages to the west were like little pictures spread out on a big map. To the east a long line of the Swedish coast could be seen, and even buildings in Sweden could be distinguished. To the north the waters of the Cattegat rolled in big waves as far as the eye could reach, while to the south the Baltic sea separated us from

At the end of the promenade we could look down on the shipbuilding works, where a very large iron vessel was in course of construction. Very many men were at work on the ship, and the hammering on the iron, nearly one hundred feet below us, was more deafening than rooster crowed and scared the ghost the sounds emanating from the Santa Fe shops at Topeka on the very busiest

Sound was bedecked with ships and boats of many nations. Turning from the sea to the view of the castle itself, the many towers and turrets presented a picture which I shall always hold in pleasing remembrance.

Our attention was called to the court yard inside the castle walls by music from the military band. We saw several hundred soldiers drawn up in line as if for "dress parade." We soon discovered that it was only for the daily distribution of letters to the soldiers.

An officer in gay uniform, surrounded by several who evidently were servants of the postoffice department, stood in front of the center of the lines. As he called the names the soldiers in turn would step forward and receive the letters and papers belonging to them. Not very many were fortunate enough to re-ceive this remembrance from friends and I could note the joyous expression of the happy one as his name was called, and the disappointed look of many who failed to receive any mail. The soldier would advance from the ranks in response to his name, march with accurate step to within a few paces of the officer; standing erect he would raise his right hand, held at right angle to the wrist, and with curve motion touch his head above the ear with the thumb side of his hand, then standing "at attention" a moment he would march to the officers and receive his letter.

After the letters were all distributed the music sounded again, the ranks were broken, and we turned to other objects of interest.

On our way down the tower our guide showed us the room in which Queen Matilda, wife of Christian VII., was im-prisoned for a time by her husband. Queen Matilda was the sister of George III. of England, and her brother intimated to the Danish King that it would be an act of wisdom on his part to liberate the Queen almost as quick as he could. England was mightier than Denmark. King Christian obeyed his broth-

Arriving at the inner court again, our fair guide left us and a soldier guard was detailed to show us through the bar-racks. We were escorted over the military part of Kronborg and out on the long terrace above the sea wall on the north side. Arriving at the end of the terrace we noticed several tunnels down under the castle. The guide informed us that these were the entrances to the underground vaults, or casements, which were made to contain 1,000 men---that formerly these connected with under-ground passages leading a mile or more to another palace, and also to vaults under the sea. The sea has broken into the passages so that only a few can be visited. Our guide provided a torch and we went down under the castle, but not far, as it was said to be dangerous on account of the sea.

According to the mythology of Denmark, in one of the underground vaults sleeps "Holger Danske," the Danish hero who will come forth whenever Denmark is in danger and fight for his country and conquer her enemies. Our guide also informed us that the spirits of former Danish Kings, including "Hamlet, Prince of Denmark," have a habit of often appearing from those underground vaults and foretelling mishaps that are about to befall the nation. We did not see any of them and, in fact, we did not want to. or fear that one of them might take a notion to appear we hastened out of the dark, slimy place to the upper air.

We were next shown the flag battery on the other side of the castle, and thence up the terrace to the walls where the ghost of Hamlet's father used to exhibit itself on dark nights, dressed in full Danish uniform and armor very timid ghost, on occasion, and easily frightened away, according to Shakespeare. Upon referring to the play of "Hamlet," act i, scene 1, I notice that it was seen by Horatio and Marcellusfriends who were stopping with Hamlet. They were walking on this very terrace and talking, at midnight, when the ghost appeared and greatly interested them, while Horatio, making himself bold,

'I'll cross it, though it blast me.-Stay, illu-

sion!

If thou hast any sound, or use of voice,

Speak to me; If there be any good thing to be done, That may to thee do ease and grace to me,

Speak to me;
If thou art privy to thy country's fate,
Which, happily, foreknowing may avoid,
O, speak!"

At this point Hamlet's Hamburg away, so it didn't speak at that time. The next night Hamlet was walking

on the platform, just above where we

In front of us the smooth waters of the stood, and his father's ghost introduced himself to the gentleman; but he was dreadfully frightened and made use of the remark which thousands of school children have used for practice in reading exercise, viz.:

Angels and ministers of grace defend us: Be thou a spirit of health, or gobli damn'd?"

You see, Hamlet was slightly profane at times. From the "platform" I walked along the walls looking for some souvenir" to bear away with me. chance I discovered a piece of red chalk down between two huge blocks of stone in the wall, in a little crevice, where evidently it had lain for hundreds of years. I did not know then what it had been used for, but I learned afterward that it was the very piece of chalk with which Hamlet marked the ghost.

In scene v Shakespeare reports the occurrence that the ghost led Hamlet across the platform to the point where I found the chalk, and then Hamlet refused to go any farther; then the ghost

"Mark me."

And Hamlet answered:

"I will."

How I wish I could have seen him mark that ghost! I wouldn't take seventy-five cents for that chalk.

Without finishing our visit to the in teresting Kronborg castle we walked nearly a mile northeast of Elsinore to Marienlyst, which used to be a royal summer palace, but now is occupied by private individuals.

Near Marienlyst, on a little hill covered with beautiful trees, is Hamlet's -a mound covered with stones in much the same manner as was the grave of Helen Hunt Jackson, on Cheyenne mountain, near Colorado Springs. In the center of the mound is a steepleshaped rock, about six feet high, on which is engraved this announcement: "Hamlet's Grave." We did not doubt the fact, for we are not skeptics; but we did wish it had been more specific, and inform us when he died and some of the particulars concerning the funeral.

The grave is beautifully situated in a lovely grove, where in summertime green grass and roses among the grand old trees which might have been green in Hamlet's day, make a charming spot which ought to be entirely satisfactory to Hamlet, though he never had resided in that part of Denmark.

I searched for Ophelia's grave, but it was not there. We followed a pretty path down the hill, some distance from the one we used in coming up. When half way down we saw a spring of clear, cold water, and, stopping for a drink, we discovered engraved on a tablet: "Ophelia Spring." We felt happier now, for we knew the lady had not been neglected. You see, she was Hamlet's sweetheart, and they used to walk up this pretty hill and sit at the spring on fine summer evenings. I luckily found two four-leaf clovers near this spring; one I keep, the other I sent to my schoolgirl friend in Topeka.

We walked slowly back to the Kronorg castle, and could not help wondering how it could be that Hamlet saw the ghost on the walls of that castle, when the last-named gentleman must have been dead from five to seven centuries before that castle was built. But it is not right to raise a doubt concerning facts which have been so long established. Shakespeare says he did, the officers and guides show the very spot, and thou-sands of visitors come there every year to see Hamlet's former home and present grave.

Again entering the castle grounds, we walked to the end of the longest terrace which extends out into the water, and

YOU CAN MAKE BIG MONEY



ice about making engagements, securing lls, etc., FOR \$15.25. SO SIMPLE that selt and nothing to get out of order. Will last this ad. out and send for entalogue of Graords, etc., with copies of hundreds of tes a people who are making hundreds of SEARS, ROEBUCK & CO., (Inc.) Chicago, III.

at the farthest point on a little platform resting on piles is a litle house for the guard whose duty it is to keep a record of all vessels which pass through the Sound. The channel is less than four miles wide and all ships can readily be noted and recorded. The guard was kind to us and explained his work for our benefit. On one side he has a large chart on which he marks the nationality of all ships which pass during the day, and I suppose he also notes the "ships that pass in the night." On the other side is a large diagram describing vessels of the different lines, with little flags stuck in the board, showing all nationalities. The guard showed us the little flag of the United States, and beneath it was printed: "De Forende Staten," which is Danish for "the United States."

He then pointed out the ships passing

through the Sound; one was a Japanese, one German, several English and Norwegian, but not a single American. He told me that it was very seldom that an American ship passed; that during each day from 100 to 200 vessels go either north to the Cattegat or south to the Baltic.

He told us that formerly the Danish government used to tax every vessel that passed through the Sound, and in that way raised a greater part of the revenue needed; but that in the middle of the present century the various nations interested paid Denmark \$15,000,000 for its right to tax ships. Denmark's people found that sound money was quite de-

We bade the accommodating guard good-bye, took another look at the handsome walls of Kronborg castle, then hastened to the little village to buy a few souvenirs of Hamlet, Ophelia, Marienlyst and the famous old fortress.

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 mall 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 vill cut this notice out and mail to the big rel able house of SEARS, ROEBUCK & CO. (Inc.), Chicago.

Highest Award.

Diploma and Medal were awarded Gem City Business College, Quincy, Illinois, at the great Omaha Exposition, for Best Exhibit of Pen-manship, Course of Study, Students' Work, and Commercial Text Books. Beautiful 60-page Illustrated Catalogue will be mailed free. Winter term begins January 2, 1899. Address D. L. MUSSELMAN, Pres't,

Gem City Business College, Quincy, Ill.



4-POUND CATALOGUE FREE!

THIS BIG CATALOGUE CONTAINS 1120 PAGES is 9x19x3 inches in size, contains over 100,000 quotations, 10,000 illustrations, the largest, most complete and lowest priced catalogue ever published. NAMES THE DESIGNATION OF THE PROPERTY OF THE P complete and lowest priced catalogue ever published. MAMES THE LOWEST WHOLESALE CHICAGO PRICES ON EVERYTHING, including everything in Greecies, Drugs, Dry Goods, Notions, Clotking, Cleaks, Dresses, Boots and Shoes, Watches, Jewelry, Books, Hardware, Stores, Agricultural implements, Furniture, Harness, Saddles, Beggies, Sewing Machines, Crockery, Organs, Pianos, Buulcal Instruments, Furnishing Goods, Guns, Revolvers, Flahing 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 you buy; explains just how to order, how much the freight, express or mail will be on anything to your town. THE BIG BOOK COSTS US HEARLY Si, the postage alone is Socents. the postage alone is 30 cents.

OUR FREE OFFER. Cut this advertisement out and send to us with 15 ceats 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 ceats.

what THE PRESS SAYS ABOUT THIS CATALOGUE:

"It is a monument of business information." Minneapolis
(Minn.) Tribune.

"A wonderful piece of work." — Washington National Tribune.

"The catalogue is a wonder." — Manchester (N. H.) Union.

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

est shopping mediums that could possibly be sent into a district."

"The big catalogue forms one of the finest shopping mediums that could possibly be sent into a district."

Boyce's Monthly, Chicago.
"Their catalogue is a vast department store boiled down."—Atlanta Constitution.
"The catalogue is extainly a merchandlae encyclopædia."—Chicago Epworth Herald.
"A law should be passed compelling the use of this catalogue in all publications."—The Hon. G. A. Southtoun.
"A law should be passed compelling the use of this catalogue in all publications."—The Hon. G. A. Southtoun.
"BEND 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.

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.

UBSCRIPTION PRICE: ONE DOLLAR A YEAR

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

ADVERTISING RATES.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of KANSAS FARMER free.
Blestors must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by pattles who are well known to the publishers, or when acceptable references are given.

By All advertising intended for the current week, should reach this office not later than Monday.
Byery advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders—

KANSAS FARMER CO., Topeka Kas.

KANSAS FARMER CO., Topeka Kas.

The world's visible supply of wheat at this time last year was considered low, being but 19,723,000 quarters. It is still lower at present, being only 15,532,-000 quarters.

This country, with exports for 1898 estimated at over \$1,200,000,000, now ranks second among the exporting nations of the world. Great Britain's export trade for the year is estimated at \$1,455,000,000, or \$255,000,000 more than ours. At our present rate of increase but a few years will be required to give us

J. N. Grau, of Asherville, Mitchell county, Kansas, whose exhibits of Merino and Dickinson delaine sheep and wool at the Omaha Exposition attracted such favorable attention, will talk to the Kansas Board of Agriculture, at its January (11-13) meeting, of his methods and experiences in north-central Kansas as a region which he thinks unexcelled for producing the finer grades of

The Millers' Gazette and Corn Trade News, of London, in its issue of December 7, gives the following as the wheat crops of the world for each of the last six harvests; 1898, quarters, 348,900,000 [= 2,791,200,000 bushels]; 1897, quarters, 283,450,000 [=2,267,600,000 bushels]; 1896, 303,125,000 [=2,425,000,000 quarters, bushels]; 1895, quarters, 313,050,000 [=2,504,000,000 bushels]; 1894, quarters, 320,250,000 [=2,562,000,000 bushels]; 1893, quarters, 309,260,000 [=2,474,080,000

J. Logan Jones, one of the big mer-chants of Kansas City, who had a long and varied career as a country merchant in central Kansas before locating in the city and building up a million dollar business, has accepted Secretary Coburn's invitation to address the Kansas Board of Agriculture upon the subject "The Farmer as Seen by the Merchant." Mr. Jones has observed the farmer so long from behind the counter and desk that he should be able to present some views that to the man and woman on the other side of the counter will be both novel and interesting.

Peanuts.

Editor Kansas Farmer:-Will you please give us through your paper the value and proper cultivation of the peanut, also best variety?

WM. R. DOTY.

Burrton, Kans. The richness of the peanut in protein suggests its use in feeds to balance the heating effects of corn. The popularity of the peanut with the small boy and other people, for use at the spelling school and other places where it ought not to be used, makes it worth while to raise it for the money it will bring. The questions asked by Mr. Doty are timely, and it is hoped they will be fully an-

BLOCKS OF THREE.-Two new subscriptions for one year for \$2, and, in addition, a renewal for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer Co., TopeRa, Kas.

swered by those who have had experi-

ence in raising peanuts.

ING" AT HAND?

The suggestion by Sir William Crookes to the effect that the world is within measurable distance of starvation, under present methods of production, has stirred up an immense amount of thought on the subject. It is to be regretted that this thought has not been as exact as voluminous.

In a recent review, the London Millers' Gazette begs to assure the earth's millions that better prices for wheat will lead to better cultivation and increased production, and places the date of shortage at least ten years in the future, even with present methods of cultivation, provided the extraordinary yields of the present season can be reckoned upon. It is strange how some serious people run into absurdities when frightened. In his most able address—much of which was reproduced in the Kansas Farmer a few weeks back-Sir William Crookes did not predict starvation for the world, but showed that certain changes must take place in the not distant future.

That higher prices for wheat will stimulate production by better farming is one of the conceded facts; but that higher prices for breadstuffs are necessary to induce larger production is just as certain. Greater production of breadstuffs is necessary to the proper nourishment of the race. Only by higher prices can this greater production be secured. Therefore higher prices for breadstuffs are imminent. This may be as far as the interest of the food producer will carry the argument; and this conclusion is made a premise in the argument of Sir William Crookes's critics to prove that the world is not soon to starve.

But justice to the eminent president of the British Association for the Advancement of Science should be done by pointing out that he drew attention to two potent antidotes to the calamity to the human race suggested by the trend of cold statistics. In the first of these he suggested that necessity for more bread will lead gradually to better farming under the stimulus of higher prices, and that in this better farming more nitrogenous fertilizer will be used. He pointed out that this fertilizer, while possibly deficient in a natural state, may be produced artificially by the electric current, and that the power of Niagara is sufficient to produce electricity enough to combine the two principal elements of the air in such form as to constitute the needed fertilizer. The quantity of raw material from which to produce this fertilizer is greater than can be consumed by any finite power, and, as rapidly as any quantity of these elements is used, at Niagara or elsewhere, new supplies will be delivered without cost.

To what state of fertility productive areas may be raised by the use of this fertilizer which Niagara, or any other of the great gratuitous powers of nature, is capable of producing by causing portions of the air to burn, may not now be told. That the expense of such fertilizing, and a margin of profit besides, will be added to the selling price of the

farmers' products, is certain. All this implies that farming is with accelerated strides to become an application of science. It implies a higher place for the farmer in the economic organization. It may imply that he who will not avail himself of the methods of the scientific husbandman will drop to the ranks of the wage laborer. Modern manufacturing industries furnish an illustration although not a parallel. It is not so very long since iron was produced in a small way by hand labor. The introduction of science into this industry has resulted in cheapening the product to the point at which it cannot be produced by hand labor. The raw materials for the iron industry are available in practically unlimited quantities; not portunity to name successors for them. much room is needed for the works; so that there is practically no natural limitation to the iron industry. Food production, on the contrary, requires an expanse of fertile fields. The most fertile and best farmed fields, where climatic conditions are most favorable, are the most productive. But the limitations to improvement appear to be speedily reached, so that there is a limitation to productive capacity of farms which bears a close relation to the extent of fertile areas. The continual geometric increase of population compared with this limitation of productive power, and the fact that the time is within measurable distance when the demands of earth's people will overtake earth's productive capacity under all improvements in tillage now conceiveable—this is the specter suggested by Sir Wiliam's showing which has thrown a certain school of

economists into such an uproar. The second alternative suggested by Co., Topeka, Kas.

IS THE FARMER'S "GOOD TIME COM- the learned Sir William is the use of the KANSAS STATE BOARD OF AGRICULprofuse productive power of the tropics. This is an unknown quantity and is so uncertain that little attention is given to it by the writers who strive to convince themselves that the rapidly increasing bread eaters of the world are to be fed for yet a long while upon products of the temperate zones. Doubtless the reluctance to change will impel the great races descended from Europeans to select the foods of their fathers and to insist upon having them long after the demand for them shall have so far outrun the supply as to make them hard to obtain in sufficient quantities.

Whatever may be said in criticism of Sir William's able presentation, it cannot be denied that the whole trend of events is towards such competition for the food products of the temperate zones as to make the future of the farmer who keeps at the head of the procession and whose staples are bread, butter and meat, more desirable than it has been for many years past.

EXTRA SESSION OF THE LEGISLA-TURE.

Under the call of Governor Leedy the Kansas legislature convened in extraordinary session yesterday (Wednesday) evening at 4 o'clock. The purpose of the extra session as specified in the call is the enactment of a new railroad law. It will be remembered that the bill passed at the regular session, and known as the Harris bill, was vetoed by Gov-ernor Leedy. The suggestion is now made that this same Harris bill with some amendments will be enacted at the extra session. Other legislation is also talked of. The State charitable institutions have been subject to biennial changes of management as one party or another has won the election. If a law can now be enacted which, without introducing objectionable features, shall place the charitable institutions beyond the reach of such revolutions, a good work will have been accomplished. Similar provision insuring stability in educational institutions would have much to commend it. Whether banking and insurance legislation will be undertaken is

still an open question. The session can continue only until the convening of the regular session in January. The political majority in the senate at the coming regular session will remain with the Populists, there being no change in the membership of that body, except such as have resulted from filling vacancies. The terms of the members of the house will all expire in January. The Republicans elected a great majority of the new Representatives, so that there will be a complete change in the political complexion of the This change in the house is so great that on joint ballot of senate and house the Republicans will have a majority. But the hold-over senate, while unable to enact any laws not agreeable to the house, will also be able to prevent either enactment or repeal of laws contrary to the judgment of that body. It is, therefore, assumed that whatever legislation shall be enacted during the extra session will remain unchanged by

the regular session.

A consideration of some importance is the confirmation of officers appointed by the governor. When such officers have been confirmed by the Senate they can be removed before the expiration of their terms for cause, only; while, if ap-pointed while the senate was not in session, they must give way on the appointment and confirmation of their successors. There are many such appointees awaiting confirmation. Not unlikely their names will be sent to the senate during the extra session, thus relieving the incoming govern

Low Round-trip Rates to Topeka.

For the occasion of the annual meeting, Kansas State Teachers' Association, The Great Rock Island Route will sell excursion tickets to Topeka from all points in Kansas at the very low rate of one fare for the round trip. Tickets will be on sale Dec. 26, 27, and 28, return limit Dec. 31, 1898. You should take advantage of this splendid opportunity to make a holiday trip at small cost by buying your tickets via the Great Rock Island Route. Consult local ticket agent for rates and full information, or address E. W. Thompson, A. G. P. A., Topeka, Kans.

BLOCKS OF THREE.-Two new subscriptions for one year for \$2, and, in addition, a renewal for one year free to any old subscriber who sends two new subscrip tions and \$2 in one order. Kansas Farmer

TURE

The twenty-eighth annual session of the Kansas State Board of Agriculture will be held in Topeka, beginning January 11 and continuing three days. The following is the program:

WEDNESDAY, JANUARY 11, 1899. Afternoon Session—Opening at 4 o'clock. Roll-call.

Report of Committee on Credentials. Reading minutes of preceding meeting. Reports of officers

The following topics will be taken up and considered, as near as may be, in the order in which they are given. Papers will be subject to pertinent discussion, and delegates are urged to prepare for these discussions. Others present, of whom there are likely to be a large number, will, as heretofore, also have the privilege of participating in the discussions, and are expected to do so.

Evening Session-7:30 o'clock. Address of welcome, Gov. W. E. Stan-

Address of welcome, Mayor C. A. Fellows.

Response, the President, Geo. W.

"The Southwest Corner," C. M. Davis, Hugoton, Stevens county.

European Contributions to Kansas Agriculture," Prof. W. H. Carruth, State

THURSDAY, JANUARY 12. Morning Session-9:30 o'clock.

"Swine Plague and Blackleg Protective Inoculation," Dr. Paul Fischer, State Agricultural College.

"The Serum Treatment for Hog Cholera," Dr. D. E. Salmon, Chief U. S. Bureau of Animal Industry.

"The Farmer His Own Veterinarian," Dr. M. Stalker, Iowa Agricultural Col-

Afternoon Session-1:30 o'clock. "Sheep Raising in North-Central Kansas." J. N. Grau, Asherville, Mitchell

"Sheep, Good and Bad," Prof. John A. Craig, Iowa Agricultural College.

Evening Session-7:30 o'clock. "The Kansas Cow and Creamery," Senator George W. Hanna, Clay Center.
"Life Among the Germans," Mrs.
Frances M. Sherman, Kansas City.
"Modifying the Characteristics of

Farm Animals," Pres. G. E. Morrow, Oklahoma Agricultural College. FRIDAY, JANUARY 13.

Morning Session-9:30 o'clock. "Practical Lessons in Apiculture," E. Whitcomb, Friend, Neb.
"What I Know About Alfalfa," H. D.

Watson, Kearney, Neb. Afternoon Session-1:30 o'clock. Election of officers and members.

"Kansas as a Stock Growing State," J. H. Neff, editor Drovers' Telegram, Kansas City, Mo.

"As Seen by the Commission Man," W. S. Hannah, Kansas City stock yards. Evening Session-7:30 o'clock.

"The Farmer and His Wife as Seen by the Merchant," J. Logan Jones, Kansas City, Mo.

Address, James Wilson, Secretary U. S. Department of Agriculture, Washing-

"Another Point of View," Mrs. C. F. Wilder, Manhattan.

OTHER MEETINGS.

The Kansas Improved Stock Breeders' Association and the Kansas State Swine Breeders' Association will hold their regular annual meetings (beginning Monday) during the same week as the State Board of Agriculture, and also the State Poultry Association will be holding its annual show during the entire H. A. Heath, Topeka, Secretary of the Stock Breeders' Association; O. P. Updegraff, Topeka, of the Swine Breeders; and J. W. F. Hughes, Topeka, of the Poultry Association, will give desired information as to their respective meetings. It is believed no man or woman interested in the agricultural and live stock industries, or in wholesome homemaking, can attend these meetings without being profited. Their sessions and discussions are open to all.

RAILROAD RATES.

The Kansas railroads have all granted for these meetings an open rate to everybody of a fare and one-third for roundtrip tickets, and no receipts or certificates will be necessary. Tickets will be on sale January 7 to 12, inclusive, and be good for return passage until and including Monday, January 16. Whosoever will may come.

HOTEL RATES.

Rates at Topeka hotels and boarding

houses will, as usual, be reasonable, and accommodations can readily be secured suited to the purses of the poor, "the comfortably well off," or the plu-

WATER IN THE UNITED STATES.

The literature of water supply in the United States consists very largely of reports of the Division of Hydrography of the United States Geological Survey. In a recent circular Mr. F. H. Newell summarizes these and outlines the work undertaken by his division as follows:

ANNUAL REPORTS.

The progress reports of the Division of Hydrography cover the results of the operations of each calendar year, bringing together available data concerning the water resources of the United States. These reports are now printed as separate volumes of the annual reports of the Geological Survey. Organized in the winter of 1888, the results of the hydro-graphic investigations for the first full calendar year, 1889, were printed as Part Il of the Eleventh Annual Report. The latest volume issued is that relating to the operations of the eighth field season, calendar year of 1896, printed as Part IV of the Eighteenth annual keport.

IV of the Eighteenth annual Report.

1896.—This volume, Part 1v of the Eighteenth Annual, contains first a "Report of Progress of River Measurements for the Calendar Year 1896," by Arthur P. Davis. This is accompanied by the following papers: "The Water Resources of Ohio and Indiana," by Frank Leverett; "New Developments in Well Boring and Irrigation in South Dakota," by N. H. Darton; and "Reservoirs for Irrigation," by J. D. Schuyler, the last paper being illustrated by a large number of views of important dams.

1897.—The next progress report, that

1897.—The next progress report, that for the year 1897, covers the results of operations for the ninth season of field work, and includes with the data thus obtained supplemental information

obtained supplemental information brought together from various sources. This volume, Part IV of the Nineteenth Annual, is now in the hands of the printer and will be bound and distributed within a short time.

1898.—The report for 1898, to be printed as a portion of the Twentieth Annual, is now in preparation. It contains the results obtained by field work during the tenth field season of the division, supplemented by related data. It vision, supplemented by related data. It has been found desirable to publish something more than the bare results of measurements, and it is believed that the value and utility of the annual relationship to be a supplementation of the supplementation o ports can be greatly increased by inserting with the statements of observations facts obtained from field assistants and correspondents regarding the recent or prospective developments of the water resources for irrigation, power, and other

INFORMATION DESIRED.

In order to round out the general information upon the subjects above mentioned, it has been found expedient to bring together as complete a list as pos-sible of persons interested in the sub-ject. This list includes civil, hydraulic, and sanitary engineers, instructors in these subjects, members of boards of health, and biologists and chemists interested in water supply. Many of these individuals in the course of professional work acquire data upon the quantity or quality of river, lake, or well waters. It is desired to obtain all such results of original observations and make brief reference to them in the annual report of the Division of Hydrography, where they amplify or relate to the topics there pre-

The matters concerning which an attempt is being made to obtain facts by co-operation or correspondence are as follows

urements of flowing streams, or even a single observation, may have value and should be recorded and preserved in print. It is desirable, therefore, to have notice called to examinations that may have been made of various streams. whether large or small, and whether the results of the examinations are applicable to questions of irrigation, of power, or of municipal supply. This is particularly the case where the water resources are yet to be developed or where a supply exists for use in agriculture or for manufacturing purposes.

Quality of Water.-The amount and character of the material in solution or suspension are of importance not only in geologic and sanitary investigations, but also in many industrial undertakings. Examinations more or less complete have been and are being made by a number of persons, and although it obtain results of practical operation of may be impracticable to assemble all of these, it is believed that a considerable bearing upon this subject may with pro-

brought together by correspondence. The Division of Hydrography is attempting to collect typical samples of river and other waters for examination and to make measurements of the material carried in suspension or rolled along the bottom of the streams. These results have practical application in questions of erosion and of the filling of storage reservoirs. The chemist and biologist can often contribute information con-cerning the quality of ordinary water in different parts of the country, and especially regarding the gradually in-creasing pollution of the streams.

Lakes and Ponds.-Besides a knowledge of the streams of the country, it is desirable to have information concerning the natural lakes and ponds, their origin, general distribution, size, depth and fluc-tuations in volume, and possibly of the changes of temperature.

Irrigation Canals and Ditches.—Recent progress in the development of irrigation, especially by structures of considerable size, is noted in the annual report. It is, of course, impracticable to list all of the irrigation ditches, but he attempt is made to make mention of those of importance or whose construc-tion bears upon the utilization of the vacant public lands.

Water Power.—The utilization of the streams of the country for power and the means adopted for the transmission of this are topics which are discussed, as briefly as possible, in the annual reports. It is desired to obtain information concerning the degree to which

crease of population and the develop-ment of industries a new problem arises—that of disposing of refuse water and of preserving the purity of the streams, so that their waters may con-tinue to be of value. In the course of the hydrographic surveys examinations are being made of various drainage basins and note taken of the character and amount of pollution. Any items of general public interest which bear upon this matter may well be noted.

Wells.—The construction of ordinary wells, and particularly of the deep or artesian borings, is largely a geologic question. Special attention is given to the occurrence of water underground, as to both its quantity and its quality. Maps are being prepared which show not only the topography of the surface but at the same time the conditions underground and the depth to water at various points. Particular attention is called to the maps of the vicinity of Pueblo, Colo., prepared by Mr. G. K. Gilbert, and printed in Folio 36 of the Geologic Atlas of the United States. A considerable part of the annual report is devoted to descriptions of wells of certain sec-tions, and an attempt is made to put on file all of the important facts concerning these. At the same time the tem-perature of deep borings is being ob-

SCHEDULES OF INQUIRY. This circular has been prepared as ex-

HAMLET'S CASTLE, ELSINORE.

tolfe's Shakespeare's Tragedy of Hamlet

the water power of various streams is now employed and facts which bear upon the more complete utilization of this power, and particularly of opportunities not yet taken advantage of, so that public attention may be drawn to sources of water power which as yet are little

Storing Water.—The development of the water resources by storage of floods is an important problem whose solution depends in part upon knowledge of the quantity of flowing water as well as upon the topography of the country and methods of constructing dams. The annual report on hydrography includes a de-scription of the reservoirs surveyed and Quantity of Stream Flow.—All meas- reference to projects recently constructed or under consideration. It is desired to assemble all facts which bear upon the storage of water, especially in reservoirs whose size renders them of public importance. Not only the quantity of water should be considered, but, wherever possible, the quality and the effect of storage upon this.

> Pumping Water.—The raising of water, especially in considerable quantities, a small height is of fundamental importance in a consideration of the utilization of the water supply for irrigation as well as for drainage of swamp lands. The development of a large part of the public lands can take place only as cheap and efficient methods of pump-ing are introduced. The utilization of the wind for this purpose has been a topic to which considerable attention has been given, and it is desirable to

planatory of different schedules of inquiry calling for addresses of persons or for information along various lines. It is hoped that the person to whom a schedule is sent will fill out the blanks as completely as may be practicable, or, if the questions do not cover the par-ticular case in hand, will write a brief description giving the more important related facts.

A Leak.

By A. C. Shinn, Ottawa, Kans., read before the Franklin County Farmers' Institute.

Stop! Look at that field! Twelve feet out to the first row. One, two, three rows, with scarcely a sign of a nubbin. Four, five, six rows-these will make less than half an average yield of the field, and a few more rows seriously damaged. Room for eight rows of corn gone, and six of these to plow, plant and cultivate, just the same as for a full crop, and yet less than one-quarter of a yield of corn. And there is the leak, caused by that nuisance of a hedge fence. Is the field next to timber? Then the waste ground is much more, as the trees are higher than the hedge.

We should all adapt ourselves to present and future conditions, and not go blindly forward in the ruts of the past. On this view, when the customs and laws of this State encouraged the setting out of forest trees and hedges, the conditions then may have justified that course. But conditions have now so changed that to follow that course is a positive loss.

You Can Pay Off Your Mortgage

This winter by working evenings for

THE LADIES' HOME JOURNAL

500 best agents get \$11,500 divided among them in addition to good pay for work done.

Publishing Company Philadelphia, Pa.

cut down or in any way injure any of the young saplings; so when working in the timber here in Kansas I have, almost instinctively, pursued the same course. using a crooked limb for a handspike to avoid cutting a standing stick suitable for the work; in driving around in the timber to put on the load, crooking here and there to avoid injuring the young saplings; in cutting for use, unless for some special purpose, selecting the crooked and injuried trees, so as to save the good sound ones to grow; and in the good, sound ones to grow; and in every way to save as much as possible of the timber. While that was the teaching of my father, and has been my prac-tice, it has also been the teaching and practice of the greater part of the people settled in the prairie States. What has been the reward that we have received for this care and self-denial?

A year or so ago I was in this same timber in Illinois, with some of the neighbors—prospective buyers of the land. There was the soil, as before the war, and a fine growth of trees, smooth and tall, many cords more on an acre than when I had worked there, and what was it worth—this wood, this timber, so carefully preserved, and taxes regularly paid for over a third of a century? The buyers said they would give more for the land stripped root and branch of its timber than they would for it as it stood with all that splendid growth of trees on. In Kansas, I know of farms on which were planted acres of forest trees that have grown for over thirty years. The labor of preparing and planting the ground, these long years without the use of the land, and all the time the expense of keeping up the fences and paying the taxes, and now at the end of this time the land would be worth more, even here, if some giant hand would pull up the trees, beat the dirt out of the roots and cast them aside as one does the weeds in a garden bed.

This course of setting out forest trees and hedges is all wrong, and the sooner it is stopped the better for all. Why, many of our cities have altogether too many forest trees, keeping the streets from drying and making the air damp and unhealthy. Even some of our schools and colleges have entirely too many shade trees, and are already, in some cases, removing them. With this leak constantly draining, to say nothing of the dangerous and continuous labor demanded by hedges, let public sentiment on this question of trees and hedges be

changed and Arbor day done away with. And now comes the Kansas Farmer with another indictment of great force against the hedges, saying, "Where Osage orange hedges prevail, some investigators have found that three-quarters of all the chinch bugs that live over live in the accumulated trash of the hedge rows." Now, how to get rid of these groves and hedges, and what to substitute for the hedges, are questions of great moment; but whatever the right answer may be, the constant, expensive and perpetual leak caused by trees and hedges is all the time with us.

BLOCKS OF THREE.-Two new subscriptions for one year for \$2, and, in addition, a renewal for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer

Borticulture.

THE ESTABLISHMENT OF NEW PLANT INDUSTRIES.

DAVID G. FAIRCHILD.

The first and most evident reason for the introduction of economic plants into any country, and that to which the or dinary mind at once refers, is the building up of new plant industries. To the most casual observer it must be apparent that the number of useful plants, compared with those of which man makes no use, is very small. The menu of an average American dinner includes the product of scarcely a dozen plants, and yet the number which could be grown for the table would reach into the hundreds. There are several reasons why the number of plants upon which we depend for subsistence remains small, and the competition between producers of the same plant product continues fierce, but the most potent one lies in a persistent conservatism of taste, which is both unreasoning and uncontrollable. That the German peasant should look upon Indian corn meat as fit only for his live stock, or the inhabitants of some portions of Holland consider the sheep raised along their canals for the English market in the same light as Americans do horse flesh, are facts which must be reckoned with, however unreasonable they may appear, in any attempts at plant introduction. This conservatism in small matters, although often enough exhibited in America, is less firmly fixed upon us, as Sir Henry Norman and other European critics have This is evidenced by our quick appreciation of such new fruits as the pomelo, or grape fruit, which has become almost as common with us as the orange, while in Sicily it has been cultivated for centuries, and is not even now appreciated as a table fruit. The growing favor of the persimmon, the increasing consumption of the banana, the established appreciation of the sweet potato, which is still practically an un-known vegetable in Covent Garden, our fondness for the peanut and popcorn, as yet merely curiosities in Germany, indicate that such a state of stagnation is not yet reached as that of eastern Europe, at least, where even tomatoes are almost unknown and the sweet potato is one of the rarest and most costly of vegetables. On the other hand, the almost complete absence from American tables of the European artichoke (Cynara scolymus), something entirely different from the plant known by that name in America, which when properly grown is one of the most delicious of vegetables, indicates anything but a readiness to increase the list of available food plants.

THE ARTICHOKE.

According to Schubler, the artichoke has always been cultivated in Norway as far north as the sixty-third parallel, and has long been grown in Louisiana and to a slight extent elsewhere in America. It is evident, accordingly, in this instance, as in many others, that the problem of buildnig up a new plant industry is not merely to establish the fact that a desirable species can be successfully cultivated here, but it is equally necessary to bring the merits of the new product to public attention and thus create a market.

That such popular education in the use of food materials is legitimate work for a department of agriculture can scarcely be questioned, inasmuch as it fosters industries which without its aid be built up. introduce and establish a new plant industry every assistance in the way of free seed or plants, full information regarding the methods of culture and care of the product, as well as aid in the creation of a market, should be furnished by the Department, and only when the industry is well on its feet should such support be withdrawn.

THE IRISH POTATO

When it is recollected that the Irish potato, upon the cultivation of which millions depend for subsistence, was the discovery of an uncivilized race of Indians in the mountains of Chile, Peru, or Argentina, and that even after these years of amelioration a variety has only recently been produced by careful breeding which yields per acre fourfold the amount of starch of any ordinary variety, it can not but seem reasonable that the serious attention of civilized races will be able to discover and bring much more quickly into daily use fully or more which are placed on the mar- advantageously, but if the top is of good

this tuber-bearing species of Solanum.

GRAPES AND PLUMS

The development of the American varieties of grape and plum is an example of discovery and improvement by a civilized race, and it can scarcely be doubted that the modern methods of extensive plant breeding will open the door for a rapidly increasing number of new food plants.

GOVERNMENT WORK.

That such work has been done, is now being done, and is in contemplation by governments of foreign countries may be judged by the following brief accounts. To be sure, as quite pertinently pointed out by Mr. J. E. O'Connor, in an excellent article on the introduction of the carob tree in India, the methods of introduction are not always properly chosen. He says:

"The article is first lauded as a most useful thing, and its acclimatization declared to be most desirable. Then there is a lull. A little later some official or perhaps some nonofficial gentleman, with a taste for these matters, sees the plant growing in some favorable locality, is struck with its appearance, introduces it with more or less success, and then leaves the district or the country, and the subject drops out of sight with him. A little later the whole process is gone through again, and so on da capo, the very slightest reference, if any, being made by each successive experimenter to the results of the trials made before his time. Thus the experiment, which might, if carefully watched, finally show in two or three years whether it was worth pursuing or not, drags on its weary course through thirty or forty years, with indecisive results at last, and the moral of the story is, that such ex-periments should be carried out in suitable conditions under the close supervision of a central Government department, charged especially with such business and competent to undertake it."

CORK OAKS.

The history of the introduction of cork oaks into the Southern States illustrates the need of continuity of experiments. In 1858 cork-oak acorns were secured and distributed by this Department throughout the Southern States and California and from occasional trees still found scattered through the region it is evident that the plant will grow and thrive, but, owing to lack of early records and in the absence of reintroductions, no progress has been made toward the establishment of the cork industry. Corks in 1893 cost us \$1,993,025, and undoubtedly cost us vastly more to-day, owing to the increasing production of wine. Over 3,488,000 acres are planted to cork oaks along the Mediterranean, and it is a comparatively recent industry there. It is not too much to suppose that Yankee ingenuity will some day eliminate the necessity for cheap labor in this culture, as it has by employing the Mc-Cormick reaper in the rice fields of Louisiana, and the United States will then no longer be dependent upon European nations for corks.

QUININE.

The history of cinchona culture on the Island of Java, which small island now furnishes two-thirds of the quinine on the markets of the world, is an example of what government support of a plant industry has done. For thirty years the Dutch Government was urged to undertake the introduction of this valuable medicinal plant from Peru, and finally in 1852 the Dutch minister of colonies was authorized to employ the botanist Hasskarl, who explored the cinchona forests of Peru, bringing back twenty Wardian cases of different species of cinchona. Plantations of the various spe cies were started and large sums of money expended, and although an error in the extensive propagation of a comparatively worthless variety, poor in the alkaloid, added unnecessary difficulties to the problem, the plantations, both governmental and private, now produce abundantly, and a factory is in operation on the island for the extraction and refinement of the product, which extraction has heretofore been done by European and American firms. 'The profit to the Government in 1896 from its plantations was \$38,500, and over \$11,395 worth of the refined product will be shipped to the United States alone this current year.

The efforts of Clements R. Markham, engaged by the Indian government to introduce the cinchona culture into India, were crowned with success, and the cinchona plantations and factories of that region have assisted in the production of their share of the 600,000 pounds

as valuable food-producing plants as ket annually. The price of the quinine this tuber-bearing species of Solanum. of the inexpensive drugs, and this cheapening has been brought about by the introduction of the industry into India

The Colonial government of Cape Colony established in 1884 a government wine farm of 300 acres, with competent wine makers, for the purpose of stimulating the cultivation of the European grape and the building up of the wine industry. Imported pure selected yeasts have here been experimented with in the fermentation of the wine must and. although as yet apparently not with the success which attends their use in the Rhine region, a perceptible acceleration of the fermentation process and production of uniformity of product have been demonstrated. The Government, by the introduction and propagation of resistant American vine stocks, which are sold for a nominal sum to grape growers, is encouraging the replanting of all vineyards with American stock, to prevent the catastrophe which the rapidly spreading ravages of the phylloxera are destined to produce.

BRITISH GOVERNMENT.

The Royal West Indian Commission, sent out by the British Government in 1896 to investigate the causes of agricultural depression in the British West Indies, recommended the expenditure of £17,000, or more than \$81,000, annually for ten years, ostensibly for the purpose of establishing new plant industries in the islands. These grants were made by the last Parliament, and nine botanic stations on the various islands, with a head office in the Barbados, for the investigation of tropical agriculture and the introduction of economic plants will soon be established. Dr. D. Morris, for some time assistant director of the Kew Gardens, was appointed to take charge and expects to begin the work of organization immediately. The botanic stations established some years ago in several of the islands have been the means of adding to the West Indian products, ginger, nutmeg, cloves, black pepper, guinea grass, sago, bourbon cane, coffee, mango, logwood, cinnamon, bamboo, camphor, orange, lemon, citron, yam cacao, and shaddock, according to a recent article in the Produce World.

Hardy Ornamental Shrubs.

Press Bulletin Kansas Experiment Sta-tion.

The person who is expecting to add any new features of beauty to his home grounds in the coming spring should begin now, if he has not begun already, by perfecting the plan by which he is to proceed. If one does not plan he is sure not to execute, or to execute improperly. The ornamentation of the home, above all things else, should be done with forethought and mature consideration. If you would be satisfied with your home and contented in it, then, in planting, sowing and pruning, adopt a plan and follow it out.

It is not enough to adopt a plan in time. It is essential also to order in due time the stock you wish to plant. Nurserymen cannot, and most of them do not, claim to guarantee their late shipments as they do their early ones. It is in late orders that substitutions of varieties and quality are made. Order in time.

Decide on what you want and order from the nearest reliable nurseryman. If he does not have it he will procure it for you or give you the addresses of those who do have it. This department is always ready to furnish the addresses

of reliable firms to those who ask. The question of soils is scarcely to be considered, since almost any soil to be found in the State is capable of supporting the best of our handsome bloomers. However, the physical condition of the soil may be such as to require some treatment before committing a valuable shrub to it. If the subsoil is hard and tenacious it should be broken up so that the roots of the plants and moisture can penetrate it. For large plots a subsoil plow is best, but for single plants, or for a small number, a spade is effective. Dig a hole wide enough and deep enough for the roots to grow uncramped for a year or two. Fill in the bottom of the hole with surface soil and tramp it until it is firm. It is best to set the plant a little deeper than it grew in the nursery. Before placing it in the ground see that the broken and torn roots are all cut away. If the ends of the roots are injured they should be pruned off, leaving a smooth cut. Further than this root-pruning is of very doubtful efficacy.

The tops may, perhaps, be shortened

SAVE YOUR ORCHARD BY USING

Absolute protection from rabbits; keeps off borers and bark-lice and prevents sun-scalds; is indestructible and cheap. Write for circu lars and prices.

J. D. BACON CO.,

Mound City, Kas

We PAY CASH each week STARK !outstans, to the first the control of the control of

shape severe pruning is not desirable. The soil should be packed firmly around and over the roots to the level of the ground, but if dry weather is expected, leave the soil around the plant lower than the surrounding surface. This method has been found of great advantage in the drier portions of the State.

The following shrubs, arranged in the order of their blossoming period, have been found perfectly hardy at the col-lege and have, besides, the highest attributes of beauty, dignity and grace:

PYRUS JAPONICA (Japan Quince).-An upright bush bearing scarlet flowers very early in the spring before the leaves are out.

SPIRAEA PRUNIFOLIA (Bridalwreath).—A small spreading shrub, five feet high, bearing small white double flowers in great profusion.

SPIRAEA VAN HOUTII.—A very graceful shrub, six feet high, spreading, bearing a wealth of white blossoms in early spring, about a week later than S. prunifolia.

LONICERA TATARICA (Bush Honeysuckle).-An upright shrub, eight feet to ten feet high, bearing handsome pink or white flowers in rather early spring.

PHILADELPHUS CORONARIUS (Mock Orange) .- An upright shrub, resembling in habit the one described next

VIBURNUM OPULIS STERILIS (Snowball).-Well known; excelled by none in its grand white clusters in rather late spring.

CARAGANA ARBORESCENS (Siberian Pea).—A legume of beautiful upright habit and dense, soft foliage, bearing small yellow flowers in late spring.

TAMARIX JUMPERINUS .- A tall, graceful shrub, with foliage resembling the cedar. Bears small pink blossoms in spikes in late spring and early summer. SPIREA BUMALDA.—Small, one to

one and one-half feet high. Bears pink blossoms in corymbs in June and July. HIBISCUS SYRIACUS (Althea) .-

Small shrub, four to five feet high, bearing brilliant white flowers in July.

HYDRANGEA PANICULATA GRAN-DIFLORA.—This shrub opens its grand clusters of blossoms in July and holds them till August. Unsurpassed in beauty.

CURED OF CANCER OF TWENTY-FOUR YEARS STANDING.

INDIANAPOLIS, IND., Sept 2 th, 1898.

DR. E. RINEHART, Indianapolis, Ind.:

DEAR DOCTOR—It is with pleasure that I can bear testimony in behalf of your wonderful success in the treatment of cancers. I was for twenty-four years a sufferer from a cancer the size of a quarter of a dol lar, on the temple, and if possible, I was more a sufferer in mind, from the dread of consequences, than in body. I heard of your treating cancer, and called upon you, and during a very pleasant talk you advised me to take your treatment, and am rejoleed to bear witness that under your care and treatment the disease was eradicated and permanently cured, and there remains but slight evidence, even by scar, that a cancer ever existed there. I can most heartly recommend your treatment and skill to all afflicted with cancer or skin diseases, and will be pleased to answer all letters of inquiry, if a stamped envelope is enclosed.

Yours very respectfully,

BENJAMIN CARBET,

225 Douglas St., Indianapolis, Ind.

Persons afflicted or desiring full information in rest test test treatment and the streatment of the streatment

Persons afflicted or desiring full information in regard to treatment, should send for a Free Book to DR. E. RINEHART, Lock Box 221, Indianapolis, Ind.



PATENT secured or money all returned. Search free.

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.

HOW WE BREED, FEED AND HANDLE OUR COWS-RESULTS.

Paper read before the Kansas State Dairy Association, November 17, 1898, by T. A. Borman, Navarre, Kas.

(Continued from last week.)

When alfalfa hay is the basis of our feed, we use corn chop diluted with bran; or, when sorghum or millet or Kaffir constitutes the roughness, we partially balance the ration by the use of about all the best wheat bran the cow will consume, and, if she will eat it, a pound or more of linseed meal. We have had difficulty in getting cows to eat the meal, and at one time had to abandon its use. But, this latter combination of feeds has produced our heaviest yields and sustained the milk flow during the whole fall and winter seasons remarkably well. The foregoing combinations of rough feeds with 4 pounds of corn and cob meal finely ground and 6 pounds of bran per feed is, this year, giving us more satisfactory results than bran alone has done.

During the year 1897 we used bran exclusively. The average quantity consumed per cow was 1.08 tons, at a cost of \$8.15. The cost of this bran could have been decreased nearly \$2 had the winter's bran been bought in the fall instead of being bought as consumed. To us this cost appears extremely small and the cow that will not return a good profit on that amount of feed, consumed during the winter, is unfitted for dairy use. It seems strange, indeed, that so many farmers are content with a small milk yield when it could be doubled, or increased three times, by the use cheap bran. Winter milk averages in price probably 80 cents per 100 pounds, and bran costs 45 cents at present; and 100 pounds of bran fed with good roughness in a warm stone stable will produce 100 pounds more milk than no bran with poor shelter and poor roughness. The idea of a balanced ration is hooted by many thoughtless farmers. But, it is our observation that the nearer we approach a scientifically balanced ration the more milk we get. But, the average dairy farmer cannot or will not go to the expense or painstaking of science, although I feel reasonably sure he would be repaid by so doing if his cows were good producers. Yet every farmer, with only a little care, can closely approach scientific feeding—so closely that very little loss will accrue from the violation of the feeding standards.

Indeed, no farmer who makes pretentions at dairying could have violated in a greater degree the teachings of our most successful feeders than ourselves, in that our ration includes no succulence in the way of roots or ensilage. We do not question the value of either, in fact we are so much in favor of ensilage that the silo on our farm is not a great way in the future. Yet, we are so well pleased at our results without it, and our work seems to establish the fast that the much written about beets and ensilage are not absolutely necessary to the production of milk and butter in good quantities, and that at a profit. What we have done, in the way of feeding, the poorest farmer in The scales in the barn are a good thing Kansas can do. Our system of feeding for us, and will do as much good for any requires no bank account to support it the cows do that.

To the Kansas dairyman the most crit- intelligence as does dairying. ical period of the milk season is that of become a disastrous failure. Fresh cows will so shrink that no quantity of winter feed will restore the flow; and cows fresh in the spring will often dry completely, or, at best, so shrink as to give an unprofitable quantity, on the winter ration; and even the dry cow, the cow to calve in the early fall, will suffer from the scarcity of nutritious and milk-stimulating food. Cows neglected at this time of the year are loath to forget and will surely take vengeance on the careless owner by retaliating at the milk pail.

At this time we give Kaffir corn or green sorghum, night and morning; or,

had put the pastures in reasonably good condition. In fact, the feeding of these green feeds has been so highly successful in milk yield and so economical in production that I believe the practice of the soiling system in the early fall will permit our small farmers to double their dairy herds and enable them to produce at a greater profit than under present practices.

Dairying after the soiling system is not an impossibility in Kansas, and, when she has become truly a dairy State, predict that it will be practiced largely.

Next season all of our cows will calve in the early fall; in fact, none are fresh later than January of this season. The advantages of a fall cow are well known. She milks longer; we get a larger yield for a longer time, hence more pounds for the year; she is, or should be, dry during the months of flies and greatest heat; the bulk of her milk commands the best prices of the year; and the low-priced milk is produced at a time when feed is cheapest and labor and care is least; and, last of all, the fall calf will make the best growth. So, we dairy with fall-fresh

The success of a cow's milking season depends largely upon the treatment before calving. It pays to feed a few pounds of corn meal, beginning six weeks before calving, getting her into good flesh and strong: and, if the grass is not good or sufficient to move the milk-producing glands to activity, we begin feeding bran a few weeks later; or we aim to have a cow so fed that she will be in condition to do her very best, at production, immediately after recovery from calving. A poorly fed cow will come fresh in a run-down condition, having made no preparation for milking; and the feeder will spend a month or six weeks of val-uable time, feeding the cow to her capacity, and in nine out of every ten cases he will fail to get as good a yield as if the feed had begun six weeks sooner. By careful, judicious feeding there is no danger in this process of treatment and it will pay enormously. Professor Cottrell, of Manhattan, says, and he knows, that a cow allowed to give a low yield for two months after calving cannot by any system of feeding known to him be brought to a high standard the remaining part of the year. If you are seeking the greatest return from your cow, begin feeding before calving.

Our milking is done in a barn every night and morning of the year, and at as nearly regular hours as a farmer's cir-cumstances will permit. We weigh and test each cow's milk with such frequency that we are able to know just what she is doing. Years ago we begun weighing through idle curiosity; but this de-manded regular weighings, and the spring balance demanded the Babcock test—the one without the other is a delusion and a snare—and the two brought about tabulated records. Dairying, without these simple means of ascertaining the real value of a cow, is not conducive to the best results. I know that a pair of spring balances, hung in a convenient place in the barn, will actually make a cow give more milk. They induce clean milking, and, if a good yield is shown one day and a low one the next, he is a shiftless milker, indeed, who will not give the same feed, or place the cow in the same condition, as nearly as possible, as that of the day of high yield. The scales in the barn are a good thing one else. No farm work is so instructive or yields so great a return for a bit of

On cold mornings our cows get a good summer or fall, when, from drought or feed of hay or fodder in the barn, and hot winds, the pastures are short, and remain there until the sun shines bright if not short the grass is too dry to sustain the milk flow. Unless some good they are turned out and go to a spring future as a dairy State. For six years feed is given at that time, what might 300 yards distant to drink. On days of have been a successful milk season will extreme cold they are restabled immediately upon their return, and while ordinarily dairy cows are decreasing in their produce, we have, under these conditions kept up the flow and several times made gains. Our barn is a frame structure, but warm, never reaching the freezing point. It is filled with swinging stanchions which keep cows reasonably clean and make them comfortable.

The calves are kent under same roof. in pen convenient for feeding, and are given skim milk, warm from the separator, after each milking. We think this method of handling the skim milk the ideal one. Its value at this time is fully indian corn fed at this time, with a good three times greater than when returned nubbin on each stalk, will never yield a from the factory; and, to the man who better profit. Alfalfa, fresh cut, or seeks the most profit from dairying, the hay, is an ideal feed. After feeding green proper disposal of this product means sorghum we have not only sustained the many dollars to the income of each cow. milk flow, but have made such gains that Hogs and calves sufficient to consume its use was continued, even after rains every drop should always be kept; and

hogs are the complement of the dairy as well as of the feed lot. In 1897 the minimum quantity of whole milk fed per calf was 450 pounds—an average of 12.5 pounds for 36 days, or into our lot of 12 calves 5,850 pounds of whole milk, equivalent to 218.79 pounds of fat; with prices paid by our creamery, \$35.91, or \$2.99 worth of fat consumed by each calf. These figures make calf raising for the first 36 days expensive, but, by the use of warm separator milk and careful feeding of corn meal with it, we get a calf started well in this world, with whole milk not longer than ten days.

620.21

As dairy farmers we are forced to look to every little saving, and, in this connection, the farm separator is our greatest friend. It saves hauling, saves time, saves butter fat fed to calves, makes more and better feed, and, to summarize, pays a tremendous interest on the investment. Our separator is operated by a calf on a tread power.

So, in a general way, I have outlined our manner of breeding, feeding, and handling our cows, and have hinted at the results. In a measure, only, are we pleased with our work. We can do better and will do it this year. The report of our work, which I am about to read, is for the year 1897. It was made under circumstances somewhat adverse, and does not show the herd at its greatest capacity, for several immature cows were milking, while others calved in the spring, and the milk flow of these was checked by hot weather and flies at a time in their period of lactation when the yield should have been heavy. Also, the report does not take into account the milk used in the house. The report is:

Average quantity milk produced per cow, lbs. Butter fat per cow, lbs. Butter (fat plus one-sixth) per cow, lbs. Value of fat at 16.375 cents per pound	8,263.1 309.23 360.75 \$49.70
Average quantity milk sold per cow, lbs. Butter fat sold per cow, lbs	202 4
lbs Value at 16.375 cents per pound	335.9 \$47.48
The financial report may be int	orost.

ing, also. The steer calves and undesirable heifers were sold at 1 year old, and brought an average price of \$25 per head. The choice heifers were not marketed and we value them to-day as yearlings, at the price of a good milch cow; but, since we cannot estimate their real value, we place them, also, at \$25-stock prices. Skim milk was returned from the creamery to the amount of 300 barrels, during the year, at an average price of 12.5 cents per barrel of 48 gallons; and we place the feeding value at 25 cents per barrel above the cost:

sate Value	from of fat of cal of ski	ves.	at \$25	eac	h	• • •	• • •	 • •	:	:	\$590.39 325.00
	Total i	ncon	ne					 			\$990.00
In	come I	per c	ow					 	٠.		81.17

Filling the Pocketbook of the Creamery Patron. The following appears in the December

number of Jensen's Dairyman, by W. F. Jensen, Beloit, Kas., president and manager of the Jensen Creamery Company, with 18 skimming stations: "The most pronounced feature of the

meeting [Kansas State Dairy Association], resulting in valuable information to the delegates, was the presence during the entire time of Profs. H. M. Cottrell, D. H. Otis, and F. C. Burtis, of the Kansas State Agricultural College, at Manhattan. These gentlemen possess learning as well as practical experience, and have sized up Kansas conditions right. They have given us, and will give us, practical education that will be Professor Cottrell had charge of ex-Governor Morton's herd (back in New York State), numbering 250 head of the best cows obtainable. Professor Cottrell, at the head of the college dairy school at

CREAM · SEPARATORS

De Laval "Alpha" and "Baby" Separators. First-Best-Cheapest. All Styles-Sizes. PRICES 850 TO 8800.

Save \$10 per cow per year. Send for Catalog THE DE LAVAL SEPARATOR CO. Send for Catalogue CHICAGO. 74 Cortlandt Street NEW YORK.

Manhattan, commencing its next term January 3, 1899, most urgently wishes everybody to correspond with him for particulars, if they want to understand feeding, the handling and care of cows, so as to obtain the best results. We urgently request young fellows on the farm to take advantage of this school and attend it. We know there is a deplorable lack of information among our young men regarding their work. We can never understand how some men and women can go from day to day without understanding the cause or effects of their work, and thus spend a whole life without being in touch with their own doings. We think there is a lack of appreciation among the young folks on the farm in regard to their lot in life. say, be proud of your work; you are most happily and independently engaged. Attend agricultural schools; obtain a thorough understanding of the animals you raise, the plants you cultivate. You will like your work, and receive great satisfaction from it. The truly great man is the one who reaches the top of his profession, be he a farmer, professional or business man. Attend meetings and schools; gain new ideas and inspirations; then go home and put what you have learned into practice; and let your work stand as an object lesson to the whole community. A man who produces an object lesson of this kind is building a living monument, that will not only be an honor to himself, and help to fill his own pocketbook, but will remain to bless the lives of many others."

ARE YOU SORE STIFF

From hard work or outdoor exercise?

ST. JACOBS OIL

Will cure after a few appli-cations, and make the muscles limber and strong.



EARS, ROEBUCK & CO., (
(Sears, Boebuck & Co. are thorough

Cows' Teats Sore? Advice Free. MOORE BROS., V.S., Albany, N. Y.

WHAT IS THE BEST SEPARATOR?

THE IMPROVED UNITED STATES. Why-Because it has the Triple Current Bowl which recovers all the cream in the milk.

Skims Perfectly Clean ; Is Very Easy to Operate.

WILLIAMSBURG, IOWA, July 28, 1898.

The Improved U. S. Separator is giving splendid satisfaction. It skims perfectly clean and is very easy to operate. We would not think of handling any milk without the Improved U. S., which I consider the best separator on the market.

J. W. THOMAS, Steward Iowa Co. Poor Farm.

Write for catalogues and further information to

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

Sharples Quality.

A good machine that does its work well, that is easily operated, that costs comparatively nothing for repairs, sells other machines for its manufacturer.

THE SAFETY HAND SEPARATOR

is best known. It makes good butter of the Sharples Quality," it lightens the dairy-maid's work, t increases the quantity of butter, it saves all the butter in the milk.

P. M. SHARPLES, BRANCHES: Toledo, O. Omaha, Neb. W. Bigin, Ill. St. Paul, Minn. Dubuque, Ia. San Francisco, Cal.

Our Dairy School.

As a graduate of the Kansas State Agricultural College, and a post-graduate student at the present time, I wish to say a few words about the dairy school; the work done in it, and the advantages to be gained from a twelve weeks' course in this line of work.

I graduated with the class of '98 and came back this fall to take up work in agriculture and bacteriology, making a specialty of dairying. My work in feeds and feeding, last winter, thoroughly convinced me that this institution gives the best training in that line of work of any institution of its kind in the West.

The dairy school was begun last winter, and has been running ever since, with the exception of the summer months. The winter term, however, is the one most largely attended, and is the one in which the most work is done in this line. The object of the dairy school is to give practical training in the feeding, selection, and breeding of the dairy cow, the care of milk, including all details of sampling, testing, etc.
The value of the different feeds and the
working out of balanced rations is taught fully, in a clear and comprehensive manner. Much stress is laid on this part of the work, for it is known to be absolutely impossible for a cow to do her best on a poorly balanced ration and under scrub conditions.

The income from many of the cows in Kansas, to-day, is very discouraging to the dairy interests of the State. In a study of creamery records worked up during the summer by the dairy depart-ment, it was found that many farmers were only getting from seven to ten dollars for the milk per cow for the entire year. Is it any wonder that the farmer who is only getting twenty dollars or twenty-five dollars, as the total income per cow, for the year says that dairying does not pay? As an example of what education in the dairying business will do, let me call your attention to the work of T. A. Borman, of Navarre. Mr. Borman has a herd of Holsteins and for the past year realized \$81.17 per head. This is the kind of work that pays, and it is just such work as this that the dairy school is trying to educate the farmer into doing. Training is also given in testing milk and butter-making.

Another point which I wish to men-tion, and one in which is needed the cooperation of every farmer and creameryman in the State, is the needs of the dairy department. There is needed a dairy building, fitted up with the proper apparatus with which to carry on more extensive work. There are also needed more cows. I appeal to the creamerymen and patrons to put their shoulder to the wheel, and, when the legislature meets, to push with all their might.

Notwithstanding the need and lack of room, this department of the college is Enquire of agent of the Chicago, Rock Samples you want—of any Silks, Dress Goods or other sampleable goods you're interested in. doing a grand good work, and I am thoroughly convinced that it will pay any farmer to come and take the course in J. A. CONOVER. the dairy school.

A Voice From the State Dairy Association.

There are thousands of young men in the State whose conditions in life might be changed to their great advantage by a little education that can be had at a trifling cost. The State Agricultural College gives a special twelve weeks course in dairying this winter, commencing January 3, 1899. Tuition is free, and the cost of attendance, exclusive of railroad fare, need not exceed \$40. The selection, breeding, feeding and care of dairy cows how to obtain the greatest amount of milk and butter from a given quantity of feed, the use of centrifugal separators and Babcock milk tests, should be understood and practiced by every intelligent farmer. There are plenty of instances where a monthly income of \$100 and up-

wards is being received from a herd of twenty to thirty dairy cows, aside from what is realized from feeding the skim-milk to calves and pigs. Formerly this income was absorbed by the calves. Now the calves are successfully reared on the skim-milk with the addition of a little corn meal, oat meal, or oil cake. It is true there are those who say, "It don't pay." The Dairy School teaches why it does not pay, and how to make it pay.

Cheap grains and roughage cannot be profitably shipped to distant markets, but they can be converted into butter and shipped to London, Liverpool and other foreign markets, the cost of transportation not exceeding 10 per cent of its value. A car-load of 24,000 pounds of butter is worth about \$5,000, while a car-load of 24,000 pounds of corn is worth less than \$100. Two years ago, when corn was worth 10 cents a bushel, one car-load of butter was worth more than 100 car-loads of corn. We can not afford to pay freight on 50 or 100 car-loads when the same value can be loaded into

one car.

The Western dairy farmer, with his cheap lands, cheap feeds, good roads and favorable climate, has a decided advanage over his competitors anywhere in the world.

Education in dairying will solve the transportation problem and settle the money question. It will minimize the losses so frequently occasioned by hot winds and droughts. It will renew the fertility of the worn-out soils, and double the value of real estate. Send the boys to the dairy school. It will teach them how to make money. Write at once to the president of the State Agricultural College, Manhattan, Kans., who will cheer fully furnish all information.

C. F. ARMSTRONG, President Kansas State Dairy Association.

Dr. Bull's Cough Syrup will make a permanent cure in all cases of cough or cold on chest or lungs. It will cure when other remedies have failed. Physicians recommend it.

Much interest is expressed in the project of the Weather Bureau to establish a set of ten or more stations in the Caribbean sea. The central station will be in either Jamaica or Cuba, and the series will extend as far as the coast of South America. The flerce hurricanes that sweep up the Atlantic coast along the Gulf Stream originate in the neighbor-hood of the West Indies, and it is expected that these new stations will prove most effective sentinel posts to forewarn

Statistics are presented in a recent number of Nature which tend to support the conclusions of Dr. Bruckner that there is a regular cycle, of about thirty-five years, in the course of which the earth experiences a change of weather from a cold and wet period, through a hot and dry period, back to a cold and wet period again. According to these statistics we are now in one of the comparatively dry periods, but early in the twentieth century the conditions of things will be reversed, and the wet years will outnumber the dry ones.

If you have any disease due to impure or impoverished blood, like scrofula, salt rheum, dyspepsia, or catarrh, you should take Hood's Sarsaparilla and be promptly cured.

Hood's Pills are easy to take, easy to operate. Cure indigestion, biliousness. 25 cents.

Holiday Rates

Over the Great Rock Island Route are low and tickets will be sold December 24, 25, 26 and 31, 1898, and January 1 and 2, 1899. All tickets good to return any

Island & Pacific Railway. John Sebastian, G. P. A., Chicago.

\$2.75 BOX RAIN COAT

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

Send No Money. Out this ad, out,
state your height and weight, state
here set taken over vest under close up under arms, due to the close up under arms, and the will
send you this coat by express, C. 0.

D., subject to examine and try to a send you are nearest express office and if found exactly
as represented and the most wonderful equal to any coatyou can buy
for fice, \$2.75, and express charges.

THIS MACKINTOSH is latest
1899 style, made from heavy waterproof,
ian color, genuine DavisQuericlosh; extra
long, double breasted, Sager velvet
collar, fancy plaid lining, waterproof
sewed, strapped and cemented, seams,
suitable for both rain or overcast, and
guaranteed greatest value ever offered
by us or any other house. For Free
Cloth Samples of Mon's Mackintoshes up
to \$5,00, and Made-to-Measure Suits
Book No. 80C. Address,
BEARS, ROEBUCK & CO., CHIOAGO, ILLE

SEARS, ROEBUCK & CO., CHIOAGO, ILLE

Sears, ROEBUCK & CO., CHIOAGO, ILLE

Control of the control

Book No. 80C. Address, SEARS, ROEBUCK & CO., OHIOAGO, ILL. (Sears, Roebuck & Co. are thereughly reliable.—Editor.)

Home Rupture Cure

Marvelous Blessing to Those Who Are Ruptured.

Cures Reported That Almost Defy Belief-Thrilling Words From Those Who Recover.

Dr. W. S. Rice of 359 S. Main St., Adams, N. Y., has the distinction of perfectly curing even the most dif-ficult ruptures of long standing. He does this with-cut causing the patient one bit of pain, absolutely



without danger and also without the loss of a mo-ment's time from the daily occupation. He uses no knife and sends his method and treatment direct to the sufferer's home where it can be easily used with-out assistance and brings immediate comfort and

If requires from three to ten weeks for the ruptured opening to heal, at the end of which time the patient can pitch hay, lift a barrel of flour, plow in the fields, or do any kind of hard work without any danger of the rupture coming back. Dr. Rice has cured hundreds of old men who had been ruptured 30 and 40 years.

dreds of old men who had been ruptured 30 and 40 years.

They write him letters that a few years ago could not have been possible, since never before has there been a certain cure for rupture. N. E. Smith, of Mound City, Kas., is one of the men whom Dr. Rice has restored to perfect health. Mr. Smith says: "Although pretty well along in years, and with ah old rupture that might have ended my days at any time, I am just as glad to be cured as though I had my life to live over again. I was a little bit doubtful about Dr. Rice's claims. I have seen so many failures of trusses and treatments that while the plan looked wonderful I had my doubts. He cured me all right, and I am willing to believe that he will anyone, I don't care how bad off they are." It will pay any ruptured man or woman or the parents of a ruptured child to write to Dr. Rice for a copy of his book which he sends free to all. And if you know of anyone else who is ruptured tell Dr. Rice to also send a book to him. Do this at once. Don't delay in a matter of such importance. Investigate this marvelous method that is guaranteed to cure rupture.

B. & B.

Ounce of Proof

that you'll save money buying your Dry Goods here is worth more to you and to this store than pounds of talk. We'll send the proof free, soon as you

An ounce of samples-or more-all the

Goods or other sampleable goods you're in-terested in.

All you need do is give us an idea of your

Goods and prices will be such convincing evidence that every woman who reads this will be glad—find it to her interest—to know about.

This store grows on merit. Merit in merchandizing means choice goods for less prices.

Special lot of half dollar Dress Goods-

25 Cents per Yard.

neat mixtures—36 to 42 inches wide—

Other choice Dress Goods, 35c., 50c., 75c., 85c.,

Silks, 50c., 65c., 75c. to \$1.50. -rich effects

rich effects
 Send for our 250 page illustrated catalogue
 you'll be surprised to see the detail of what a large Dry Goods store this is.
 Extensive assortments a feature.

BOGGS & BUHI Department G. G. Allegheny, Pa.

When writing advertisers please mention Kansas Farmer.



CEDAR HILL FARM.

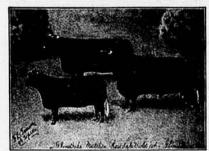
C Golden Knight 108086 by Craven Knight, out of Norton's Gold Drop, and Baron Ury 2d by Godoy, out of Mysle 50th, head the herd, which is composed of the leading families. Young bulls of fine quality for sale; also offer a choice lot of grade bull and helfer Shorthorn spring calves.

C. W. TAYLOR, Pearl, Dickinson Co., Kas.



SPRING VALLEY HEREFORDS.

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



GLENDALE SHORT-HORNS, Ottawa, Kas.

Leading Scotch and Scotch-topped American fami-lies compose the herd, headed by the Cruickshank buils, Glendon 119370, by Ambassador, dam Galan thus, 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 114552 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. 19.—Cattle—Receipts since Saturday, 4,167; calves, 91; shipped Saturday, 2,034 cattle, 51 calves. The market was strong to 100 higher. The following are representa-

DRESSED BEEF AND	SHIPPING STEERS.
No. Ave Price 191,337 85.10 71,158 4.15	No. Ave. Price 491,267 84.85
WESTER	N STEERS.
431,154 84.20 26883 3.75 114809 8.45 29683 3.15	341,111 \$3.90 11950 3.55 28 Ind791 3.30 1940 3.00
NATIVE	HEIFERS.
86 878 ±3.85 1 860 3.65	8 866 †3.65 5 800 3.25
NATIVI	E COWS.
11,310 43.70 31,050 3.25 12623 2.75 11,040 2.25	11,530 \$3.50 11,240 3.00 31,000 2.50 1860 2.20
	FEEDERS.
2 930 \$8.9) 3 983 8.25	15 990 83.75
NATIVE S	TOCKERS.
1	1 540 84.15 1 790 8.60 1 570 8.50 4 512 3.00

Hogs—Receipts since Saturday, 11,609; shipped Saturday, 109. The market was steady to a shade higher. The following are representa-

61372	#8.40	51227	83, 3714	67301	83.3714	ı
74277	8. 3714	60267	3.35	71303	8.35	ı
66306	8.35	68243	3.35	71271	3, 35	ı
78290	8.35	63329	8.35	73319	3, 35	ı
66263	3.3214		8.3214		3.8214	ı
109239	3.3214	75315	8,321/4	79244	8.3214	Г
68288	8.3214	82264	3.3214		3.3314	ı
69258	8.30	65292	3.3214	87208	8.30	ı
33244	8.30	95193	8.30	84235	3.80	ı
71221	8.271/		3.271/	80210	3.2714	ı
88186	3 2714		3.271/2	73230	3 2714	ı
79243	8.271/	38132	8.25	5176	8.25	ı
83184	8,25	83174	8.25	32234	3, 25	ı
33172	8.20	70183	8.20	50149	3.20	ı
104169	3.20	100180	3.171/4	64180	3.1714	ı
6516)		8314)	8.15	108154	3. 15	ı
3106		151106	8.00	5120	3.00	ı
1200	3.00	1400	2.75	1190	2.50	
Sheep-	-Recei	pts since	Saturd	av.2.020:s	hipped	ı

Saturday, 623. The market was steady. The

Following are representative sales:

477 Col. lms. . 75 45.35 | 26 T. lms. . . . 58 74 25 | 25 th 110 4 25 | 71 N. M. sh. . 100 4 00 442 N. M. sh. . 99 4 00 | 5 nat ewes 1 26 3.75 50 T. ewes . . 76 3.50 | 345 T. stk 52 1.25

St. Louis Live Stock

St. Louis, Dec. 19.—Cattle—Receipts, 2,800; market steady; native shipping and export steers, 42.95@5.35; light and dressed beef and butcher steers, 43.50@5.30; stockers and feeders, 230@4.50; cows and heifers, 42.00@4.35; Texas and Indian steers, \$3.00@4.35; cows and heifers, \$2.20 a 3.25.

Hogs-Receipts, 12,000; market 5c lower: pigs and lights, \$3.20@3 30; packers, \$3.30@3 40; butchers, \$3.40@3.45

Sheep—Receipts, 600: market strong; native, \$3.35@4.00; lambs, \$4.50@5.00.

Chicago Live Stock

. Chicago, Dec. 19.—Cattle—Receipts, 13,000; market steady to 10c higher; beeves, 42,90@6.00;

market steady to 10c higher; beeves, 42.90@6.00; dows and helfers, \$2.00@4.75; Texas steers, \$3.30 @4.50; stookers and feeders, 42.80@4.33.

Hogs—Receipts, 43,000; market steady to a shade higher; light, \$3.15@3.87%; mixed, \$3.25@3.45; heavy, \$3.20@3.25; yorkers, \$3.30@3.37%.

Sheep—Receipts, 20,000; market steady to 10c lower; natives, \$2.50@4.30; westerns, \$3.00@4.20; lambs, 44.00@5.55

lambs, 44.00@5.55.

Chicago Grain and Provisions

Dec. 19.	Opened	High'st	Low'st	Closing
Wh't-Dec May	6614 67%	67%	66 6736	66 67%
Corn —Dec May	34½ 35¾	65 % 34 % 35 %	65% 3414 351%	65% 34% 35%
Oats — July May	261/4	35% 26% 26%	351/a 26 265/a	35 % 26 26 %
Pork —Dec Jan May	8 10 9 45 9 721/4	8 10 9 45 9 75	8 071/4 9 371/4 9 65	8 0714 9 40 9 6714
Lard —Dec Jan	5 121/2	5 15	5 121/4	5 0714
Ribs—Dec Jan May		5 671/2	5 831/4 4 621/4 4 80	5 35 4 55 4 6214 4 8214

Kansas City Grain.

Kansas City, Dec. 19.—Wheat—Receipts here to-day were 278 cars; a week ago, 287 cars; a year ago, 282 cars. Sales by sample on track: Hard, No. 1, nominally 62½(63c; No. 2 hard, 61½) (63c; No. 4 hard, 65‰) (61½c; No. 4 hard, 65‰) (65c; No. 4 red, nominally 62‰66c; No. 4 red, nominally 62‰6c; No. 9 rejected red, 58½c. Soft, No. 2, nominally 62‰6c; No. 9 reminally 62‰6c 58@61c. Spring, No. 2, nominally 60@62c; No. 3 spring, 56@60c.

Corn-Receipts here to-day were 61 cars; a week ago, 42 cars; a year ago, 177 cars. Sales by sample on track: Mixed, No. 2, 32@32%c; No. 3 mixed, 31%c; No. 4 mixed, nominally 31c; no grade, nominally 30c. White, No. 2, nominally 32c; No. 3 white, nominally 31%c; No. 4 white, nominally 31%c; No. 4 white, nominally 31%c;

No. 4 white, nominally 31c.
Oats—Receipts here to-day were 19 cars; Week ago, 8 cars; a year ago, 15 cars. Sales by sample on track: Mixed, No. 2, 27c; No. 3 mixed, nominally 25@25½c; No. 4 mixed, nominally 25a White, No. 2, 27%@28c; No. 3 white, 27@27½c; No. 4 white, nominally 25a.

Rye—No. 2, nominally 49½c; No. 3, nominally 48½c; No. 4 nominally 49½c; No. 3, nominally 49½c; No. 4 nominally 49½c.

Rys—No. 2, nominally 49%c; No. 3, nominally 48%c; No. 4, nominally 47c.

Hay—Receipts here to-day were 51 cars; a week ago, 36 cars: a year ago, 45 cars. Quotations are: Choice prairie, 6.50@7.00; No. 1, 56.00@6.25.

Timothy, choice, \$7.00@7.25. Clover, 86.25@6.75. Alfalfa, \$6.50@7.50.

Kansas City Produce.
Kansas City, Dec. 12.—Eggs—Strictly fresh,

Butter—Extra fancy separator, 19c; firsts, 17c; seconds, 15c; dairy, fancy, 16c; country roll, 11% 2030; store packed, 11c; packing stock,

Poultry—Hens, 5c; springs, 5½c; old roost-ers, 12½c each; young roosters, 17½c; ducks, 5½c;

geese, 5%c; young turkeys, 7c; old turkeys, 6%c; pigeons, 50c per doz.

Vegetables—Navy beans, \$1.35 per bu. Lima beans, 4%c per lb. Onions, red globe, 45@50e per bu.; white globe, \$1.00 per bu. Cabbage, home grown, 40@50e per doz. Celery, 40@50e per doz. Pumpkins, \$1.00 per doz. Squash, 75e per doz. Turnips, home grown, 15@255 per bu.

Potatoes—Home grown, 30e per bu.

Potatoes-Home grown, 30c per bu

THE STRAY LIST.

FOR WEEK ENDING DECEMBER 8, 1898.

Wilson County-C. W. Isham, Clerk MULE—Taken up by A. J. Reynolds, in Cedartp. (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, if 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 years old; and one black mare pony, 6 years old with fresh harness marks when taken up; both val-ned at \$30.

Smith County-John A. Crabb, Clerk

CALVES—Taken up by Perry Frazier, in Lane tp. (P. O. Athol), October 27, 1898, two helfer and one steer calves, about 6 months old, helfers 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 Sherms tp., one light red steer, under- and upperbit in rigi ear, upperbit in left ear, indistinct sign of brand left hip, has bad lump on left jaw, 2 years old; value 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

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 redron 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. Gawhrop, in Ottumwa tp. (P. O. Burlington), November 15, 1898, one red steer, i year old, line-backed, white face and belly, branded with letter L on right hip; valued at \$15.

FOR WEEK ENDING DECEMBER 15, '98.

Lyon County-H. H. Peach, Clerk.

Dyon County—H. E. Peach, Clerk.

COW— Taken up by J. H. Wilhite, two miles southeast of Emporia, November 3, 1898, one red cow, 5
years old, dehorned, star in forehead, white tail.

STEER—By same, one one-year-old steer, part Jersey, branded H on right hip.

HEIFER—By same, one one-year-old Jersey heifer,
black face.

Hodgeman County—S. S. Kieni, Cierk.

HORSE—Taken up by Fred Sweet, in Center tp.,
November 18, 1898, one bay horse, about 7 years old,
white hind feet, no marks or brands.

MARE—By same, one bay mare, about 7 years old,
white hind feet, indescribable brand on left shoulder.

HORSE—By same, one gray horse, about 4 years
old, branded 28 on left shoulder.

MARE—By same, one bay mare, about 10 years old,
indescribable brand on left hip.

COLT—By same, one black mare suckling colt.

Pottawatomic County—A. P. Scritchfield, Clerk. Hodgeman County-S. S. Kiehl, Clerk.

Pottawatomie County-A. P. Scritchfield, Clerk.

STEER—Taken up by Frank Krouse, in Viennatp., November 1, 1898, one yellow one-year-old-steer, small crescent cut out of each ear; valued at \$20. Wabaunsee County-B. Buchli, Clerk.

MULE—Taken up by Ulysses Frank, in Farmer tp. (P. O. Alma), one bay horse mule, 14½ hands high, about 14 years old, scar on right front fetlock, mane short, tail trimmed; valued at \$20.

Montgomery County-D. S. James, Clerk. PONY—Taken up by C. W. Peck, in Parker tp., October 31, 1898, one sorrel mare pony, 4 years old, no marks or brands.

MULE—By same, one three-year-old mule, no

marks or brands.

MULE—By same, one bay mule, 4 years old, no marks or brands; the three animals valued at \$45.

Woodson County—W. O. Eades, Clerk. STEER—Taken up by Geo. Englebrecht, in Owl Creek tp. (P. O. Yates Center), November 12, 1898, one red one-year-old steer, no marks or brands; valued at \$15.

FOR WEEK ENDING DECEMBER 22, '98.

Greenwood County-Perry Clemans, Clerk. STEER—Taken up by M. A. Morher, in Salt Springs tp., one red steer, marked and branded as follows: Swallow fork and underbit in each ear, branded with a mark somewhat resembling a P on right hip; valued at \$24.

Elk County-J. A. Benson, Clerk.

STEERS—Taken up by Gust. Anderson, in Painter-hood tp. (P. O. Busby), December 2, 1898, one two-year-old red and white steer, left ear cut off, dim brand on right hip, letter S on left hip; valued at \$30. One one-year-old red steer, dehorned, no other marks or brands; valued at \$18.

Neosho County-B. W. Garvin, Clerk.

STEER-Taken up by I. B. Henry, in Big Creek tp. (P.O. Leanna, Allen county), one black steer about three years old, dehorned and ear-cropped, branded with three letter L's on right side, also with letter T reversed on left thigh. Hind legs also show barb wire scars; cash value \$20.

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 is-sued by Santa Fe Route Passenger Department.

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

Blocks of Three!

Two new subscriptions for one year for \$2, and, in addition, a renewal for one year FREE, to any old subscriber who sends two new subscriptions and \$2 in one order.

Kansas Farmer Co., Topeka, Kas.

PURE-BRED HEREFORDS

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

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

VALLEY GROVE SHORT-HORNS

THE SCOTCH BRED BULLS

Lord Mayor II2727 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 helfers bred to Laird of Linwood for sale. Also breed 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

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

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

KANSAS CITY MARKET

Owing to its Central Location, its Immense Railroad System and its Financial Resources, oriers 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
	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.

Blackleg Vaccine



Write for particulars, official indorsements and testimonials of thousands of American stockmen who have during the last three and a half years "vaccinated" their cattle and stopped their losses

PASTEUR VACCINE CO., 52 Fifth Ave., CHICAGO. N. B.—Each packet of our original and genuine Vaccine bears our trade-mark. Beware of imitations.

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

ME DEPEND THE QUALITY of ADVANCE FENCE to hold your trade. Try us on a small order and satisfy yourself. Sold direct to the farmer at wholesale prices. Circulars and special discounts free.

BLOCKS OF THREE.-Two new sub scriptions for one year for \$2, and, in addition, a renewal for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer ADVANCE FENCE CO., 41010id 8t., Peoria, Ill. | Co., Topeka, Kas.

The Poultry Hard

Conducted by C. B. TUTTLE, Excelsior Farm, Fopeka, 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 carling 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.

WHY DO CHICKENS DIE?

It is said that 55 per cent of the children die before they reach the age of five years. What proportion of the chickens hatched do we raise to maturity or marketable age? Experience teaches that the mortality is as great among chicks as it is said to be among the children.

The two principal reasons for the great mortality among little chicks are bowel disease (dysentery and diarrhea) and lice. Lice are certainly preventable, and yet thousands of young chicks are yearly sacrificed to their greed. One way in which the lice kill them is by swarming upon them in such numbers that they quite drain away the lifeblood and literally murder their innocent prey. Another way, and probably a large number of chicks are thus carried off, is by a steady drain upon the system, lowering the vitality and making the chick pe-cuitarly susceptible to chill winds and rains, resulting in looseness of the bowels, which the weakened little body cannot rally against, and the result is speedy death. It is easy to clear out the It only requires the will to do it and the application of simple remedies. The coops must be absolutely clean, the sitting hen thoroughly dusted with some good insecticide three or rour times during the period of incubation, and when the chicks are hatched grease the head and under the throat with a few drops of oil, repeating the operation every few days until the chicks are two or three weeks of age. This process should never be neglected—it is the only method that will keep young chicks free from lice. If you desire to raise chickens the lice must be destroyed; if you want lice, let them alone and they will destroy the chicks.

A friend suggests that lice must be something new, because he never knew them to harm the chicks when he was a boy. Perhaps this friend did not observe very closely when a boy, and perhaps he lived on a farm which after the lived on a fa forded abundant opportunities for the chickens to wallow in the dust and in heaps of wood ashes from early spring to late fall. Chickens which are thus privileged will take care of the funerals of a good many lice in excellent taste. The louse breathes through, small openings along the edges of its body. A sprinkling of fine dust, applied as the old hen knows how to apply it, and as the little chicks soon learn to apply it, stops up these breathing openings and smothers the lice. If chickens, privileged to indulge in dust baths as often as they like, are provided with a house and nests free from insects, they will do much of the work which must otherwise be done by the poultry keeper.

of chicks, and the principal causes of it are improper food, a chill (from wet or cold or both of them), and want of grit. It is difficult to decide which one of the three causes is most potent. With some the causes is most potent. With some the causes is most potent. With some tirely? Let us show where they are sufficiently the first place it stands to it is one, with others another, and then perior. In the first place, it stands to again all three. The nature of the food and the manner in which it is given has much to do with the health of the chick. A writer in Farm and Poultry speaks to the point when he says:

"Improper food, such as sour, filthy food, raw corn meal dough, etc., is another great evil. Many would-be chicken raisers throw down a great lot of food and leave it till the chicks have eaten it up, regardless of the fact that it soon sours in the sun, and sour food is the worst thing a chicken can eat. Not only does it supply no nourishment, but it taxes the strength already gained to rid the system of it, thus compelling the little body to draw upon its reserves to take a step backward. It is easy to see that this is poor economy if we want the chicks to grow. A very common mistake chicks to grow. A very common mistake he will raise a better and healthier lot is to mix up too much food and save that which is not fed to be fed next time. By least, he can offer settings at a price

way to sourness, if not quite sour, and by so much is a danger. It is very easy to avoid the improper and sour food rock. Simply feed so much as will be eaten up greedily, and let it be abso-lutely sweet and fresh and clean. The same rule applies to feeding chicks that we have so often recommended for feed-

ing fowls: 'Feed only what will be eaten up quickly, and eaten up clean; if any food remains uneaten five minutes after feeding they have been overfed.' 'Feed a little at a time, and feed often,' is the successful rule with chicks.

"Much dysentery in chicks, as in human beings, is caused by a chill (being chilled through) from exposure to cold winds or rains, and frequently from their getting wet in the dew on the grass in the morning. An excellent preventive of this is the shelter boards illustrated and described in May number, page 346. With those shelters to give the hen and her brood a square yard of dry ground for exercise, eating, etc., they will not go out to get wet. In the cold northwest or east winds which we have had this spring we have found those boards a very great protection, sheltering the little family from the chill blasts and keeping them warm and comfortable, and we strongly recommend them to our readers as an important aid to chicken growth and a preventive of dysentery resulting from taking cold.

"For these ills prevention is the thing, precautions taken to prevent them being worth all the remedies in the pharmacopoeia; an ounce of prevention is worth pounds and pounds of cure!"

Pure-Bred Poultry.

Fowls have been neglected so long on farms that it is a difficult matter to change this indifference for interest. We can hardly blame them for not taking any great amount of interest in what is known as the farmer's hens. They are certainly not picturesque, and with the exception of the varied and oftentimes beautiful plumage of the males, are not attractive to look at. Their useful qualities should not, as a rule, endear them to the farmer, for they are decidedly at a low ebb in this particular. Yet it is a very hard task to convince our farmer friends that their flocks can be improved. To them the neglected hen will always remain the only animal on the farm to suffer this neglect, and if they are persuaded to improve the quality we fear the same neglect will continue.

The first step which some of them

have been induced to take in the way of improvement is by buying a thoroughbred male of some known egg-producing variety (for eggs are the height of the farmer's poultry ambition), and crossing him with their common dung-

But the benefits of the first season have not been appreciated, and the crossing has not been renewed, and the result is back they go to common dunghills, and the thoroughbred male is lost in the mixture of the succeeding sea-sons. The common excuse is lack of time to "bother with the hens." Of course, those offering such an excuse and showing so much indifference are almost hopeless, and perhaps it were better to pass them by; yet as the constant dropping wears away the stone, we are con-vinced that many a farmer's stock of today is a great improvement on those of ten years ago. The vast strides made in general poultry culture have been the means of distributing a better quality Bowel disease carries off its thousands of fowl throughout the country, and the

reason that any strain of fowls carefully bred, and with, we will say, the object of egg-production as most important, can be brought to a higher degree of excellence in this particular than the common every-day dunghill. Now, can the farmer understand this reason? With him "seeing is believing;" therefore, let him buy a small flock of ten thoroughbred Plymouth Rocks, the culls of some fort deep breed by the beat he had at the comment. first-class breeder, which can be had at this season at a reasonable figure. Let him run them side by side with his dunghills and judge for himself. Of course, we expect they will be as much neglected as his common flock, but still a neglected thoroughbred will do better than a neglected dunghill.

In the second place, he will have a better carcass to offer in market, and that time the mixed food is well on its above the market quotations for fresh



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

Tuttle's Elixir

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

Tuttle's Pamily Elixir cures Rheumatism, Sprains, Bruises, etc. Samples of either Elixir free for three 2-cent stamps for postage. Fifty cents buys either Elixir of any druggist, or it will be sent direct on receipt of price. Money refunded if not satisfactory in every way. Particulars free. DR. S. A. TUTTLE, 27 Beverly Street, Boston, Mass.

eggs, and at the season when the latter are at the cheapest price. Are not these reasons sufficient? Is there not more chance for profit in such a fowl than in the scrubs and runts he is accustomed to? And bear in mind, my farmer friend, that, except for the original cost of your thoroughbreds, their care and feed will be no more than of your dunghills.— Farm News.

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.

January 25-28, 1899. Theo. Sternberg, judge.
Topeka Fanciers' Association.—L. V. Marks, Secretary, Topeka. Exhibit January 9-14, 1899. in connection with State show. 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.

Some claim that eggs will not hatch in high altitudes. Give the hens plenty of green food and there will be no trouble.

One great source of unfertile eggs is the yarding of so many hens with one cock; his vitality is exhausted and in consequence but a few of his eggs hatch.

If you will plant plum trees in your poultry yards, you will find them profitable in the way of yielding fruit as well as useful to provide shade for the fowls.

Success in poultry culture is no haphazard affair, says one, but is secured only by regular methods, and the closer the application and more careful and earnest the effort, the greater becomes

POULTRY SUPPLIES.

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

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.

THE IMPROVED

VICTOR Incubator



A BUSINESS INCUBATOR.



The Sure Hatch is Business.
Over 500 in use.

Low in price and guaranteed.
Send 2-cent stamp for castless. Send 2-cent stamp for catalogue worth dollars it ou run or want to run an incubator. It contains indress The Sure Hatch Incubator Co.

Clay Center, Neb.

> LUST AS NATURAL as the PETALUMA INCUBATOR

? all.

If a hard the proper application and distribution of heat and moisture, regulation and distribution of heat and moisture, regulation and ventilation. For 60 to 350 eggs. WE PAY REIGHT ANYWHER in the U.S. Handsome catalog free. Petaluma Incubator Co., Box 80, Petaluma, Cal.

The Hens Acknowledge It.

SUCCESSFUI



poultry house. There's not eat and lay eggs. This incubator has hatched over one million chicks during the past year. Its regulator insures uniformity of temperature. It has patent egg-tray adjuster; has fire-proof lamp. Send 6 cents for new 148-page catalogue. Finely structure of the patent egg-tray adjuster; has fire-proof lamp. Send 6 cents for new 148-page catalogue. Finely structure of the patent egg-tray adjuster, has fire-proof lamp.

DES MOINES INCUBATOR CO., Box 88. Des Moines, Iowa. *** **************



NEW NORTHWESTERN Portable Steam Feed Boiler



Adapted for general farm purposes. Absolutely safe; no danger from explosions. Water entirely surrounds firebox; no waste of fuel. Burns coal, cobs or long wood. Write

DAVIS GASOLINE ENGINE WORKS CO., WATERLOO, IOWA.

We ship from Omaha, Neb.; Kansas City or St. Louis, Mo.; Bloomington, Ill.; Indianap-olis, Ind.; Minneapolis, Minn.

KEYSTONE DEHORNING CLIPPERS The Quiet, Orderly, Gentle and Safe The guilds, or unity, addition and on animal is the one that has been dehorme. It means animal comfort and that mea animal profit. This knife cuts clean, crushing or bruising. It is quick, caus least pain. Strong and lasting. Fully we ranted. Highest awards World's Fair. Set for free circulars and prices before buyin A. C. BROSIUS, Cochranville, P

W. S. Young, McPherson, Kas., Western Agent



At the Omaha Exposition, First Prize and Gold Medal went to Page Fence. This week, thirty full cars Page Fence—solid train—goes to Nebraska farmers. FAIR Exchange? PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



Field and Hog Fence with or without bottom cable barbed. M. M. S. Poultry Fencing. Lawn and Farm Steel Gates and Posts.

UNION FENCE CO. DeKalb, III.

Port Arthur's P rosperity 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

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., XANSAS CITY, MO.

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 II.—Flat Growth and Animal Nutrition. Part III.—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: "Y-u have made the entire live stock community your debtor." This valuable book will be sent by prepaid express to any address for \$2. or with the Kansas Farmer one year for \$2.75.

Address Kansas Farmer Co.,

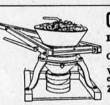
Topeka, Kas.



ONCE SHOWN, SELLS ITSELF. BLOOMFIELD MFG. CO., BLOOMFIELD, IND.
Salesmen Wanted.







O. K. FEED MILL.

Diamond Cut Steel Burrs Cheapest and Best feed mill on the market. Write for prices and cir-culars.

ZEIGLER & DALTON, Junction City, Kas,

We make Steel Windmills, Steel
Towers and Feed Grinders and are
selling them
cheaper than
the cheapest.
Our productions
are standards; are first-class in every respect and are sold on trial. Send us





PROFIT FARM BOILER With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make

amplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Ket-tles, Hog Scalders, Caldrons, ctc. 137 Send for circulars, D. R. SPERRY & Co., Batavia, Ill



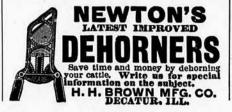




Double motion, 'mmense capacity, easy draft, enclosed gear, runs in oil which absorbs friction and wear. Big advantage over all others. Ask for particulars. STOVER MFG. CO., 535River St., Freeport, III.



only Practical Mill for farmers' use. Made sizes. Power applied direct to grinding No gears to wear, get out of order or inthe draft. The lastest grinding mill made all kinds of grain and lasts a lifetime. The Only Practical Mill for farmers' use. THE BLUE VALLEY MFG. CO., Manhattan, Kas





<u>OUR \$5.00 FEED COOKER</u>

Reliable Incubator & Brooder Co. Box

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.

In debts alone it has a shortage.

Send for free copy of "What's the Matter With Kansas?"—a new book of 96 pages of facts.

GENERAL PASSENGER OFFICE.

THE ATCHISON, TOPEKA & SANTA FE RAILWAY,

TOPEKA.

A Bunch of Keys

descriptive of the agricultural and min-eral 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 100 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 AWFORD.

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



Western trade supplied from Chicago salesroom

30 FREE TRIAL
Buy direct from Factory at Wholesale prices. Saves agents large profits, No money in advance. This Higher road, will be sold together for slip, 500, on the same terms already stated. Frace Kenwood drop head Sewing Harne Frace Kenwood drop head Se Buy direct from Factory at Wholesale
prices. Saves agents large profits.
No money in advance. This Highgrade Kenwood drop head Sewing Machine \$79.50. Equal to others sold by
agents at \$65. Arlingtons at \$14 to
\$10.50 retail value \$25 to \$50. Other
Hacklness\$,\$11.50 and \$15. All strachments FRER. Over 100,000 in use. Warranted 10 years. Catalogue and testiromals free. Write today for special
freight offer. CASH BUYERS' UNION,
158-164 W. VanBuren St., 8-64 Chicago, Ill

Administrators' Sale of Real Estate.

Pursuant to the will of the late David R. Youngs, I offer at private sale all the read 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. Well Pursuant to the will of the late David R.

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 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 102

4. Also about 101 acres of good prairie hay land, being w. hf. of nw. qr. frl. of said sec. 27, and about 24 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.

dr fiv

en

m

th

ch me di

lic

wt

up qu.

otl

of

ste th

cu

els

no SD

lic an Th

sit go

ins

the

an

da we

be

lic

let

ch

bo

ser

per

for

chi

to

Th ing

litt up

ers

lik

fre

the by

thr

it i age

has

chi

spe

oth rai

and

it u

sou

doe tax

the

tle

tha

chi

is t

wh

1400-2 Union Avenue,

MILLET CLOVERS TIMOTHY KANSAS CITY. MO. CRASS SEEDS.

is certain if you sow our Alfalfa Seed. We also sell choice qualities of Cane and Milles Seeds, Kaffir and Jerusalem Corn, etc. All crop '98. Our book, "How to Sow Alfalfa," free. McBETH & KINNISON, Garden City, Kas.

Special Want Column.

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

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

FOR RENT—Bighty acres of second bottom land, well improved, six miles northeast of Topeka. For particulars, call on or address John Rollheuser, 122 East Fourth St., Topeka, Kas.

THREE CHOICE BOARS of the Model strain and two of the Corwin strain: also, choice gilts for sale. Walter Roswurm, Beman, Morris Co., Kas.

A BARGAIN FOR QUICK BUYERS.—Pure Barred Rock cockerels, suitable for grading up farm flocks, at 60c., 75c., and early hatch \$1; also Bronze turkeys. After December 1st birds for fancy trade with Thoo. Hewes' score-yard. Mrs. F. A. Hargrave, Richmond, Kas.

SILVER SPANGLED HAMBURG COCKERELS for sale, 50c. each. Roscoe Good, Cimarren, Kas.

W. Q. HYATT, the Western live stock salesman, Carbondale, Kas. Sales made everywhere, satisfaction guaranteed, fifteen years active business. Terms: Sales under \$1,000 ten dollars. over \$1,000 one per cent. and expenses. Your patronage respectfully solicited. Write before claiming dates Reference—the best farmers and stock-raisers in the West, for whom I have made sales.

CALESMEN WANTED—Local or traveling. New inducements that put you ahead of competition. Make good wages during the slack season. Lawrence Nursery Co., Lawrence, Eas.

WANTED-Millet, cane and alfalfa seed. E. Annabil & Co., McPherson, Kas.

BARGAINS.—We have on one of our farms eight fine yearling Poland China boars that went through cholera three Lonths ago that we will sell for next ten days at \$12.50 each. They are all in fine condition and sired by Highiand Chief, Knox All Wilkes and Look At Me. Don't miss this chance. Dietrich & Spaulding, Richmond, Kas.

FOR SALE-FERRETS-White, brown, old, young trained or untrained. Write Frank Parker, V. S

SHORTHORN BULLS FOR SALE—Crulckshank-topped; bulls right, prices right. Come or write. Kellerman & Son, Mound City, Linn Co., Kas.

JACK FOR SALE.—Large; black, with white points.
Address J. C. Hume, Council Grove, Kas.

WANTED—Quotati ons on corn, your track. M. C. Hemenway, Hope, Kas.

FOR SALE CHEAP—Fine peach orchard, containing about 3,000 young Elberta trees in high state of cultivation. Will be full bearing next year. Located about five miles north of Tifton, Ga., on line of railroad, in famous peach belt. About twenty-five acres cleared and about 225 acres in pine timber. Will sell cheap and on easy terms and long time. Owner wants to sell, as he is in business in the North and has not the time to attend to it. One of the healthiest places in the South. Fine fruit and vegetable country. Address Box No. 882, Pittsburg, Pa.

WANTED—Alfalfa, cane and millet seed; also a limited quantity of Jerusalem corn seed. Correspond with F. Barteldes & Co., Lawrence, Kas.

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

FOR SALE—French Coach stallion; also small herd of choice A. J. C. C. Jerseys. Inquire of M. S. Babook, Nortonville, Kas.

BLACK LANGSHANS EXCLUSIVELY—Parent stock score high and well mated. Young stock for sale. Cockerels \$1.00 each, trios \$2.50. Mrs. T. E. 'Vhitlow, Morantown, Kas.

WANTED—Millet, Sorghum seed, Kaffir corn (red and white), Alfalfa. Send samples, give quantity. Field seed orders solicited. Kansas City Grain and Seed Co., Kansas City, Mo.

HEREFORD CATTLE.—Breeding stock for sale.

Archibald cattle a specialty. Visitors welcome
J. C. Curry, proprietor "Greenacres Farm," Quenemo,
Osage Co., Kas.

100 MERINO RAMS FOR SALE — Pure-bred eight Shropshire rams from the Champion flock at the Omaha Exposition. Address E. D. King, Bur-

WANTED—One Kansas Farmer agent in every locality to represent the paper regularly. Good inducements offered. Address Kansas Farmer Co.,

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

WANTED, AGENTS—We want an agent in every county in Kansas. Those acquainted with the farmers and threshers preferred. Liberal commission For particulars, address The Victor Oil Co., Cleveland, Ohio.

BLOCKS OF THREE.—Two new subscriptions for one year for \$2, and, in addition, a renewal for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer Co., Topeka, Kas.

CHORT-HORNS FOR SALE—Forty-six cows and b helfers, Cruickshank, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Cruickshank, Royal Prince 100646. Six bulls ready for service, sired by Young Mary bull, Glendon 119371. Theodore Saxon, 222 West Elghth St., Topeka, Kas.

MACLEAN FARMERS SUPPLY CO., Kansas City, Mo. (Between Union Depot and Stock Yards.) Sell machinery and other supplies to farmers direct, saying the consumer middlemen's profits. Send now for 1998 Spring Price List.

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

FOR SALE—A limited number of the last edition of Prof. J. C. H. Swan's great book, "The Future By the Past." Price \$1.00; postage paid until the supply is exhausted. Address Kansas Farmer Co., Topeka, Kas.

FOR SALE—Five yearling boars. Also fine line of spring boars and glits by Chief Editor 17995, Tecumseh Short-Stop 14750 and High Hadley 20992. Choice blood. Call or write. E. T. Warner, proprietor Franklin County Herd Poland-China Swine, Princeton, Kas.

FOR SALE — Pure-bred Polards and Berkshires f from weanlings up, at very low prices. O. P. Up-degraff, North Topeka, Kas.

FOR SALE—Grade Shropshire ram lambs, also fifty ewe lambs, at \$5, and 160 ewes at \$6 per head. Ad-dress E. W. Melville, Eudora, Kas.

TO STOCKMEN — Feed Mills and Corn-Shellers used as samples and at fairs, special bargains. Write or see us. Sandwich Mfg. Co., 1205 Union avenue, Kansas City, Mo.

PICHLAND HERD.—I want to close out the entire herd of Poland-China sows and herd boars, in cluding Klever's 1st Model 1824 S., What's Wanted Jr. 2d 1854, and B.'s Black U. S. 19957. The breeding and quality of these boars ought to suit anybody Come and inspect, the only way to get suited. F. W Baker, Council Grove, Morris Co., Ka

BERKSHIRES—Choice bred sows by Imported Lord Comely, and boars ready for service. Wm. B. Sutton & Son, Kas.

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

SINGLE COMB PURE WHITE LEGHORN COCK-erels for sale at \$1 each. A. F. Huntley, Paxico

COTTSWOLD RAMS FOR SALE—W. Guy McCandless, Cottonwood Falls, Kas.

WANTED TO EXCHANGE—Thepure-bred Cruick-shank bull, My Lord 116563, bred by Col. Harris; sire Imp. Spartan Hero 77862; dam Imp Lady of the Meadow (Vol. 30, p. 615), for a bure-bred Cruick shank bull—can't use him any longer in my herd. HW. McAfee, Topeka, Kas.

WE MAKE A GOOD FARMER'S SPRING WAG-on, two lazy-backs and let-down end-gate, for \$55. Warranted. We will ship on approval to re sponsible parties. Kinley & Lannan, 424-426 Jackson street, Topeka, Kas.

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. STORRS, AUCTIONEER, BURLINGAME, KAS. THIRTY years' experience. Extensive acquaintance. Correspondence solicited.

THOMAS J. CLARK,

AUCTIONEER, HOYT, KANSAS. Many years ex-perience. Extensive acquaintance. Correspond-ence solicited.

J. N. HARSHBERGER,

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

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.

HARNESS Write for illustrated catalogue. Largest Harness and Carriage house in the Northwest. NORTHWESTERN HAR-NESS & CARRIAGE CO., 172 6th St., St. Paul. Minn-

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.



I have for sale twelve Jacks, aged 3 and 4 years next spring. Their breeding is from Spanish, Kentucky and Tennessee bred Jacks and Jennies, black with white points.

L. O. HINGSTON,
Richmond, Okla.

KANSAS ECONOMY INCUBATOR Send for circular which describes my book on incubators and brooders. The book gives full details so that you can build your own incubators, brooders, incubator and brooder houses, poultry houses; also much other information on poultry, including diseases, their treatment and prevention. Price of book, \$1. Send to JACOB YOST, Lock Box 196, Arkansas City, Kas.

Lock Box 196, Arkansas City, Kas.

ANDS

sell any or all of the following properties, or for single farm nearer my home and business:
40 Acres in Barber County, Kansas.
60 "Rawlins"

160 " "Rawlins " | 160 " "Greeley " | 160 " "Cheyenne " | 154 " "Lamar " Tec. Address

E. L. GALT, Sterling, Ill. Mention this paper

Watch for Sunny Slope Advertisement.



WILD TOM 51592. The great son of the great sire, Beau Real 11055, heads the nerd.

Mrs. Kate Wilder Cross, Emporia, Kas.

CHOICE POLAND-CHINA CILTS FOR SALE.

Poland-China gilts sired by Wren 17172, Eberley's Model 2854, and Duke of Weston 18974. 1896 farrow. It want a choice young animal, send for one of these—85 to \$10. I guarantee satisfaction on this kind.

J. W. HIGGINS, JR., HOPE, KANSAS.

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



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, 1896. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 2841, Black Joe 28908, 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

Sir Charles Corwin 14520 and Harry Faultless, Jr.



We have been in the show ring for the last three years, always winning the lion's share of the premixms. If you want prise-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale Write or come and see us. We have an office in the city—Rooms 1 and 2 Firebaugh Building.

ELM BEACH FARM, Wichita, Kas., 8. C. DUNCAN, Supt.

BERKSHIRES

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

Write before buying to

MONEY.

O. P. UPDEGRAFF, TOPEKA, KS.

Nelson & 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, 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 Gosling, well and favorably known as a pre-expert judge of beef cattle, who will in the future assist us in this branch of our business.

POTATOES Sent out to be Sprouted on Shares

No experience required. Directions for sprouting free with order. Also Vineless Sweet Potatoes for sale and on shares.

T. J. SKINNER, Columbus, Kas.

FENCE. GOLD MEDAL THE

Anchor Fence Company. 1820 Grand Ave., Kansas City, Mo.

Makers of "The Anchor Clamp"—The Tie That Binds. Also

DEALERS IN WIRE FENCE MATERIAL.

[OPEN.]

Gold medal awarded to Anchor Fence at the Trans-Mississippi Exposition, Omaha, 1898. The best wire fence on the market. Mention Kansas Farmer and write for full particulars.

