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The Prize-Winning Herd of the Great West. Seven prises at the World's Fair. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 28441, Black Joe 28603, World Beater and King Hadley. FOR SALE—An extra choice lof richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly-bred sows. Inspection or correspondence invited.

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.8.

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J. D. MARSHALL, Walton, Kansas, Breeder of Poland-China hogs of the most noted strains. Miles Look-Me-Over at head of herd. 42 prizes in 5 fairs in 1900. Call, or write me your wants.

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CRESCENT HERD Has 'Em. Come and see, or write your wants

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Headed by the grand boar, Anderson's Perfect I Know, dam Anderson's Model (43611), sire Perfect I Know 19172 mated to a lot of choice selected sows of the most noted prize-winning families. A fine lot of fall and spring pigs ready to ship. Write for what you want. Safe arrival and satisfaction guaranteed.

VERDIGRIS VALLEY HERD

Large-boned, Prize-winning POLAND-CHINAS. We have for sale 6 last fall boars, 3 extra good. Also 100 spring pigs. They are of the low-down, heavy-boned, lengthy, easy-keeping kind. The practical, money-making kind of hogs. We can furnish pairs or herds not akin, and of any of the popular and prize-winning strains. Prices reasonable. Nothing but the best shipped on order.

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

FIVE POLAND-CHINA BOARS

Sired by Knox All Wilkes and out of granddaughters of Chief Tecumseh 2d ready for service. Twenty fine gilts, daughters of Knox All Wilkes, Ideal Black Chief, and Majestic Chief bred to Imperial Chief, the first prize boar at Iowa State Fair 1900. He is a grand good one. Knox All Wilkes gilts bred to Ideal Black Chief, the great yearling boar by Missouri's Black Chief, the great yearling boar by Missouri's Black Chief. The best fall pigs we ever raised.

DIETRICH & SPAULDING, Richmond, Kans. Farm one mile from station.

PURE BRED POLAND-CHINAS -- 33 For present sale, I have CHOICE SOWS,

Bred to Logan Chief 2d 24427 and Proud Teet 24655. Most of the sows are sired by the 900-Corwin I Know 18448 and Hadley U. S. 20186. 2 choice October pigs at \$8 and \$10 for the next 30 My hogs have good heads and small, fancy Come and see them or write.

JNO. BOLLIN, Kickapoo, Leavenworth Co., Kans. I ship from Leavenworth.

MAPLE GROVE REGISTERED POLAND-CHINAS

HIRAM SMITH, Breeder,

Colwich, Sedgwick County, Kansas.

Herd headed by the famous herd boar, BLACK
CHIEF (42357), and assisted by IDEAL U. S. (Vol.
XXII). I have on hand 80 serviceable boars and 85
gilts for sale at reasonable prices; quality, style, and
breeding considered. Out of 20 richly-bred sows, such
as Worldbeater's Beauty (103484), Dolly P. (105020),
Black Bessie (104244), and Banner's Pride (103706).
Inspection or correspondence invited.

SWINE.

IOLA HERD OF POLAND-CHINAS. Chief's Model 22444 at head. Young boars and glits for sale reasonable. My pigs have taken 1/2 of the prizes entered for in strong competition. A. B. Muli, iola, Ks.

CATTLE.

ENGLISH RED POLLED CATTLE—Pure-bred young stock for sale. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo. Mention this paper when writing.

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ROSEDALE HERD OF HOLSTEINS ... C. F. STONE, Proprietor. PEABODY...KANSAS.
Home of Empress Josephine 3d, champion cow of the
world. Gerben's Mechtchilde Prince at head of herd.
....Young bulls and heifers for sale....

Polled Durhams! THIS little ad. will direct you to the largest as well as the best Scotch bred Polled Durham herd of cattle in the United States. EF 150 fine Duroc-Jersey pigs. F. F. FAILOR, NEWTON, IOWA.

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A few choicely bred young bulls—spring yearlings for sale at very reasonable prices; also 2 Shropshire, and 1 cross bred Shropshire-Cotswold buck. Address JAMES C. STONE, LEAVENWORTH, KANSAS.

RED POLLED CATTLE

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Proprietor, Importer, and Breeder.
Cresco, Howard Co., Ia.

Sycamore Springs Stock Farm

SHORTHORNS. H. M. HILL, Proprietor, La Fontaine, Kans.

All stock reserved for the Gowdy, Wolf & Son, and Hill sale at Kansas City, November 20, 1900. Personal inspection of our sale draft and of herd invited. Correspondence solicited.

...SILVER CREEK HERD...

SHORTHORN CATTLE.

GWENDOLINE'S PRINCE 130913 in service, a son of the \$1,100 cow, Gwendoline 5th. Best Scotch, Bates, and American families represented. Also breed high-class Duroc-Jersey swine. Can ship on Santa Fe, Frisco, and Missouri Pacific R. R. J. F. STODDER, Burden, Cowley Co., Kans.



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Our standard is the standard of the breed. STEELE BROS., Belvoir, Douglas Co., Kans.

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Herd bull, Sir Knight 124403. Herd boars, Black J. S. 2d 22582 S., and Sunflower Black Chief 23603. Representative stock for sale. Address ANDREW PRINGLE, Harveyville, Waubaunsee Co., Kans.

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ESTABLISHED 1884.

Sires in Service: Shadeland Dean 51364. . . Oakwood Hesiod 3d 87527. Fifty breeding C. B. SMITH, Fayette, Mo.

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Edgewood Polled Durhams. The largest and best bred herd west of the Mississippi river. Scotch blood a specialty. Bulls for sale. Address...

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1,300 acres. Pure bred stock only. Herefords, Poland-Chinas, Light Brahmas, and Belgian hares. Stock of all kinds for sale. Pigs, \$5; pedigreed hares, \$2. O. B. WHITAKER, Proprietor, Lincoln, Kans.

Maple Leaf Herd of THOROUGHBRED -- SHORTHORN -- CATTLE, AND POLAND-CHINA SWINE.

JAMES A. WATKINS, Whiting, Kans. Farm is two miles sour of Rock Island depot.

BREED THE HORNS OFF BY USING A RED POLLED BULL.

CHAS. FOSTER & SON, Butter Co., Kans. Breeders of Red Polled cattle. Herd headed by Powerful 4682. Pure-bred and grades for sale. Also, prize-winning Light Brahmas.

PIONEER STOCK FARM. J. H. McALLISTER, Proprietor.

-BREEDER OF-

PURE BRED GALLOWAY CATTLE, POLAND-CHINA AND CHESTER WHITE HOGS, JACKS AND JENNETS.

STANDARD BRED STALLIONS AND MARES.
AGEE, HOLT COUNTY, NEBRASKA.

MT. PLEASANT

HERD OF SHORTHORNS

Herd headed by Acomb Duke 18th 142177.
Herd composed of Young Marys and Galateas.
Young Bulls for sale. Sired by Phyllis Duke
131838.

A. M. ASHCROFT, Atchison, Kan.

R. D. No. 3. BILL BROOK HERD

REGIS- SHORTHORN CATTLE.

Headed by Iowa Scotchman 2d. Young bulls and heifers always for sale. Write for prices, and address

RECORDED HEREFORD BULLS FOR SALE.

The get of Marmion 66646 and Anxiety Wilton A-45611, 10 to 24 months old. These bulls are large, and good individuals, and of the best of breeding. Inspection invited.

FRED COWMAN, Lost Springs, Kans.

Breeder (not dealer) of HEREFORD CATTLE.

Herefords. Registered

THOS. EVANS, Breeder, Hartford, Lyon County, - - - Kansas.

SPECIAL OFFERINGS :-FOR SALE—Seventeen bull and 15 heifer calves, one 3-year-old imported bull, one year-ling bull, and 5 cows.

PURE BATES SHORTHORNS.



M. W. ANDERSON, Independence, Mo.

Wild Eyes, Craggs, Peach Blossoms, Duchess Craggs, Harts, Barringtons, and Bracelet. 166th Duke of Wildwood 13671 at head of herd. Can sell young fe-males, bred or open.

CATTLE.

125

RAVENSWOOD :: SHORTHORNS

=125= C. E. LEONARD, - - BELLAIR, MO.

Males and Females For Sale. Inspection especially invited. Lavender Viscount 124755, the champion bull of the National Show at Kansas City heads the herd. R. R. and Telephone Station, Bunceton Mo.

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V. R. ELLIS, Gardner, Kansas.

Cruickshank Top Crosses on Best American families. Sir Charming 4th at head of herd. Bulls of all ages—solid reds and roams—by Sir Charming 4th and by Godwin 115476 (the present sire at Liuwood) for sale. A few young bulls of serviceable age for sale.

H. M. Satzler,

Burlingame, Kansas,BREEDER OF

HEREFORD CATTLE, BER SHIRE SWINE, COTSWOLD SHEEP. STOCK FOR SALE.

CLOVER CLIFF FARM.



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

Elmdale, Chase County, Kansas.

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Herd Bulls, Godoy 115675, Royal Red 150066

Can offer 30 registered Shorthorn bulls from 12 to 30 months old. Also 30 head bulls from 6 to 12 months old. Well Worth to Examine Them.

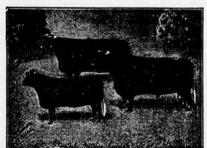
P. HARNED, Vermont, Cooper Co., Mo. On Missouri Pacific Railroad.

H. R. LITTLE,

HOPE, DICKINSON CO., KANS., Breeds Only the Best Pure-bred

SHORTHORN CATTLE.

The herd numbers 136, headed by ROYAL CROWN 12698, a pure Cruickshank, assisted by Sharon Lavender 143002... For Sale just now 16 Bulls of serviceable age, and 12 Bull Calves. Farm 1/2 miles from town. Can ship on Mo. Pacific, R. I., or Santa Fe. Foundation stock selected from 3 of the great herds of Ohio.



GLENDALE SHORTHORNS, Ottawa, Kans

Leading Scotch and Scotch-topped American milies compose the herd, headed by the wickshank buil, Scotland's Charm 19784, by ps. Lavender Lad, dam by Imp. Baron Cruick-ank. Twenty buils for sale. C. F. WOLFE & SON, Proprietors.

LOCKRIDGE STOCK FARM

GEO. CHANNON, Proprietor Hope, Dickinson County, Kansas

BREEDER OF PURE-BRED

SHORTHORN CATTLE,

POLAND-CHINA SWINE,

PLYMOUTH ROCK POULTRY.

FOR SALE: The young Shorthorn herd bull, Glendower 2d, a half brother to Bothwell's heifer, Strawberry, that sold at the Kansas City Sale for \$700. Will also sell a few young bulls and heifers.

Now offer in Poland Chinas 40 spring gilts, bred or open, and 100 fall pigs. ... Also 200 Plymouth Rock cockerels. Prices very reasonable as feed is too scarce to carry so many over winter. . : : :

. CATTLE.

POWELL'S HEREFORDS.

Sires in Service: JUDGE VICTOR 62246, ROYAL BOY 82820.

Special Offering: Three very choice bull calves, extra large, growthy fellows in good W. S. POWELL, Moline, Elk Co. Kans.

SHEEP.

.. AMERICAN..

Angora Goat Breeders **ASSOCIATION**

For all information as to registering, etc., address W. T. McINTIRE. Secretary, 227 Live Stock Exchange KANSAS CITY, MO

HORSES AND MULES.



VASTLY IN THE LEAD. PERCHERONS, FRENCH COACHERS, SHIRES.

ON HAND, HOME-BRED AND IMPORTED 270 STALLIONS, 235 MARES.

The greatest collection of stallions ever brought together. Our two large, recent importations for this year included the Principal Prize Winners at the

WORLD'S EXPOSITION, PARIS, and at the Government Shows at Amiens and Mortagne, and the Tops, first choice, purchased from the leading stude of France and England.

The superiority of the Oaklawn Percherons was

INTERNATIONAL LIVE-STOCK EXPOSITION

at Chicago, December, 1900, pronounced by press and public the greatest live stock exhibition ever seen, where Oaklawn's Exhibit was awarded seen, where Oakkawn's Exhibit was awarded Three 1st Prizes, three 2d Prizes, three 3d Prizes, two 4th Prizes and two 5th Prizes in the three stallion classes; Championship, stallion, any age; Championship, mare, any age; 1st and 2d Prizes for collections; \$100 Gold Medal, best group, five stallions; \$100 Gold Medal, best group, three mares.

Catalogen amplication Prices reseable

Catalog on application. Prices reasonable.

DUNHAM, FLETCHER & COLEMAN, WAYNE, DU PAGE CO., ILLINOIS.

Leavenworth County ...



JACK FARM. Twenty-five Jacks and Jennets for sale; also a registered trot-ling-bred stallion, 1614 hands high, weight 1,300 pounds.

O. J. CORSON.... Potter, Kansas

SNYDER BROTHERS, WINFIELD, KANSAS.

.....BREEDERS OF.....

SHIRE, AND PERCHERON HORSES, SHORTHORN, AND POLLED DURHAM CATTLE, POLAND-CHINA SWINE.

BREEDING STOCK FOR SALE.

LIVE STOCK AUCTIONEERS.

JAS. W. SPARKS LIVE STOCK AUCTIONEER Marshall, Mo.

Iave been, and am now, booked for the be sales of high-class stock held in America Write me before claiming dates.

R. EDMONSON (late of Lexington, Ky.) and Tattersalls (of Chicago, limited), now located at 208 Sheldley Bullding, Kansas City, Mo., offers his services as Live Stock Auctioneer. All the Herd and Stud books. Wire before fixing dates.

GEO. R. HUNCATE, The Reliable AUCTIONEER Son of A. J. Hungate, who spent 45

years as a prominent Auctioneer I have sold more cattle during the past year than any man in Kansas. Sales made on the per cent plan. Correspondence solicited and promptly answered. Address, Sixth and Quincy Streets, Topeka, Kans.



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Col. J. N. Harshberger,

LAWRENCE, KANS.

Special attention given to selling all kinds of pedi-greed stock, also large sales of graded stock. Terms reasonable. Corre-spondence solicited. Man-tion Kansas Farmer.



SUNNY SLOPE HEREFORDS.

155 HEAD FOR SALE—Consisting of the Imported herd built, Sentinel, 7 2-year-old buils, 73 buils from 8 to 16 menths old, 60 yearling helfers, and 10 cows. - - - - -

MY ANNUAL SALE—Will be held at Kanas City in connection with W. S. Van Natta, and Boots & March February 28 to March 1, 1901, when 160 head will be sold from the three herds at auction.

C. A. STANNARD, - - - Emporia, Kansas.

SCOTT & MARCH,

..... BREEDERS OF PURE BRED.....

EREFOR

BELTON, CASS COUNTY, MO.

BULLS in service, HESIOD 29th 66304; Imp. RODERICK 80155; MONITOR 58875, EXPANSION 93652, FRISCOE 93674, FULTON ADAMS 11th 83731. HESIOD 29TH COME

Twenty-five miles south of Kansas City on Frieco, Fort Scott & Memphis and K. C., P. & G. Rati



...GUDGELL & SIMPSON...

INDEPENDENCE, MO.,

..... BREEDERS AND IMPORTERS OF

EREFORDS.

One of the oldest and largest herds in America.

ANXIETY 4th blood and type prevail.

BOTH SEXES, IN LARGE OR SMALL LOTS ALWAYS FOR SALE.

VALLEY GROVE SHORTHORNS.

THE SCOTCH BRED BULLS

Lord Mayor 112727, and Laird of Linwood 127149 Head of the Herd.

LORD MAYOR was by the Baron Veltor 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. Lerd 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.

T. P. BABST, Proprietor, Dover, Shawnee Co., Kans.



HERD BULLS: BARON URY 2d 124970. LAFITTE 119915.

I have 12 fine young butls, ranging from 5 to 20 months, both in solid red and red roans for sale. Three of these are ex-...ceptionally fine...

C. W. TAYLOR, - - Pearl, Kansas.

GALLOWAYS.

Largest Herd of Registered Galloways in Kansas. Young bulls, cows, and heifers for sale.

W. THRALL, Eureka, Kans.



Columbus Herefords

Herd headed by COLUMBUS 51875, Hestod 17th 56467, and Weston Stamp 15th 108353. Columbus is the sire of the \$7,500 Dale, the \$5,050 Columbus 17th, the \$2,000 Columbus 12th, the \$1,250 Viola. Five of Columbus get, of our breeding, sold for \$7,140 or an average per head of \$1,428. Young stock of both sexes for sale sired by Columbus, and Hestod 17th.

BENTON GABBERT & SON, Dearborn, Mo. Maple Leaf; Chicago, Rock Island & Pacific Railroads.

T. K. TOMSON & SONS,

ELDERLAWN HERD OF SHORTHORNS DOVER, SHAWNEE COUNTY, KANSAS.

GALLANT KNIGHT 124463 in service. Females are pure Scotch and Scotch-topped on the best American families. 100 head in herd. A choice lot of young stock for sale. Correspondence and inspection invited.

250 HIGH GRADE ANGORA DOES

All pure white, thin pendulent ears. : : Will sell very cheap if taken soon. W. T. McINTIRE, Live Stock Exchange, - - Kansas City, Mo.

Characteristics and Needs of the Several Wheat Districts of the United States.

MARC A. CARLETON, U. S. DEPARTMENT OF AGRICULTURE.

From the standpoint of investiga-tions so far made concerning the con-ditions of wheat environments and the adaptations of varieties in the United States, the country may be considered as divided into eight wheat districts, each possessing characteristics quite different from those of the others. In fact, in some cases they are as different ract, in some cases they are as different from each other as though they lay in different continents. They are as follows: (1) The soft wheat district, including mainly the New England and Middle States; (2) the semi-hard winter wheat district, including the North Central States; (2) the southern wheat district. wheat district, including the North Central States; (3) the southern wheat district, including the northern part of the Southern States; (4) the hard spring wheat district, including the Northern States of the plains; (5) the hard winter wheat district, including the Middle States of the Plains; (6) the durum wheat district including a part of the wheat district, including a part of the Southern states of the Plains; (7) the irrigated wheat district, including in general the Scattered portions of wheat area in the Rocky Mountain and Basin

tion of hard, glutinous wheats. Moreover, the climate is against their production, being too moist and cool in summer. Nevertheless in New York and Pennsylvania, by means of the plentiful application of fertilizers and the unusual attention paid to seed selection practiced in this region, a large amount of good wheat is annually grown in proportion to the entire area. Twenty-five or thirty years ago, when the area given to wheat culture in this country was much more limited than at present, and when the hard red wheats were not so popular, New York had a deservedly great reputation both for her wheat production and tion both for her wheat production and flour industry. And even at present, if there is a diminution of this reputation, it is not because of any actual decrease in wheat and flour production, but because of the overshadowing increase in districts more favorably conditioned or situated, though we should add to this the fact that there has been a corresponding change in the kind of wheat used for bread-making. The fact that so high a standard is maintained in the wheats of this region in the face of adverse natural conditions, is strong proof of the importance of intelligent wheat culture, particularly in respect to seed selection and the proper treatin wheat and flour production, but be-cause of the overshadowing increase in

regions of the United States. The wheats grown are generally semihard, rather reddish in color, and either bald or bearded. Throughout this district, as well as over a large portion of the country, there has been a decided tendency during the last twenty years or more toward the use of harder red wheats and also of a larger proportion of winter compared with spring varieties. The increasing use of the harder wheats has been coincident with the advent of the roller-milling process, but not necessarily a forced result of regions of the United States. but not necessarily a forced result of the latter, as some have interred. The the latter, as some have interred. The two have worked together. The proportion of such wheats now grown is much larger than ten yars ago. Especially is this true in Michigan, where special impetus has been given to such improvements through the efforts of Prof. R. C. Kedzie assisted by the millers of

soil is also generally not of the best for soil is also generally not of the best for such purposes. Rust is always very bad, because of the constantly damp, warm climate. In spite of these difficulties there is no doubt that with sufficient effort the wheat industry might be very materially improved. Just recently there has been much interest awakened in the possibilities of successful wheat culture, particularly in Georgia and South Carolina. This increasing interest in the matter finally resulted in the calling together of a convention at Macon, Ga., in July, 1899, convention at Macon, Ga., in July, 1899, when it was unanimously decided that Georgia can very easily and should supply her own demands for wheat for bread-making. Many members of the convention gave very favorable testimony regarding their own experiences in wheat growing during the past year. Probably one of the greatest obstacles in the way of profitable wheat raising in portions of the South is the lack of good flouring mills, much of the grinding being at present performed by the most primitive of gristmills. With a continued increase in wheat acreage there will perhaps be a corresponding increase in the number of first-class mills constructed.

mills constructed.

On account of the severe rust attacks which occur in this district it is



IMPORTED PERCHERON STALLION CASTELAR, 25048 (42688).

Winner first prize, World's Exposition, Paris, 1900. Winner first prize in class, and Championship, all ages, International Live Stock Exposition, Chicago, 1900. Property of Dunham, Fletcher & Coleman, Wayne, Du Page County, Illinois.

States; and (8) the white wheat district, including the larger part of the Pacific Coast States. Just as these districts differ from each other in their characteristics, so do all the particular needs of the wheat grower in each differ widely from those of other dis-

GENERAL NEEDS OF ALL THE DISTRICTS. Before describing these districts separately, it will be well to note briefly two general needs common to all of them. These are (1) greater yielding power and (2) earlier maturity. In the writer's experience these are found to be ever present needs, not only in all our own states, but in all wheat coun-

SOFT WHEAT DISTRICT.

In this district are included approximately New York, Pennsylvania, New Jersey, Maryland, Delaware, and portions of Virginia, West Virginia, and eastern Kentucky; also such portions of New England as produce wheat to any considerable extent. The region is any considerable extent. The region is characterized on the whole by the production of rather soft wheats, containing a large amount proportionally of starch, though occasionally they incline to semihard. The color of the grain is usually yellowish white or amber but competings with a seminary continuous series and declarate the seminary continuous series and declarate the seminary series and seminary series are series and seminary series and seminary ber, but sometimes quite reddish. The soil, especially if not heavily fertilized, does not possess the necessary amount part of Wisconsin. It produces a wheat of alkali, prosphate, and humified or-ganic matter required for the produc-

below what it should be.

In the most northern portions of this district spring sowing is almost entirely practiced, and there is a need for hardy winter sorts which will be able to extend the winter-wheat area farther northward. In some localities rust is occasionally very injurious, the black stem rust sometimes completely stroying the crop. Early maturing and rust resistant sorts are therefore desirable for escaping or overcoming the attacks of this parasite.

SUMMARY OF CONDITIONS AND NEEDS OF THE DISTRICT.

(1) Chief varieties now grown: Fultz, Early Genesee Giant, Jones's Jones's Winter Fife, Red Wonder, Gold Coin, Fulcaster, Longberry, Mediterranean, Early Red Clawson, Blue Stem.

Average yield per acre, about

(2) Average yield per acre, about 14% bushels.
(3) Needs of the grower: (a) Harder-grained, more glutionus varieties.
(b) Hardier winter varieties for the most northern portions. (c) Earlier maturity. (d) Rust resistance.

SEMIHARD WINTER WHEAT DISTRICT.

In this district we may include Ohio, Indiana, Illinois, Michigan, and a small

ment of the soil. In some localities of this district the standard is considerably above what one would expect, while in some other districts it is far there is still a demand for hard red wheats, and in the northern portion of the region for hardier winter varieties.

The black stem rust is sometimes very destructive in these states, particularly in the lower, moist, and timbered portions of Ohio, Indiana, and Michigan. Hence there is great demand also

SUMMARY OF CONDITIONS AND NEEDS OF THE DISTRICT.

(1) Chief varieties now grown: Fultz, Rudy, Early Red Clawson, Poole, Valley, Nigger, Dawson's Golden Chaff.
(2) Present average yield per acre,

about 14 bushels. (3) Present needs of the district: (a) Hardiness of grain. (b) Rust resistance. (c) Hardy winter varieties. SOUTHERN WHEAT DISTRICT.

In area this district includes the larger portion of Kentucky, Virginia, West Virginia, and North Carolina, all of Tennessee, and portions of South Carolina, Georgia, Alabama, Arkansas, and Missouri. The annual production of wheat is comparatively small, and is furnished principally by Kentucky, Missouri, Tennessee, and Virginia. In the greater portion of the region the combination of great rainfall with mild of medium quality, and on the whole temperature is not conducive to the is one of the most important cereal greatest success in wheat growing. The

are really not many early maturing wheats grown in this country, and of the early foreign varieties already tested none have yet proved to be sufficiently hardy. Canning Downs, an early Australian sort, winterkilled even in so mild a region as Mississippi. However, there has not been a sufficient number of trials of such varieties, and the different experiments have not been often enough repeated to give reliable results. As to the matter of rust resistance, experiments made in Louisiana showed that hard red wheats, including a number of Russian origin, resisted rust the best. In Mississippi two Australian varieties, Beloturka and Defiance, were quite rust resistant, while varieties obtained from England rusted very badly.

Occasionally wheat is much injured in the northern portion of this region by late spring frosts. It is on such occasions that late-maturing wheats and late-sown crops may have the advantage, since those ripening early are likely to be caught by the frost just at blooming time and be prevented from "filling out," while the later ripening crops, blooming after the frost, escape such injury. It seems possible, how-ever, to grow varieties that will resist the action of these frosts, and there-

(Continued on page 42.)

Agricultural Matters.

Selecting Seed Wheat.

EDITOR KANSAS FARMER:—I have lately seen an article in the Chicago Record, apparently from Abilene, Kans., the opening sentence of which is as follows: "The farmers of the Kansas follows: "The farmers of the Kansas wheat belt are much interested in a movement for pure seed-wheat which has been started by the millers and grain dealers." The writer of that article then goes on the recount the proposition to import pure seed wheat from southern Russia to renew their seed, which is thought to have deteriorated. Now this deterioration may be due to several causes, one of which is no doubt the common practice of the ordinary farmer to sow unselected seed, more or less impure, from year to year. No doubt that is one of the most potent causes. If the Kansas farmer wants pure seed all that he needs to do is to clean his wheat; if he wants pure seed of a good quality all he has to do is to clean and select his from his own wheat. If he persistently do this year If he will year he will find that his wheat will not deteriorate in quality, but that on the contrary it will improve in quality and his crop will be greater in quantity as well. Machinery is on the market with

which any farmer can rapidly and with unerring exactness select from any sort or kind of small grain the very largest, heaviest, and most potent for his sow 309 Richard Block, Lincoln, Neb.

Crop Estimates by the Department of Agriculture.

The statistician of the Department of Agriculture has made public the esti-mate of the United States wheat crop at 522,229,505 bushels, the area actually at 522,229,505 bushels, the area actually harvested being 42,495,385 acres, and the average yield per acre 12.29 bushels. The production of winter wheat is estimated at 350,025,409 bushels, and that of spring wheat at 172,204,096 bushels, the area actually harvested being 26,235,897 acres in the former case and 16,259,488 acres in the latter. The winter wheat acreage totally abandoned in ter wheat acreage totally abandoned in Ohio, Michigan, Indiana and Illinois is finally placed at 3,522,787 acres, and the spring wheat acreage totally abandoned in North Dakota and South Dakota at 1,793,467 acres.

The extraordinarily rapid rate at which the winter wheat acreage of Nebraska is gaining upon the spring wheat acreage of that state has necessitated a special investigation of the relative extent to which the two varieties were grown during the past year. The result of the investigation is that while no change is called for in the total wheat figures of the state, 590,575 acres have been added to the winter wheat column at the expense of the spring variety. The newly seeded area of winter wheat is estimated at 30,262,564 acres. While this acreage is slightly greater than that sown in the fall of 1899, as estimated at the time, it, is 600,654 acres less than the area that was actually sown, the discrepancy being due to that remarkable rapid development of winter wheat growing in Nebraska, with which, as above stated, the De-partment's reports had failed to keep pace.

A comparison of the newly seeded acreage with that of the fall of 1899 shows that of the eleven states and territories that sowed 1,000,000 acres or upward with winter wheat one year ago, Pennsylvania, Missouri, Kansas, Cali-fornia and Oklahoma report an increase amounting to 971,704 acres, and Ohio, Michigan, Indiana, Illinois, Texas and Tennessee a decrease of 1,780,191 acres. The average condition of the growing crop on December 1 was 97.1 per cent of the normal. There are many complaints of the Hessian fly, but the low condition figures reported from Ohio, Michigan, Kentucky and Tennessee, 86, 80, 87, and 84 per cent respectively, are fully offset by the exceptionally high condition reported from Kansas, Missouri, California, Oklahoma and other states, in all of which it is about nor-

The production of corn in 1900 is estimated at 2,105,102,516 bushels; oats, 800,125,989 bushels; barley, 58,925,833 bushels; rye, 23,995,927 bushels; buckwheat, 9,566,966 bushels; potatoes, 210,926,897 bushels; and hay, 50,110,906 tons. The area from which these crops were gathered as follows in acres: were gathered as follows in acres: Corn, 83,320,873; oats, 27,364,705; barley, 2,894,282; rye, 1,591,326; buckwheat, 637,930; potatoes, 2,611,054; and hay, 39,132,890.

oats crop has only once been exceeded. On the other hand, the barley and rye crops are the smallest, with one exception in each case, since 1887. The buckwheat crop is the smallest since 1883, and the hay crop the smallest with one exception, since 1888.

The following summary shows this and last year's wheat, corn and oats crop in the United States:

crop in the United	1900. Bushels.	1899. Bushe
Wheat, winter Wheat, spring Total wheat Corn	172,204,096 522,229,505 2,105,102,516	296,675, 250,629, 547,304, 2,078,144, 796,178,6

The Corn Crop of the World. CROP REPORTER.

Corn, if its adaptation to civilized uses be conceded to date from the discovery of America, was the last of the world's great grain crops to be brought under the dominion of civilized agri-culture. The rapid expansion of its culture on the continent of its probable origin since that time, especially during the century just closed, has been one of the most characteristic features of the growth and development of the Western Hemisphere. Cultivated with increasing areas in every country of North, Central and South America, even in the southern part of the British Possessions in North America, it has become, in a manner, typical of the progress of western civilization; and a suggestive significance attaches to the fact that, in those countries of this continent whose development has been the most marked, the production of corn has reached its greatest proportions.

THE EXTENT OF CORN CULTURE.

The limitations which climate has placed upon the culture of this product presumably indigenous to a semi-tropical zone, together with an inexplicable prejudice among some foreign nations against its use as a human food, have played an important part in preventing a somewhat similarly rap extension of its culture throughout the civilized world. But, the process of acclimatiza-tion to which the plant so readily responds and the dissemination of information among foreign nations as to its great economic value as a food for both man and domestic animals-have, among other causes, gradually brought the crop into considerable favor abroad, and the culture of corn is to-day pursued more or less extensively in some portions of all the great continental divisions of the earth's surface. To citizens of the United States, where threefourths of the entire corn crop of the world is produced, it is gratifying to note that statistics of production for a series of years from all countries for which such figures are obtainable show that the world's production of corn, though exceeded occasionally by that of wheat and with more frequency with that of oats, has now attained such magnitude that in some years it constitutes in quantity the world's greatest cereal crop.

THE AMOUNT OF THE CROP.

Useful official figures from the principal corn producing countries are now for the first time available for making an estimate of the quantity of corn produced in the world in the calendar year, From a comparative statement published in the Crop Reporter, giving the world's crop from 1895 to 1899, it is apparent that the aggregate for the last-named year was 2,723,015,000 bushels, an increase of 67,522,000 bushels over the crop of 1898 and of 150,421,000 bushels over that of 1897, but a decrease of 231,420,000 bushels from the crop of 1896 and 101,330,000 bushels from that of 1895.

The average annual production of corn in the world for the five years enumerated in the tabulated statement was 2,756,057,000 bushels; and the preëminence of the Western Hemisphere as a corn producer is excellently illustrated by the fact that its average production for the same period was over 82 per cent of the world's average production or, stated in full, 2,269,380,000 bushels.

There is an obvious lack of absolute completeness in corn statistics of the Western Hemisphere, due to an inability to obtain either official or commercial figures from Central America, and from some countries of South America, in which countries corn is known to be the chief article in the dietary of the masses; but, the omission is unavoidable, and, from a commercial point of view at least, it affects but little the interest and significance of the statement.

THE UNITED STATES' PORTION. The strikingly characteristic feature

A Month's Test Free The corn crop of 1900 was one of the four largest ever gathered, while the express paid. Send no money. Pay \$5.60 if cured.

of the corn crop of the Western Hemisphere, and to an almost equal extent of the corn crop of the world, is the large proportion of the crop produced in the United States. The average production of this republic during the five years-1895 to 1899-has constituted about 90 per cent of the average product of the Western Hemisphere and almost exactly 75 per cent of the average crop of the world. The corn crop of the United States has within the last quarter of a century attained a mag-nitude which makes it more than double in quantity any other single cereal crop of this or any other nation of the world.

EUROPE'S PORTION.

Second in importance as a corn producer, but rather in an absolute than in a relative sense, is the continent of Europe. Confined by climatic limita-tions to the southern part of the continent, principally to countries and por-tions of countries lying between the forty-eighth parallel of north latitude and the coastal boundary on the south, the crop has within these limits become of notable importance. In Austria-Hungary, the second corn-producing country of the world, and in Roumania, it is the principal cereal crop. In portions of southern France, in Spain, Portugal, Italy, Servia, Bulgaria, and in the southern part of Russia, it has become an integral part of agriculture. The average annual crop of the European continent for the five years ending with 1899 was 441,426,000 bushels, about 16 per cent of the average crop of the world. In 1899, owing to a drought which prevailed during a critical season of the year in the Danubian countries, but notably in Roumania, Bulgaria, and south-western Russia, the European crop showed a marked falling off, and amounted to only 389,332,000 bushels, a decrease of 52,094,000 bushels from the five-year average, and of 102,342,000 bushels from the large crop of 1898. That 16 per cent, however, represents fairly the importance of Europe as a contributor to the world's supply, is indicated by the fact that that continent's average production for the four preceding years was almost exactly the same percentage of the world's crop for that

quadrennial period.

The corn crop of the few producing countries of other continents is of little comparative, though of considerable local, importance. The following table, giving the percentages of the corn crop of the world produced on each of the five continents, illustrates their relative importance in the culture of this cereal. Statistics of yield from Asia, where, in parts of India at least, corn is known to e a popular food product, are unobtain-

Percentages of world's crop by continents. Continents. 1895. 1896. 1897. P. ct. P. ct. P. ct. 80.5 3.2 14.8 1 2 0.3 N. America.... 79.3 S. America.... 3.1 Europe...... 16.0 79.4 2.0 16.7 77.3 26 18 4 Africa.... 13 Australia..... 0.3 0.4 0.4 1.2 0.4 Total..... 100.0 100.0 100.0 100.0 100.0

Hereford Cattle Sale.

The attention of the reader is called to the public sale announcement found elsewhere in this issue maa by one of the most successful breeders of the whitefaces known within the history of the Hereford breed of cattle, of 200 head of America's best at public auction, Kansas City, January 22, 23, 24, and 25,

Those familiar with the success of the breed since the coming to America, nearly a century ago, doubless will, after noting the individual history that belongs to the 200 head that will be offered without reserve to the highest bidder, conclude that this sale ought to and will bring together all up-to-date and progressive beef cattle breeders regardless of breed preferences or locality .

Those that are unacquainted with the individual and collective merits that come with this lot of cattle or with the English and American history of the breed in the competitive show rings, whether between the whitefaces themselves or with the best of the other beef breeds, will find on investigation that this offering combines all the merits possible as claimed for it and is indeed most fittingly suited to open the 20th century's history of improved beef

The promoter of this sale, Mr. So tham, familiar with the breed from his early youth up and following in the footsteps of his father who was born to the whiteface manor in Herefordshire, England, has intelligently and persistently advocated throughout the two score years of his life's experience the score years of his life's experience the mertis of the breed of his choice, be- drove's signature is on each box. 25 cents.

akes short roads. nd light loads. ood for everything that runs on wheels. Sold Everywhere. Made by STANDARD OIL CO.

lieving in "individual merit by inherand that to have the best one must necessarily begin right and firmly resolve to intelligently stay right.

In order that the offering might be of sufficient magnitude to attract the prospective buyer and interest the beef cattle breeders it will be observed in reading the announcement that the cattle comprising the offering other than the 50 head of Weavergrace bred animals come from the most noted of herds and possess blood and prize-winning history the peer of any known to the breed. That this is true the reader is cordially invited to note the pointers as found in the announcement and write for free copies of the sale catalogue wherein will be found such facts as is needed to confirm the foregoing statements and assure all interested in better beef cattle of the great importance of this com-

Gossip About Stock.

Go and see M. L. Ayres' fine string of 60 Percheron stallions at Shenandoah, Iowa. Ayres sells to every customer or visitor to the farm. See the advertisement.

Read the new advertisement of the Lincoln Importing Horse Co. Mr. A. L. Sullivan invites the attention of draft horse men to the facts set forth in his announcement relating to the grand lot of Shires and Percherons to be seen in the company's barns at Lincoln, Neb. These horses are for sale, and they are worthy to stand in the front ranks anywhere. Write or call at the barns. Inquire for Sullivan. Havelock car takes you to the place.

The first annual sale of bred sows and gilts by H. Davison, of Waverly, and A. B. Mull, of Iola, was held at Waverly, Kans., on December 27, 1900, was a satisfactory success. Mr. Davison sold 25 sows and gilts for \$561.50, an average of \$22.46, and Mr. Mull sold 13 sows and gilts for \$249.50, an average of \$19.20. The 38 head brought \$811, an average of \$21.34, and in view of the fact that the bulk of the offering was spring the bulk of the offering was spring gilts it was a good sale. Among the purchasers from a distance were: Kirkpatrick & Son, Wolcott; H. W. Cheney, North Topeka; W. P. Wimmer & Son, Mound Valley; Wm. Plummer, Osage City; W. P. Goode, Lenexa; and Geo. W. Null, Odessa, Mo. Messrs. Davison & Mull say that the Kansas Farmer did them good service, also the auctioneer, Col. J. F. Given, of Waverly, and they recommend him to other breeders who may need an efficient auctioneer.

Unexpected Wealth.

Ferguson—Hello, old chap; this is a better cigar than you usually indulge

Paterson-Yes, I thought I could afford a more expensive brand this time.

Ferguson—Had a windfall, eh? Paterson—Yes, Uncle Gotgiltte sent each of the children a \$5 bill this Christmas.—Town Topics.

Rough on the Bay State.

teacher in civil government had told his pupils that once in 10 years the state of Massachusetts takes a cen-Little James, who is an attentive Sus. scholar, upon being called up to re-

cite, said:
"Once in every 10 years Massachusetts comes to its senses."—New York Tribune.

TO CURE A COLD IN ONE DAY

The Stock Interest.

Conducted by J. G. Haney, Assistant in Feeds and Feeding, Kansas Experiment Station, Manhattan.

THOROUGHBRED STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper. January 17, 1901-J. J. Dimmock, Shorthorns, Kan-

Sas City.

January 23, 24, 25, and 26, 1901—T. F. B. Sotham.
Herefords, Kanass City, Mo.
February 6, 7, 8, 1901—Combination sale of Galloways, at Omaha, Neb.
February 7 and 8, 1901—Steele Bros., Eagle & Son, and others, Herefords, Kanass City, Mo.
February 19-20—Armour, Funkhouser and others, at Kanass City.
February 27-March 1, 1901—C. A. Stannard, Scott & March, and W. S. Van Natta & Son, Herefords, Kanass City.

March, and W. S. van Assessed City.

March 5, 1901—T. J. Wornall, Mosby, Mo., Shorthorns, Kansas City, Mo.

March 12, 1901—Gifford

Manhattan, Kans.

Maruh 19, 1901—H. O. Tudor, Shorthorns, Holton,

March 19, 1901—H. O. Tudof, Smothering, Mosey, at Ohioago, Ill. Frank B. Hearne, Manager, Independence, Mo. March 29, 1901—B. O. Cowan, New Point, Mo., Shorthorns, Kansas City, Mo.

Information Wanted on Steer Feeding, Etc.

The following is a sample of many letters that come to the experiment station people for answer: "Can you send anything on feeding western cattle? Have you ever experimented feeding either western or range cattle, and native cattle without hay? If so what effect? Is it not better to feed the very richest food to these ranch cattle on account of the small capacity of the stom-I have noticed some of them living largely on hay or sorghum or what-ever hay there was. Would it not be better to limit their hay? We are feeding 350 head of western and native cattle, and I am very anxious to know more about this mtater of hay. In what shape have you fed cattle to get the best results? We have fed hundreds of cattle both native and western but I feel sure we know very little about it."

"Have you ever fed cattle while grazing on alfalfa? If so with what results? Have you ever fed cow-peas with corn? Please send me what information you can on these subjects."

"Now I should be pleased to learn something about raising cow-peas. How do they yield? How treated? Also what variety of corn yields the best as a rule? Also what kind feeds the best?
"We farm 700 or 800 acres of bottom

land and it is very important that we plant the best. If you give out pamphlets on these subjects I should be pleased to have them."

It will be seen at a glance what a world of experiments it would require to even answer this one letter, and do it satisfactorily. I suppose a full answer to this one letter could not be obtained from the combined reports of all the experiment stations in the land. It suggests at once the extensive work there is for the experiment stations. The writer states that he has fed hundreds of head of cattle and farmed broad acres of land, and yet he asks some simple questions that can be easily answered by carefully conducted experiments. He is an example of thousands of farmers and stock-raisers. They can not provide the means for answering these questions. The experiment stations are established for the purpose of answering these questions, and they are doing so as rapidly as pos-

The stations are fast gaining the confidence of the farmers, but one reason why they are not more of a benefit is that the funds for carrying out experiments are too meagre to allow the trial to be conducted on a large enough While I think the larger the number of animals or acres included in any one trial the better, I do not count the small experiments totally valueless, but they do not have the weight with the actual farmer. The experiment sta-tions are intended to help to answer these questions, and yet from a Kansas standpoint there are very few that have been answered by our experience.

sible under the existing circumstances.

As to answering the questions, it is practically impossible to do so. We have never fed cattle without roughness. Cattle grown on poor ranges do lack capacity, and it is perhaps the best not to attempt to fatten the first year. Half feeding during the first winter, and then putting on good range during the grass season, and selling off the grass is practiced by many who handle range stuff. They are not accustomed to grain feed, and our hay does not compare with the buffalo-grass as a fattening feed, hence the unsatisfactory results in trying to feed these cattle the first year. This is not the only trouble though by any means. They need to be domesticated, and bought much

cheaper than they usually are. A good feeder, good cattle and a bal-

anced ration give the best results in cattle feeding. It is not possible for any one to tell how cattle should be fed to secure the best results. There are too many things that enter into the operation. I hope to have the report of a trial of feeding cattle while on alfalfa pasture in a short time, and hope it may be published. I believe the oper-ation proved favorable.

The cow-pea is new with us but we grew 15 acres this year. I am not prepared at present to give a report. As to corn, we have published several bulletins on this subject. St. Charles White, and Learning Yellow gave us best results. As to the feeding value of the ordinary feeding dent varieties, it may be said that there is no difference.

J. G. HANEY. Kansas Experiment Station.

Lambs and Kaffir-Corn.

J. P. J., of Emporia, wishes to know whether sheep and lambs can be fattened successfully on Kaffir-corn, grain and all, and how much bran would be advisable to feed the lambs, if any, when bran costs \$13 and there is plenty of Kaffir-corn. The college has never fattened a sheep, so there is nothing to be said directly from experience. Right here I would call to the attention of the stock-raisers that the legislature will be asked this winter to make an appropriation for feeding experiments, and every one interested in having such questions accurately tried should see that the legislator from your district favors such an appropriation.

It is my opinion that sheep may be fattened satisfactorily on Kaffir-corn. And considering the fact that Kaffircorn fed from the shock is a very cheap feed, and would not be expensive to feed, the gains would have to be very small to make the operation unprofit-able. A little alfalfa or clover hay in addition would help out the ration. It would hardly seem practical to compet the sheep to eat the fodder very closely, as the heads would be eaten first. I am confident that topping, threshing and grinding would not be at ail profit-

For lambs, the Kaffir-corn is too starchy, there is not enough of the growth-producing material present, as compared with the fat-producing. For satisfactory results it would undoubtedly be necessary to fed some other feed like bran, oil-meal, or alialia or clover hay. If alfalfa or clover hay can be had for the lambs it would be best to head the Kaffir-corn, but I believe there would be little if any gain from

threshing and grinding.

The lambs should have one-third of their grain ration in bran to make the ration growthy, if alfalfa or clover is not fed as roughness. Lambs too young might not be able to handle Kaffir heads satisfactorily, in which case threshing

would be necessary.

These are my views on the subject, but it would perhaps not be best to take these views too authoritatively. It is in order now for others to speak. Let us hear your views. J. G. H.

Ration for Steers.

J. P. J., of Valley Falls, asks for a balanced ration for 1,000-pound steers from chop at 60 cents, bran 60 cents, cottonseed \$1.10 per hundred pounds, mixed clover and timothy hay or prairie

hay at \$5 per ton.

A steer while fattening should be fed all it will eat. . After on tull feed, it eats very little roughness. The mixed hay would be preferable in every case. To balance the ration, dropping fractions, 10 parts of corn and 4 parts each of bran and cottonseed-meal gives about the proper proportions. A 1,000pound steer of good quality would eat about 25 pounds of the mixture per day, perna However, the amount of both grain and hay eaten will depend largely on the individual as well as the time the cattle have been on feed. Care must be taken in getting cattle on such a feed as this. From the beginning, it should not be done in less than one month. If the to begin by giving one-fourth of a pound of the cottonseed-meal per day per head and increase the amount one-fourth of a round per day until the desired amount is being fed. With the bran, there need not be so much caution, but there would be no harm in following at the same rate with the bran. A great many practical feeders will not observe such pre cautions in adding or substituting feeds but it is largely because the results are not apparent to the eye, perhaps; but where the cattle are frequently weighed it is found that a change in feeding fattening stock must be a very gradual one not to show detrimental results during the change. J. G. H.

Grass for Wet Gumbo Spots.

W. D. H., of Partridge, Reno County, says he wants to seed a field to alfalfa that has a number of low places in which water stands for quite a time in vet springs. The spots are gumbo and are so located that they can not be surface-drained. He wants to know what grass he can sow in these spots that will grow. I will say that this is a hard proposition, and if there is not already a ild grass growing on these spots. I am doubtful whether there is any grass that will do any good there. Red-top has a reputation as a wet land grass but it will not grow when water stands as long as it is said to in this case and I have seen it tried in even a more favorable location and it failed. Quice often these sinks may be drained by digging down a few feet at various places in them. The soil may be impervious only at the surface, and when this is broken through, the water sinks away rapidly. This could be found out only by a trial hole or two.

If any other reader of the Kansas FARMER can offer anything on this subject let us hear from you. ject let us hear from you.

The Breeders of Hope.

The breeders of improved stock located in the vicinity of Hope, Dickinson County, Kansas, are making history and progress for that part of the state Several enterprising men have breeding establishments that attract buyers from all parts of the West. At the close of 1900, when visited by the writer, they were all doing a lively business, evidently making up for the dull days of the past. The secret of their present prosperity is easily explained, however, by reason of the fact that they breed first-class stock, sell at reasonable prices, and court scrutinizing publicity by advertising in the Kansas Farmer. The breeding establishments recently

visited at Hope, Kans., were: J. W. Higgins, Jr., R. H. Little, Geo. Channon and M. C. Hemenway, and A. L. Evers at Dillon, 4 miles west of Hope.

The Shorthorn herd of R. H. Little, formerly located 7 miles from Hope, is now located about 2 miles distant on a new farm where Mr. Little has erected new and modern buildings for the ac-commodation of his herd, which at present numbers 135 head, all ages. Some recent additions have been made to the herd of Bates and Scotch blood from leading prize-winning herds in Ohio, the purchase including a number of bulls and cows.

Among the cows to be retained as the 6th Duchess of Granville by Baron Oxford of Niagara 6th 106337; dam 15th Fenwell Duchess, tracing closely to imported Fenwell Duchess 5th. Several heifers of similar breeding are among the recent additions. Another Ohiobred cow is Lady Watson 3d, Vol. 36, got by the 8th Duke of Woodford. Mr Little's herd is headed by Royal Crown 125698, bred by I. Barr & Son, of Iowa, and sired by the imported bull, Ducal Crown 97149; dam, Octavia by Scottish King 100743, tracing to imported Spleenwort. Royal Crown is assisted by Sharon Lavender 143002, sired by Lavender Chief, bred by C. B. Dustin, of Illinois. This bull is strong in the blood of Golden Chief, King of Aberdeen and Barmpton. These bulls have some grand youngsters to their creawhich have added much to the prestige of this herd among breeders who have inspected and made purchases. It is necessary to visit this herd to note the material progress made during the past two years. A number of very desirable bulls of serviceable age, also a few females, are now offered for sale.

'Higgins's Hope Herd of Poland-China swine and Lincoln sheep, owned by J. W. Higgins, Jr., of Hope, has made big improvements in all directions since his first public sale, and the Perfect We Know boar has sired such a grand lot of strong, stylish pigs that have met with such a popular sale that all the spring pigs have been sold and Mr. Higgins now offers a number of large sows bred to Perfect We Know that will produce large and fine litters that will surely please discriminating breeders desiring Perfect We Know blood. Mr. Higgins has splendid equipment, and has enjoyed a splendid patronage for so new an establishment. Mr. Higgins is also one of the large and successful sheep feeders of the state and this establishment is kept on an adjoining farm, where 5,000 head of western sheep arrived last week and will be fitted for the 1901 market. Mr. Higgins has enjoyed a very successful career with pure-bred stock, although his larger operations have been with sheep, cattle and horses. Mr. Higgins believes in the best modern equipment for all classes of stock and is excedingly careful and exact in his busiexceedingly careful and exact in his busi-

WORK THE HORSE IF NECESSARY

OL



PREVENTS FLIES, MAGGOTS, SCREW WGRMS AND PROUD FLESH. ALL DEALERS 25 and 50 Cents

SEND 46. FOR TRIAL SIZE TO B. H. DONUY, Ph. C., STATION A, DENYER, COLORADO. ENDORSED BY HORSEMEN EVERYWHERE

Sunny Slope Farm.

Emporia, Kans., July 19, 1900. Dear Sir:—I have used two boxes of your Balmoline on my horses for sore shoulders and sore necks and must say that I find it a very satisfactory remedy. It has healed them faster than any remedy I have ever used. At the same time we were working our horses all the time.

Respectfully yours, C. A. STANNARD.

ness affairs in systematic shape so that the profit or loss of every transaction

is readily apparent. The next visit was to one of the old pioneers of Hope, the Lockridge Herd of Shorthorn cattle, Poland-China hogs and Plymouth Rock chickens, owned by Geo. Channon, where was presented a grand lot of sucking calves that presented a most pleasing sight when turned in with a score or more of cows, each one with a calf at side, clearly evidencing that all cows were breeders in this herd. Mr. Channon has quite a uniform herd of cattle, the result of the use of that grand breeding bull, Glendow and his heifers that are now raising their first calves constitute the star attraction at Lockridge farm, although at present there is on hand quite an attractive lot of young Poland-Chinas, consisting of 40 spring gilts and 100 fall pigs that are to be disposed of as soon as possible; likewise 200 Plymouth Rock cockerels that Mr. Channon says must go soon, as so much stock and not a great surplus of feed makes it necessary to close out, and prices will be, therefore, reasonable. Mr. Channon has had the best season's trade in

Shorthorns he ever experienced.

Mr. A. L. Evers, of Dillon, and Albert
Dillon, of Hope, present the whiteface interests, and are endeavoring to keep Hereford cattle as prominent as did their old neighbor, C. A. Stannard, with his Sunrise Herd. For several years the produce of these herds was sold on contract, but now they have grown to such proportions that they prefer to make their own individual sales as they have such splendid representa-tive stock; it should not be difficult to readily dispose of their surplus, in view of the reasonable prices asked. Mr. Evers made some notable additions to his breeding herd, it will be remem-bered, at the national show and sale at Kansas City in October.

M. C. Hemenway is the editor of the Hope Dispatch, also a breeder of Shorthorn cattle and Poland-China pigs. He has shared in the general prosperity of the brisk trade enjoyed by the other breeders of Hope. He sells his pigs so young that it is said that they go by but this he declares is envious slander on the part of his neighbors and that he is making money at the business even if he does sell pigs young and cheap; however, the writer notes that while his stock is increasing in numbers he has much fewer \$5 pigs than two years ago.

The breeders of Hold understand how to breed and how to sell, and experience has demonstrated that the most economical method of quickly disposing of surplus stock is to advertise it in the KANSAS FARMER, and they all do it. Keep your eye on the breeders of Hope.

ID MOORE'S HOG REMEDY and cure Mange and Canker, kill Lice and Fever Germs, remove Worms and PREVENT OHOLERA, at a cost of

FEED Five Cents Per Hog Per Year.
A postal gets particulars and book on "CARE OF HOGS." Address MOORE CHEMICAL CO.,

1503 Genesee Street, - - Kansas City, Me

NO SPAVINS

The worst possible spavin can be cured in 45 minutes. Curbs, splints and ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write today. Ask for pamphlet No. 12.

FLEMING BROS., Union Stock Yards, Chicago, III.

Soy-Beans for Horses and Hogs.

R. B., of Longworthy, Iowa, writes for information on feeding soy-beans to mares with colts, horses being prepared for sale, and to hogs. How much should be fed and with what other feed.

All questions regarding the feeding of soy-beans, in our experience, can be referred directly to the feeding of oil-meal. Feed it exactly as you would oil-meal. For the mares with colts I would consider oats as a superior feed, and soy-beans will return their best when fed to hogs. But a couple of pounds of the soy-beans per day to a mare will greatly aid her in suckling the colt, especially when corn is the greater part of the grain ration. The beans are laxative and cooling in their effect and will greatly aid in keeping the mare in good condition. Corn and soy-beans together are too condensed a feed for best results, especially when ground finely. The feed tends to pack too rapidly in the stomach and will not permit of the proper circulation of the digestive fluids.

If oats are not to be obtained, onehalf corn-meal—not ground too fine—one-third bran, and one-sixth soy-beanmeal, by weight, would be a suitable ration. Oats would take the place of both the corn and the bran, and would perhaps make a better ration for the mares, but would perhaps not be any better for fattening horses. The ration of corn, bran and beans would make a splendid ration for fattening, and if clover-hay is fed, the amount of bran might be reduced to one-fourth and the corn increased in proportion. I would not advise feeding over onefifth or one-sixth the ration of soy-beans. The grinding for horses is an advantage, but I do not favor grinding

For hogs we found soy-beans to give us the most profitable returns when fed as one-fifth the grain ration, when corn or Kaffir-corn constitutes the grain. We obtain the best results by feeding the beans whole, and also the Kaffir-corn whole. The gain in grinding corn depends on the condition of the corn and also the hogs to be fed. Old corn that is hard and flinty should be ground, but not too fine. The results from soaking or cooking were also unfavorable. The only treatment that we have been able to give the feed for hogs that is profitable is to moisten the feed as fed. This keeps down the dust and makes the feed more palat-

J. G. HANEY. Kansas Experiment Station.

Central Shorthorn Breeders.

The fourth annual meeting of the Central Shorthorn Breeders' Associa-tion of America is to be held in the Assembly Hall, Live Stock Exchange Building, Kansas City, Mo., Tuesday and Wednesday, January 29 and 30,

TUESDAY, 10 A. M.

Address of Welcome, G. M. Walden, president Kansas City Live Stock Exchange, Kansas City, Mo.
Response, H. C. Duncan, Osborn, Mo.

President's Address, Hon. S. F. Lockridge, Greencastle, Ind.

TUESDAY, 1 P. M.

How to Breed and Feed to Produce Junior Champions, George Bothwell,

Nettleton, Mo. Shorthorns in the Southwest and Range Districts, V. O. Hildreth, Aledo, Texas.

The Relation of the Shorthorn Breed ers of Canada to Those of the United States, W. D. Flatt, Hamilton, Ontario, Canada.

Health of the Herd, Common Ailments, their Diagnosis and Treatment, O. O. Wolf, M. D. C., Ottawa, Kans. Selection, Care and Management of the Herd Bull, C. C. Norton, Corning,

Best Methods of Disposing of the Surplus of the Herd, and Practical Suggestions for Making a Successful Public Sale, F. A. Edwards, Webster City, Iowa.

WEDNESDAY, 9 A. M.

Selecting, Exhibiting and Fitting Shorthorns, John E. Robbins, Horace, Ind

The Study of Shorthorn History, Alvin H. Sanders, Managing Editor Breeders' Gazette, Chicago, Ill.

Feed and Care of the Herd from the

Practical Standpoint of Profit and Loss,

B. O. Cowan, New Point, Mo.
Twentieth Century Demand for Shorthorns, and How Best to Meet It, John McDairmid, associate editor Live Stock Indicator and Iowa Homestead, Des Moines, Iowa.

Judging Shorthorns, and the Educational Feature of Show Yard Exhibits, C. F. Curtiss, Director and Professor of Agriculture, Iowa Agricultural College Experiment Station, Ames, Iowa,

WEDNESDAY, 1 P. M.

The Shorthorn in the Feed Lot from he Standpoint of the Practical Feeder, Hon. T. M. Potter, Peabody, Kans.

Suggestions and Advice for the Bene-fit and Encouragement of Beginners and Owners of Small Herds, Senator

W. A. Harris, Linwood, Kans. The Shorthorn, the Cow for the American Farmer, J. H. Pickerell, Secretary of the American Shorthorn Breeders' Association, Springfield, Ill. The Tabulation of Pedigrees, Its Ad-

visability and Practicability, J. F. True, Newman, Kans.

How to Encourage Range Men to Use Shorthorn Bulls, L. A. Allen, Kansas City, Mo. Election of officers and business ses

sion. Special reduced rates have been ap plied for on the certificate plan on all railroads

A cordial invitation is extended to all interested in improved cattle, improved methods, and Shorthorns in particular, to attend this meeting.
S. F. Lockedge, President,

Greencastle, Ind.

GEO. P. BELLOWS Sec'y, Maryville, Mo.

Sale of Peerless Herefords.

Sale of Peerless Herefords.

The attention of the beef cattle breeders of the country, especially those that have a preference for the better class of registered Herefords, is called to the star illustrated announcement found elsewhere in this issue. Therein the reader will find that the 200 head that will be sold without reserve or by-bid, have been selected out of the most famous herds in this country. The Weavergrace herd, founded and owned by T. F. B. Sotham, contributes 24 young buills and 25 helfers that are considered the superior of any equal number ever sold from the herd.

The Riverside Hereford Cattle Company's herd, founded and managed by its vice president, William Humphrey, and now the largest registered herd in the world, sends into this sale 75 head of specially picked animals. Among the offerings will be 64 head topped out of the noted Shadeland Herd, whose foundation animals cost more money in Hereford-shire, England, than has any like number that ever came to America. It is safe to state that no herd in the world now has more strongly bred nor more high priced herd buils or better bred cows than has the Riverside Hereford Herd.

The very successful breeder of extra good ones, Clem Graves, of Indiana, comes into the combination with 20 head, which includes his entire show herd with three exceptions. To Mr. Graves belongs the honor of breeding and owning the \$7,000 breeding and prize-winning buil, Dale, and other undefeated prize-winners. Those familiar with the show yard history of American Herefords, will find that Mr. Graves' offering, both in breeding and individuality, is the peer of any. The aforementioned breeders have contributed the sale cattle from their respective herds, believing that the progressive beef cattle breeding public will appreciate it. In order to have an offering commensurate with the beginning of the twentieth century, and of a sufficient number to afford the greatest number of buyers possible an opportunity to a wide range of blood, other breeders have contribute some

Gossip About Stock.

Mr. F. J. Moffitt's closing out sales of Shorthorns and Poland-Chinas at Shenandoah, Iowa, February 13-14, will shortly be announced with full details in Kansas Farmer. Fifteen daughters of old Imp. True Briton are in the sale. The Poland-Chinas are of Iowa's best. Watch for advertisement at an early date.

John Bollin, of Kickapoo, Kans., makes a change in his Poland-China advertisement and makes the interesting announcement: "I will have bred sows and 50 fall pigs. The sows are choice and bred to two as good boars as I ever saw, Logan Chief 2d 24427 and Proud Tecumseh 24655, two boars that Gus Aaron and 1 bought at Iowa state fair."

I. J. Hedrick, of Arrington, Kans., advertises his sale o- grade Hereford cows to be held on January 22. Besides the Hereford offering he will sell his work horses and farm implements sufficient to work a 600-acre farm. His outfit was purchased new a year ago, and those who are the buyers at this sale will be the fortunate ones. Write him for full description

In this issue of the Farmer Geo. W. Null, Odessa, Mo., Legins his card as live stock auctioneer and Poland-China breeder. It will be remembered that Mr. Null is the owner of that wonLerful Anderson's Model, the dam of the \$3,055 litter of pigs. As an auctioneer Mr. Null has made a list of very successful sales during the past year or two and has winter sales booked for Kansas, Missouri and Illinois.

Don't fail to notice the change in the advertisement of Oltmanns Bros., of Watseca, Ill., importers and breeders of German

Coach and Percheron horses. Coach and Percheron horses. This firm has long enjoyed a select trade from the most discriminating buyers on account of the high excellence of the stock offered for sale and the fact that the prices are reasonable. This firm are leading importers of the Oldenburg horse and their Percherons are close in the blood lines of the greatest sires France has ever produced.

Receipts of horses and mules at the Kansas City stock yards last year were, according to the Drovers' Telegram, 103,-308 head, a gain over the preceding year of 69,533 head. Of this gain Kansas furnished 22,808, Missouri 14,418, Indian Territory 6,283, Nebraska 5,402. Actual receipts for the year 1900 from the heaviest contributing states were: Kansas 36,368, Missouri 25,811, Indian Territory 7,394, Nebraska 6,460, Oklahoma 5,970 (a gain of 5,424), Idaho 3,055, Colorado 2,902, Iowa 2,879, Wyoming 2,676.

Dietrich & Spaulding, Richmond, Kans., were at the state breeders' meeting this week and to the Kansas Farmer said: "The fine boar mentioned in last week's Kansas Farmer we sold to Campbell Russell, of Bennett, Ind. Ter., breeder of Shorthorn and Hereford cattle. He was a coming pig and will be heard from. Last week sales kept coming in, including 24 boars and 3 glits bred. Imperial Chief, the lowa state fair winner, is making great growth and yet has the finish of a pig. We think he will be the best finished large hog it has ever been our luck to see."

The attention of our readers is directed to the advertisements of the Burr Incubator which appears in this issue. This incubator has been in successful operation in a limited field for a number of years. The owner of the patents covering its construction not having the capital to manipulate it extensively. All this time, however, the owner has been improving and perfecting his incubator until he has the most perfect egg hatching machine on the market. This fact, careful experiment and comparison has established. The patents and the factory of the Burr Incubator are now the property of a strong company of Omaha business men with capital who propose to manufacture and guarantee these machines and place before poultry fanciers and raisers as good a machine as can be produced of its kind. The Burr Incubator is worthy of the attention of our readers.

Transfers of Pedigreed Stock.

BERKSHIRE SWINE.

Boar by Prince Majestic 46000, Manwaring Bros., Lawrence, Kans., to E. C. Stratton, Pavilion, Kans.

Two boars by Columbia's Duke 33855, Manwaring Bros., to Otto Buckheim, Winkler, Kans.

One glit by Pearl's Prince 55256, Manwaring Bros., to P. S. Jewett, Lawrence, Kans.

waring Bros., to P. S. Jewett, Lawrence, Kans.
One boar by 2d Seven Oaks Col. Mills 45718, Manwaring Bros., to R. Frank Stinson, Phillipsburg, Kans.
One boar by 2d Seven Oaks Col. Mills 45718, Manwaring Bros., to S. G. King, Gypsum, Kans.
One boar by Prince Majestic 46000, Manwaring Bros., to M. F. Kimball, Neodesha, Kans.
One boar by Pearl's Prince 55256, Manwaring Bros., to Mr. Plerce, Neodesha, Kans.
Sow, Belle Silverlight 55389, N. F. Shaw, Plainville, Kans., to Peter Grover, Bow Creek, Kans.
Boar, Flossy Highclere 51484, N. F. Shaw, Plainville, Kans., to Geo. M. Kelly, Lenora, Kans.
Boar by Flossy Highclere 51484, N. F. Shaw, Plainville, Kans., to Peter Grover, Bow Creek, Kans.
Boar by Flossy Highclere 51484, N. F. Shaw, Plainville, Kans., to Otts Register, Lenora, Kans.
Boar by Flossy Highclere 51484, N. F. Shaw, Plainville, Kans., to Otts Register, Lenora, Kans.
Boar by Flossy Highclere 51484, N. F. Shaw, Plainville, Kans., to A. Reed, Stockton, Kans.

Shaw, Platton, Kans

POLAND-CHINA SWINE. Boar by Hill's Sanders 16002, J. M. Gilbert, Busby, Kans., to G. W. Westfall, Severy, Kans.
Boar by Hill's Sanders 16002, J. M. Gilbert to Samuel Clogsden, Fall River,

Boar by Hill's Sanders 16002, J. M. Gilbert to Samuel Clogsden, Fall River, Kans.

Gilt by Hill's Sanders 16002, J. M. Gilbert to John Burns, Fall River, Kans.

Boar by Hill's Sanders 16002, J. M. Gilbert to E. R. Violet, Fall River, Kans.

Two gilts by Hill's Sanders 16002, J. M. Gilbert to W. J. Turner, Fall River, Kans.

Three sows by Plutonia 22339, J. M. Gilbert to George Forbes, Fall River, Kans.

Boar by Plutonia 22339, J. M. Gilbert to George Forbes, Fall River, Kans.

Boar by Plutonia 22339, J. M. Gilbert to Levi——, Fall River, Kans.

Boar and sow by Plutonia 22339, J. M. Gilbert to E. E. Reynolds, Busby, Kans.

Boar by Hill's Sanders 16002, J. M. Gilbert to Philea Marshall, Cane Springs, Kans.

Boar by Hill's Sanders 16002, J. M. Gilbert to Ira Hatfield, Busby, Kans.

Miss Banner Boy (47196), Nellie Sanders (47198), J. E. Hoagland, Holton, Kans., to Wynant Bros., Holton, Kans.

Bessie Sanders (47197), Belle U. S. (48268), J. E. Hoagland, Holton, Kans., to E. E. Rafter, Holton, Kans.

Bess 36196, sow, by Hoagland's I Know 19632, to Geo. Klusmin, Holton, Kans.

Boar by Our Perfection 23364, J. E. Hoagland to Jesse White, Riley, Kans.

Boar by Our Perfection 23364, J. E. Hoagland to —— Ayers, Adrian, Kans.

Boar by Bumgardner's Tecumseh, J. E. Hoagland to G. W. Shields, St. Clere, Kans.

Boar by Our Perfection 23364, J. E. Hoagland to E. E. Rafter. Holton

Boar by Bumgardner's Tecumseh, J. E. Hoagland to G. W. Shields, St. Clere, Kans.

Boar by Our Perfection 23364, J. E. Hoagland to E. E. Rafter, Holton, Kans.

Two boars by Our Perfection 23364 J. E. Hoagland to T. T. Reardon Hoyt, Kans.

Boar by Our Perfection 23364, J. E. Hoagland to P. McFadden, Whiting, Kans.

Boar by Our Perfection 23364, J. E. Hoagland to S. T. Linscott, Holton, Kans.

Boar by Graceful Chief 20939, Elm Beach Farm, Withita, Kans., to Clark Kinkead.

Boar by Graceful Chief 20939, Elm Beach Farm to

Boar by Graceful Chief 20939, sow by Sir Charles Corwin 14520, sow by Black Corwin 20800, sow by White Face Corwin 20798, Elm Beach Farm to O. J. Martin.

Boar by Sir Charles Corwin 14520, boar by Graceful Chief 20939, Elm Beach Farm to O. J. Martin.

Boar by Sir Charles Corwin 14520, boar by Graceful Chief 20939, Elm Beach Farm to A. Jacobitz, Marion, Kans.



Boar by Kansas One Price 46115 O., sow by Chief Model 21575 S., W. E. Nichols, Sedgwick, Kans., to —— Peacock, Sedgwick, Kans., to Geo. Nichols to J. C. Lawson, Filson, I. T. Boar by Best on Earth 2d 21451, Chas. Morrison, Phillipsburg, Kans., to Geo. Mathews, Leveta, Col. Boar by Best on Earth 2d 21451, Chas. Morrison to E. L. Phipps, Ashland, Col. Boar by Monarch 23940, Chas. Morrison to W. G. Riley, Hardilee, Kans. Boar by Best on Earth 2d 21451, Chas. Morrison to C. H. Clark, Delphos, Kans. Boar by Best on Earth 2d 21451, Chas. Morrison to F. B. Cannon, Phillipsburg, Kans.

Kans.
Boar by Monarch 23940, Chas. Morrison to Frank Peasley, Republican City, Nob. Boar by Best on Earth 2d 21451, Chas. Morrison to Luther Wilcox, Phillipsburg, Kans.

Morrison to Luther Wilcox, Phillipsburg, Kans.

Boar by Best on Earth 2d 21451, Chas. Morrison to E. B. Slick, Dana, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., Winfield, Kans., to A. R. Elrod, New Salem, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to A. L. Skinner, Burden, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to S. B. Reed, Attica, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to J. A. Leng, Winfield, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to F. H. Schrepel, Ellinwood, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to J. A. Leng, Winfield, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to A. P. Hill, Winfield, Kans.

Boar by Ideal Corwin 43965, Snyder Bros., to W. Lewis, Floral, Kans.

Elight sows by Ideal Corwin 43965, Snyder Bros., to H. E. Smith, Burden, Kans.

Two sows by Ideal Corwin 43965, Snyder Bros., to H. E. Smith, Burden, Kans.

Two sows by Ideal Corwin 43965, Snyder Bros., to Hutchison, Kildare, O. T.

Two sows by Columbian Success 25065, Snyder Bros., to F. H. Schrepel, Ellinwood, Kans.

Two sows by Columbian Success 25065, Snyder Bros., to H. E. Smith, Burden, Kans.

One boar by Illinois King 25063, Snyder

Snyder Bros., to H. E. Smith, Descentions, Cone boar by Illinois King 25063, Snyder Bros., to Chas. Craig, Winfield, Kans. One boar by Illinois King 25063, Snyder Bros., to Mr. Nixon, Oxford, Kans. Two sows by Joe I Am 21457, Adam Blosser, Bolton, Kans., to H. H. Crane, Independence, Kans.

Boar by Victor Corwin 18132, Adam Blosser to G. T. Young, Bolton, Kans.

Two sows by Victor Corwin 18132, Adam Blosser to H. H. Crane, Independence, Kans.

Kans.
Boar by Joe I Am 21457, Adam Blosser to Rushey Darbro, Brownsville, Kans.
Boar by Winfield Chief Wilkes 25068, Snyder Bros., to J. C. Page, Akron, Kans. PERCHERON HORSES.

Four registered stallions and 4 registered mares, Snyder Bros., Winfield, Kans., to F. H. Schrepel, Ellinwood, Kans.

FRENCH COACH HORSES.

One French Coach horse, Snyder Bros., to Mr. Schrepel, Ellinwood, Kans. SHORTHORN CATTLE.

SHORTHORN CATTLE.

Mina's Thistle 159146, B. W. Gowdy, Garnett, Kans., to Wm. Raschke, Greeley, Kans.

Constance Duke 3d 159142, B. W. Gowdy, to Chas. Lerchen, Denver, Col.

Anderson 159138, B. W. Gowdy to Chas.

Lerchen, Denver, Col.

Kansas Winsome 159144, B. W. Gowdy to Chas. Lerchen, Denver, Col.





\$8.50 for our Steel Lever Harrow. 2 sections, 60 teeth, cuts 10 ft. Complete with draw bar, also 30r 4 sections. Also spring tooth and all other harrows at

Bartlett 159141, B. W. Gowdy to Chas. Lerchen, Denver, Col. Red Flower 159148, B. W. Gowdy to P. B. and C. C. Miles, Peoria, Ill. Baron Ruby 159140, B. W. Gowdy to L. E. Parson, Udall, Kans. Count of Kansas 159143, B. W. Gowdy to Wm. Wiggins, Tonovay, Kans. Kirklevington Duke 159145, B. W. Gowdy to Tom Clyde, Haskell, Kans. Baron Galaxy 159139, B. W. Gowdy to Frank Watt, Glenlock, Kans. POLLED DURHAM CATTLE. Bull by Firefly 1326, 2 heifers by Winfield

Bull by Firefly 1326, 2 heifers by Winfield Chief 503, Snyder Bros., to P. H. Marsh, Tonkawa, O. T.

RED POLLED CATTLE. Queen's Laddie, Vol. 13, Charles Morrison to W. B. Canfield, Goodland, Kans. Victor, Vol. 13, Charles Morrison to J. B. Boothroy, Goodland, Kans.

BROWN SWISS CATTLE.

BROWN SWISS CATTLE.

Trickster 1369, bull, E. M. Barton, Hinsdale, Ill., to J. W. Cool, Keelville, Kans.

Nettle B. 753, E. Bourquin, Bartlett,
Kans., to J. W. Coole, Keelville, Kans.

Melinda B. 2017, E. Bourquin, Bartlett,
Kans., to J. W. Cool, Keelville, Kans.

Lotta B. 2018, E. Bourquin, Bartlett,
Kans., to J. W. Cool, Keelville, Kans.

Publishers' Paragraphs.

The Kansas Seed House of F. W. Barteldes & Co., of Lawrence, Kans., is one of the old reliable houses of this country, and this house is a great credit to Kansas, and their business is not only national but international and their immense business due to correct principles of handling reliable and fresh seeds. Ask for their new catalogue and give them an order.

new catalogue and give them an order.

J. R. Ratekin & Son, the well known seed-corn growers at Shenandoah, Iowa, are again before the world's corn-growers with their regular annual announcement. They have reasons for anticipating a good trade from Kansas the coming season, and the object of their present announcement is to set farmers to thinking early about one of the important features of their year's operations. Good sound seed selected from varieties that have been propagated and developed to a high degree of excellence through a long series of years of proper selection and cultivation is always and everywhere the prime factor in the making of the best possible corn crop. This fact, stubborn as the rock of ages, is the corner stone of the seed-corn trade. The Ratekin establishment in Iowa is built up squarely on this line of facts. The further fact that the small cost of a bushel of seed is so dispropor-



tioned to the large acreage it will cover (8 acres being the rule) is one calculated to cause the thinking farmer to use the very best seed at his command. Their trade of last year was even beyond their expectations, but Ratekin & Son were equal to the occasion, and every customer was supplied with promptness and dispatch. In order fully to cope with their growing trade it is to be stated that 1,200 acres were put to corn last spring and cultivated and grown under the personal supervision of this seed firm. The outcome of this fine piece of enterprise has been quite up to expectations. It is a sight to behold the bulging cribs of golden ears, on the one hand, and of the large stores of silvery white, on the other. Thousands of farmers will make goodly drafts upon these vast stores before day of planting arrives. There are three popular varieties most in evidence here—Pride of Nishna, a fine yellow dent, adapted to a wider range of soil and climatic conditions than is true of any other variety grown by this firm, unless it be the Iowa Silver Mine, which is perhaps the best known variety of white corn, and one that is pronounced a winner everywhere. A fine basket of Iowa Silver Mine is represented in the accompanying illustration. It will be a lucky chance to try a planting from the Iowa Silver Mine. In seven states it has proved one of the where. A fine basket of Iowa Silver Mine is represented in the accompanying illustration. It will be a lucky chance to try a planting from the Iowa Silver Mine. In seven states it has proved one of the highest yielding varieties grown. A newer variety is the Gold Standard. This corn was given a fine test over a wide stretch of country last year and proved itself one of the wonders of the corn-growing world. The Ratekin catalogue is this year to be more a book than catalogue. This 50-page book is a rare treat to the corn-growing world. It covers all phases of the seed-corn business fairly and squarely, it gives the reader an acquaintance with Ratekin & Son and their methods of doing business, and therefore it is important that it get early into the hands of planters who want the best seed in all parts of the country. Just think of a 50-page book on corn-growing, original matter and apt illustrations, and to be given to all who ask. Remember that a 2-cent stamp helps pay postage and shows that the the sender wertisement in this paper.

What He Did.

Kentuckian-He called me a liar, sir. New Yorker—And what did you do? Kentuckian—I went to the funeral.— Detroit Free Press.

Tenant and Land Owner.

The time has arrived for the farmers of Kansas to arise to a sense of duty, and lift the hand of protection against the miserable haphazard way the great resources of the state are managed. It should concern every sound minded person in the state, and deserves their attention. The wealth of the state is in its soil. Nowhere on the globe is there a larger tract of rich land than in Kansas. Mother earth is groaning, farm tenants are shedding tears. Land owners are cursing them both because they do not get better returns from their land, all for a lack of better discipline. In many cases the land is held for speculative cases the land is neid for speculative purposes. No one is concerned about its improvement. The owner tries to get as much out of it as he can, and puts the least in, and finds fault with the tenant because he does the same thing. For the benefit of both the tenant pleads for improvements, and most ant pleads for improvements, and most earnestly asks for a three or five years' lease. After being refused the last he is compelled to move or sign a lease with a seventh clause, which reads as follows:

That in case of sale of said premises during their occupancy by said second party, and purchaser desires possession, the second party hereby agrees to surrender the same at once on payment of a fair and reasonable compensation for growing and immature crops; and if he and the purchaser, or his agent, can not agree as to the amount of such compensation it shall be left to three disinterested appraisers, of which said sec-ond party shall choose one, the purchaser or his agent one, and these two shall choose a third one, and their decision shall be final as to the amount to be paid by the purchaser to said second party."

Every year sales like this take place, many times in the same community The tenant can do nothing else but dispose of his personal property, and be without employment the rest of the year. This is quite an item, as a tenant to farm well must have from \$500 to \$2,000 invested in stock and machinery. It is an old saying, that three moves are equal to one burn-out.

ONE YEAR LEASE.

All farmers will agree that one-year leasing is a detriment both to owner and tenant. No tenant can take a poorly handled farm and make it pay the first year. The extra labor will overbalance the income, but by plowing deep, hauling out manure, and keeping down the weeds it will pay better the second year, and still better the third year, and so on until it reaches its highest state of cultivation. But it is often the case that when a tenant farms well and brings the farm up to a standard by much extra labor, it is sold, and he has to give possession at once, or it rents for cash at a high figure, and the owner gets the full benefit of the extra The tenant is called shiftless, labor. The tenant is called shifteness, and he becomes careless about his farming. Do you not see the cause of

It is necessary for a farmer to plan years ahead and to figure on a certain amount of increase of live stock and to keep the kind of stock his farm is adapted to. He can not keep cattle in a pig pen, nor pigs on a prairie grass pas-ture. Some farms have pig pens and others pastures. When the tenant changes he must often sell one and buy the other kind of stock. Some farms are adapted to wheat, others to corn, and require different farm tools.

THREE YEARS' LEASE,

Tenants, when given a chance, often become our best farmers, and should be encouraged to work to their own interests. If given a three-year lease the farm will be better, as it will then be handled right; it will pay the owner better, and in the end he can sell at a higher figure. That which benefits an individual will benefit the state. The tenant could keep sufficient stock consume the roughness, which would be a waste; also to consume the grain instead of hauling it to market at a low price on account of being overstocked and he could sell his stock with profit at the expiration of the lease.

No farmer can move grain, and feed for stock, farm machinery, and house-hold goods, without considerable ex-pense. With a few moves he is ready to quit the farm from necessity, if not completely discouraged. Instead of the briar shall come up the myrtle tree; instead of the sunflower shall come up the corn. If the tenant fails to cut weeds let the owner or agent hire them cut, and the crops should stand for the bill. In case the tenant fails to farm in good workmanlike manner, haul out manure, and care for all improvements properly; on in case the farm sells, or the owner wishes possession for himself, son or daughter, the tenant's time to expire at the end of the first year by

the owner paying \$50 the first year, \$25 the second year, and nothing the third year, notice to be served six months prior to the first day of March, as all

prior to the first day of March, as all good farms are rented near that time.

From 1860 to 1880 Kansas was a refuge for the poor man. Many expect to be buried in the state of their choice, and are anxious to have homes of their own. But they can not accumulate money nor property, or scarcely live, with less than a three years' lease. They practice economy. The furniture in the house of the average tenant is evidence that he is willing to do with-out almost the necessities of life in order that he may succeed.

CASH RENT.

For cash is the most satisfactory way to rent for a term of years, but oc-casionally more rent is exacted from the tenant than the entire crop is worth. As it costs \$50 or more to move, the tenant sometimes pays this much more rather than move. In case of a failure of crops the entire crop at cash value does not equal the cash rent paid. In some instances tenants submit to a mortgage on their property. When the crop fails the stock must go. There are thousands of acres of land lying idle every year in the state because the rent is too high. It means millions of dollars to the state. No tenant could farm it and live. There are poor men in the cities who were raised on the farm who would gladly toil all day long in the burning hot sun of the summer months, could they only support their families by farming these idle tracts of land. In no case should any tenant be required to pay more cash rent than the cash value of the customary grain rent of that community. Let the spirit of Lincoln still live, and slavery in Kan-J. C. SHAFER. Wichita, Kansas.

English View of Our Commercial Growth.

The London Economist gives some reason why in its opinion the "effusive self-congratulation" over the recent growth in our commerce seems "rather overdone." It does not deny that this growth has been striking and rapid, but it is still unwilling to concede to us the complete conquest of the world's industrial markets, and it thinks that certain factors in our expanding foreign trade have been overlooked. It points out that to a certain extent it is a nominal growth, due to the rise in prices of such staple articles of export as cotton, iron, and steel products, but in any event real or nominal, it has not been confined to the United States. During the last three years the commerce of the United Kingdom, far from being supplanted, has increased more rapidly than that of the United States. our exports of home products have in-creased 18.6 per cent, the exports of the United Kingdom have increased 26.5 per cent. The factor in our increase upon which it lays most stress is the policy of "protection to the manufacturers in the home market, which enables them to sell their products in foreign markets at lower prices than could otherwise be possible," so that "the people of the United States are taxed for the benefit of foreign purchasers." If, in addition to this, we are willing to tax ourselves and pay big enough subsidies to ships, we may in time be able to give our goods to foreigners at still lower prices. They are not likely to object if the American Barkis is willing.—N. Y. Evening Post.

Funny Economics.

Some of the economics of well-to-do omen are very funny. Take twine, women are very funny. Take twine, for instance. In the minds of many opulent housewives it is a sign of wicked waste to cut the string of a parcel, and they will carefully and laboriously untie every knot of a package, however intricate, and then, at the cost of much time and patience, they will do it up in neat little re carefully put away, as if they were valuable possessions. Every time that string is needed in the household they string is needed in the household they produce one of these precious rolls from their hoard, with a glow of satisfaction over their thrift. Now, a large ball of twine costs about six cents, and contains enough cord to do up all the packages of the house for a year, at least, and yet not one housekeeper in a hundred, it is safe to say, will ever buy a ball of twine.

Rubber bands, too, are felt to be invaluable, and are put by religiously, for the idea of buying a comfortable box of assorted bands ready for use would never be thought of, although the cost would be infinitesimal. Yet these very women will squander hundreds of dollars in useless fineries and overlook wastes in their kitchens that would, if stopped, reduce their butchers' and grocers' books considerably. Such is their inconsistency.—N. Y. Tribure.

\$ 10.90 FOR STEEL PLOW

if not satisfactory return to us and we will pay all freight, both ways.

GUARANTEED TO SCOUR

ysoil. Mold board, landside and share made of soi, surface is as hard and smooth asglass; beam is sicel.

me 10.10. Made in 12, 14, 16 and 18 in. We have a
combinations of walking and riding plows. All styles
combinations or walking and riding plows. All styles
continuators, rollers, corn planters and other impl hend for free 328 page agriculture catalogue and save agents profit MARVIN SMITH CO., 55-57-59 N. Jefferson St. CHICAGO

THE STRAY LIST.

Week Ending December 27.

Riley County-C. M. Breese, Clerk. STEER—Taken up by N. A. Peterson, in Sherman Tp. (P. O. Randolph), Nov. 30, 1900, one red steer, some white in face and under belly; valued at \$22.

Greenwood County—C. D. Pritchard, Clerk.

Greenwood County—C. D. Pritchard, Clerk.
COW—Taken up by S. H. Rhea, in South
Salem Tp. (P. O. Ivanpah), Dec. 15, 1900,
one red old western cow, 3 or 4 years old,
branded on left shoulder, also crop off each
ear; valued at \$15.
COW—Taken up by E. B. Sherman, in
Janesville Tp. (P. O. Hamilton), Nov. 24,
1900, one dark red cow, crop off left ear,
branded on right htp; valued at \$25.
Comanche County—F. M. McIntyre, Clerk.

COW-Taken up by Ed Seyfrit, in Arilla Tp., Dec. 4, 1900, one small white cow, swallow fork in left ear, A on left hip; valued at \$12. Ford County-S. P. Reynolds, Clerk.

STEERS—Taken up by C. M. Beeson, in Richland Tp. (P. O. Dodge City), 3 good western steers, 2 years old, 2 are red and white, 1 roan, all branded 66 (bar 66) on right hip, ear marks crop off left ear and underbit on right ear; valued at \$15 each.

Week Ending January 3.

Barton County-F. M. Lutschg, Clerk. COW-Taken up by Wm. Ahrens, in Lakin tp., (P. O. Ellinwood), November 5, 1900, one red and white spotted cow, hornless, about 10 years old.

Sedgwick County-J. M. Chain, Clerk. STEER-Taken up by J. W. Holbrook, in Wichita tp., December 11, 1900, one red muley steer, crop off right ear, about 2 years old; val-ued at \$22.

McPherson County-B. Harms, Clerk. STEER—Taken up by S. Burk, in New Got-and tp., (residence sec. 35), one red and white rearling steer (grade Hereford.)

Douglas County-Geo. A. Flory, Clerk. HEIFER—Taken up by J. B. Watkins, on his premises being the property known as the Blackwell pasture, one 3-year-old heifer, dark red; valued at \$30.

Week Ending January 10.

Lyon County-H. E. Peach, Clerk.

Lyon County—H. E. Peach, Clerk.

STEERS—Taken up by D. J. Lewis, in
Emporia Tp., one spotted red and white
western steer calf, branded J on right
shoulder, slit in right ear.

Also one red steer, 1 year old; no marks
or brands. Taken up by D. J. Lewis of
Emporia Tp.
at \$15.

Greenwood County-C. D. Pritchard, Clerk. STEER—raken up by S. Goldsworthy, in Fall River Tp., one red steer, about 1 year old, branded 3 on right hip; valued

Coffey County-W. W. Palen, Clerk. COW-Taken up by B. B. Harreld, in Neosho Tp. (P. O. Crandall), November 20, 1900, one 3-year-old cow, black and white, branded —S— on left hip.

Chautauqua County-C. C. Robinson, Clerk. MULE—Taken up by Solomon Gibbs in Belleville Tp. (P. O. Peru). November 26, 1900, one brown mule, weight about 700 pounds; valued at \$20.

Wabaunsee County-B. Buchli, Clerk. STEER—Taken up by G. S. Burt (P. O. Wabaunsee), December 15, 1900, one red steer, 1 year old, slit in end of right ear; valued at \$18. Pottawatomie County—A. P. Scritchfield, Clerk.

HEIFER—Taken up by John Conroy, in Blue Tp., December 29, 1900, one small red dehorned yearling heifer, a little white in forehead, also a little white under belly and on end of tail; valued at \$17.

Douglas County-Geo. A. Flory, Clerk. HEIFER-Taken up by E. G. Woodward, one red helfer, 1 year old, both ears off; valued at \$12.

Ottawa County-F. D. Partridge, Clerk. STEER—Taken up by J. S. Fox, Buckeye Tp. (P. O. Bennington), one red and white steer, 3 years old, branded O S on left hip. Taken up on the 24th day of Novemhip. Tak ber, 1900.

Montgomery County-D. S. James, Clerk HOG-Taken up by T. C. Williams, Havana, Kgns., December 24, 1900, one male hog about 4 years old, black valued at \$12. Wilson County-C. W. Isham, Clerk.

STEER-Taken up by John Peterson in Colfax Tp., November 6, 1900, one red and white steer, slit in right ear and dehorned;

white step, shi high valued at \$25. HORSE—Taken up by J. L. Roe, in Tal-lyrand Tp., December 7, 1900, one light bay horse, 15 hands high, 3 white feet, small slit in right ear, collar mark, blaze face. Labette County—L. H. Hughes, Clerk.

Labette County—E. H. Hughes, Cierk.
HORSES—Taken up by W. E. McCrum
in Osage Tp., December 12, 1900, one black
gelding, 16 hands high, white on forehead,
white tip on nose, left hind foot white,
ringbone on right ...nd foot, about 11 years
old; valued at \$5.
Also, one black gelding, 16 hands high,
white star in forehead, some white on
back, shod on front feet, 10 years old; valued at \$20.

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The Some Circle.

CHARITY.

Go, man, to thy brother, noble and proud, Now in sin's dark polution and misery bowed, Go speak to him kindly, though he grovel

angels will smile o'er an action so just.

Thy hand may unloosen the fetters that bind;
Thy words may bring light to his sincluded mind;
There's much to be done in this vast world of ours,
Then remember, oh, man, thou hast Godgiven powers.

Go, sister, and speak to that sad erring one, If repentant, forget all the wrong she has

done;
Regard not her presence with silent disdain,
When a kind word may save her from sinning again.
'Tis but little to give, it is easily spoken,
And may soothe a heart by grief almost broken,
kemember that charity suffereth long;
Then judge not, condemn not, lest ye be wrong.

—N. L. Hickok.

Glimpses in Cuba 200 Years Ago.

SANTIAGO DOD IN LOUISIANA PLANTER.

The Royal ordinances for the government of the diminutive sugar plantations and other rural properties [of Cuba 200 years ago] were so quaint and indicative of the spirit of the early period of clericalism and "paternal" control, that they deserve a passing notice. Every estate was compelled to possess a "Cruzalta, cepo, gallo, gatoy, That is to say, a cross on high, a pair of stocks, a cock, a cat, and a dog. The cross was sometimes improvised with two rough sticks, tied gether, as in fact were many dwellings, but more often these emblems of faith were profusely carved and adorned as artistically as the attainments of the carpenter who made them would permit. They were placed at the front of the house above the eaves, as a public evidence of the catholicity of the owner, and were also erected along the high-ways, in open fields, and on the outskirts of the forest to mark the spot where some unfortunate Christian had been brought to an untimely end without extreme unction, by banditti, a thunderbolt, or other violent death. The stocks were a necessity, not only for private use in the case of refractory slaves, but also-as there could be no jails at a time when even the churches were built with thatch and wattle— for the temporary detention of crimi-nals and deserting soldiers, when the alcades who were also justices of the peace, made their semi-yearly visits, and had to deal with such. This practice continued on sugar plantations so long as slavery existed.

THE COCK, THE CAT, AND THE DOG.

The cock presupposed an accompaniment of hens, and was intended to promote, an increase of his species at a time when the markets were never overstocked with eggs or fowls. cat was expected to protect indirectly the scant supply of food by the de-struction of rodents that increase to the extent of becoming a scourge, in the propitious climate of Cuba, in the absence of their natural born enemy. The dog was as much needed to announce the approach or put to flight the wild ones of his own species that then abounded everywhere, and were probably of the "dumb" or aboriginal breed, that whined and growled, but never barked, and were very destructive to the smaller domestic animals. These watch dogs (to preclude their being confounded with the wild ones killed) always had their ears and tails cropped, and this old practice has been continued so long that dogs born without the latter appendage are not The bloodhound, so uniuncommon. versally and cruelly used at a later day for the capture of fugitive slaves, does not appear to have been introduced at this time, when blacks were fewer, and more humanely treated.

DISPENSERS OF THE LAW.

To insure compliance with the ordinances, the Alcades-there were at this epoch always two, one atcing as a substitute-were obliged in turn, to make two yearly circuits of inspection. At first these visits were wholly gratuitous, but in time it became customary to present them at each farm, with one hen, undoubtedly because they had in some manner made it clearly under-stood that such an ovation would be acceptable. This practice eventually gave to these visitations the name of "Visitas de la Gallina," or "visits of the

THE PROPRIETOR MUST ANSWER.

The proprietor or the "mayoral" rep-

sign of the cross, was subjected to an interrogatory, as to whether "the roads of the jurisdiction were open as ordered by Royal justice." Each estate being obliged to keep the highways -mostly bridle paths without other improvement, than that of felling the forest—free from the brush which if neglected in the rich soils of Cuba obliterated them in the course of one rainy season, and as to whether he had on his estate the cross, stocks, etc., as ordered.

Whether he had harbored any slave hiding from his owner, or any fugi-tive soldier—the slave being more important was given precedence—and if he had admitted vagrants and idlers, or knew of any such elsewhere;

Whether he had cognizance of the existence of any occult contraband goods, or of any one who had sold pro-hibited merchandise without municipal license, such as dry goods an _ rum;

Whether he knew or had heard of the commission of any public sin, or of any delinquents, violent deaths, quarrels, affrays, or spilling of blood.

EXTRAVAGANCE AND VICE IMPORTED.

These inquisitorial visits, although afterward perverted, like everything else in the unfortunate island, and made a new means of extortion, that finally led to their abolition, did during many years, much for good order, peace and morality. The more so that, besides the functions cited above, the Alcades wherever they discovered feuds, broils, of animosity between neighbors, used their influence, which was great, to bring about friendly understanding and good will. In fact, this period preceded and followed, as it was, by times of so much more vice, abuse and inhumanity than seems to have prevailed in any other Spanish-American colony was, perhaps, for those far enough from the coast to be out of reach of the frequent and disastrous incursions of freebooters, as well as the ravages of the enemies of the mother country in her in-terminable wars, the most happy and tranquil that Cuba has ever known, although shut out as much as stringent laws and the vigilance of the authorities could accomplish their seclusion, from all intercourse with foreign nations. They were, perhaps, more so from this very cause, for when greater freedom of trade was conceded, the importation of extravagance and vice seems to have greatly exceeded that of virtue or enlightenment.

COULD WED WITHOUT PARENTS' CONSENT.

It was not alone with a view to the increase of domestic animals that ordinances were promulgated. Such was Spain's interest in the early settlement of the island, that she also extended her maternal solicitude to the human species. One of the Royal Orders went so, far as to provide a legal procedure for clandestine marriages. It was de-creed that when there was parental opposition, the lovers should meet after dark, and wend their way to the priest's house, and that upon their own testimony that there was no other impediment, he was to perform the ceremony and make them man and wife.

There is one other interesting feature of this epoch, otherwise so simple, primitive and in many respects so unsophisticated, in so much as it shows that the prevalent backwardness in all arts and trades was not so much due to poverty as to that innate spirit of retrogression, which is so characteristic of all Spain's colonial empires. That excessive love of dress and personal adornment to which not only comfort and many of the conveniences of private life, but proper nourishment and health were often sacrificed, was as deeply rooted in Cuba during this early period as it is at this present time of ill prepared transition.

CONTRASTS IN COSTUMES.

A contemporary chronicler has left us detailed descriptions of the costly wardrobes of these Cuban colonists of two centuries ago—of their habiliments of silk, brocade and all the richest fabrics the looms of France and Spain could produce—of coats costing not in-frequently the sum of \$150, equivalent to nearly double that amount at the present relative value of coin, and we may safely assume that the attire of the gentler sex was even more costly.

Nothing could well be more incongruous than the scenes presented by these semi-aboriginal Cuban towns on Sundays and other innumerable feast days that were marked in the church calender with a double cross and for want of newspapers and almanacs duly announced from the belfry the preceding noon, by that excruciating clamor of the bells, that still tortures the ears of the unaccustomed stranger.

By day the alternately muddy or saves fully as much labor.

resenting him, after duly making the dusty grass grown, unpayed streets, sign of the cross, was subjected to an lined with habitations little better than those of the recently exterminated Indians, were enlivened by gay crowds thronging the middle of the primitive thoroughfare, for even the present narrow apology for sidewalks was as yet unthought of. Inese were mainly of the poorer class of residents and country people, clad, both men and women, in the coarsest of white fabrics, the former in short trousers, half-hidden by a long unconfined shirt reaching half-way to the knee, and the latter in short unadroned frocks, flowing straight from the shoulders "as free as mountain breezes," and as low as possible in the neck for coolness. The heads of both sexes were protected from a blazing tropical sun by coarse palm leaf hats, so broad in the brim that stays of braid from the crown were needed to support the weight-mostly barefooted, or at best shod with low heelless shoes. Here and there in bold con-trast to these humble habiliments of the less favored class were small groups of provincial dames and cavaliers, bedecked in rich silks, brocades and all the costliest goods that the looms of France and Spain could furnish; resplendent with gold lace and silver braid, saluting right and left with courtly airs and graces, for to their credit be it said the inhabitants of Cuba seem never to have been wanting in courtesy.

AFTER DARK.

After dark the scene changed. The gorgeously clad elite gathered at the homes of the wealthier residents, either to dance to amateur music from the guitar, upon floors of beaten mud, under roofs of bare palmleaf thatch, supported upon walls of unwhitened clay, in the dim light of tallow dips, or to feast at the rudest of tables, from metal or wooden plates, served from gourd dishes, often with spoons of ike material, and drinking at best from silver rimmed cups, which were the pride of their possessor, while their poorer neighbors crowded about the large barred windows and ample doors freely enjoying the scene and applaud-ing the dancers when occasion offered.

The contrast of the resplendent attire of these early settlers with the rude surroundings must have been almost weird in its intensity, making these incongruous revelers more like masque raders in some gay travesty, or chance invaders from some distant and more

cultured sphere.

PLENTY OF DISPLAY, LITTLE COMFORT.

This anomalous love of adornment imited exclusively to their attire, was not alone responsible for this singular vagary. It was in part due to another old and still dominant characteristic of the Spanish race. The absence of that instinctive desire for comfort as we understand it was so complete that no word to express our conception of it existed in their language until adopted directly from ours. The need of those innumerable conveniences which we consider essential to civilized existence was never experienced, and consequently there was no incentive to seek, improvise or invent them. Even now, when in Cuba, these are freely offered and easily obtained; they are usually rejected with indifference or accepted only when they pind them-selves to the gratification of their inherent love of display.

Some Utensils That Pay.

On many Kansas farms where upto-date and expensive machinery is used for a short season and then put into the sheds to stand idle for months, the kitchen is poorely equipped with articles which would be used every day in the year; articles as inexpensive as they are useful. This is not always the case by any means, for the people of Kansas are progressive in every line of work undertaken, yet it is true that many housekeepers work with equipment inadequate to the needs.

A good meat chopper can be obtained for from \$1.25 to \$3.00 depending upon the capacity. For family use the small sizes answer every purpose. The machine screws to the kitchen table and is ready for use in a few seconds. All kinds of food may be chopped and the work is done more quickly and much more thoroughly than is possible with the old chopping bowl. Cabbage or the old chopping bowl. celery may be chopped for salad, mince meat, Hamburg steak, nuts for cake, corn for fritters, bread for stuffing or crumbs, vegetables and meat for cro-quettes, vegetables for soups,—the day does not pass when the little meat chopper will not save time and give an attractive product.

A double-boiler is used almost or quite as much as a food chopper and

may be cooked in this without stirring, it is an ideal milk heater, and is convenient in the cooking of many foods. It will pay to buy a granite-ware double-boiler. The cost of this, also, depends upon the capacity, and the price ranges from fifty cents upwards. We know of a few Kansas homes

where a fork is the best article in the house with which to beat eggs. We are using an "egg flap" purchased three years ago at the "Temple of Econoin Kansas City at a cost of 1 cent. The investment is not regretted. A Dover egg-beater is best for beating yolks, salad aressing, etc., and costs but a few cents.

Good granite ware for cooking spoons. pans, kettles, and so on, always pays and is more satisfactory in every way than earthen or iron utensils. Tools that make the work lighter and the working more rapid will pay in any household where time has value.

MARY WAUGH.

Stray Notes.

A small amount of sugar added to canned or dried corn when cooking will improve the flavor.

A little grated cheese added to scrambled eggs just before removing from the stove makes an excellent variation from plain eggs. When grated, the cheese will melt in one minute's cooking. Stir through the egg mixture.

Instead of warming up left over mashed potatoes, mix with salad dressing and shape into small cakes. Slice a lemon thinly and lay one slice of emon on each cake. Serve on a lettuce leaf, or on a plate garnished with parsley or celery leaves. Round slices of hard cooked eggs are a pretty garnish for potato salads.

The Obstacle.

Olddamme: "Young man, have an ideal. Have an ideal, I say, and hug it to your bosom at all times and places."

Youngdogge: "But she won't let me,"—Harper's Baazar.

Modern Inference.

Guide (referring to Egyptian pyramids)—It took hundreds of years to build them. O'Brien (the wealthy con-tractor)—Thin it wor a government job, eh?—Tid-Bits.

A Tragedy.

She-If you had no idea when we could get maried why did you propose to me? He-To tell the truth, darling, had no idea you would accept me .-

Catarrh Cannot be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. 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 combi-nation 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 all druggists, price 75c. Hall's Family Pills are the best.

Willing to Help.

Ernest (boldly)—If I thought no one was looking I would kiss you. Dora(shyly)—Shall I close my eyes? -Puck.

Health for 10c. Cascarets make the bowels and kidneys act naturally, destroy microbes, cure headache, bilious-ness, and constipation. All druggists,



Mothers! Mothers!! Mothers!!! most or opper and Cereals

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, SOFT-OPPER and Cereals

Cereals

MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS by MILLIONS OF MOTHERS for USE SUCCESS. IT SOOTHES the CHILD, SOFT-OPPER and COLIC, and is the best remedy for DIARRHOEA. Sold of "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

The Houng Folks.

A LIFE LESSON.

There! little girl, don't cry!
They have broken your doll, I know!
And your tea-set blue
And your playhouse, too.
Are things of long ago;
But childish troubles will soon pass by;
There! little girl, don't cry!

There! little girl, don't cry!
They have broken your slate, I know;
And the glad, wild ways
Of your schoolgirl days
Are things of long ago;
But life and love will soon come by;
There! little girl, don't cry!

There! little girl, don't cry!
They have broken your heart, I know;
And the rainbow gleams
Of your youthful dreams
Are things of long ago;
But heaven holds all for which you sigh;
There! little girl, don't cry!
—James Whitcomb Riley.

Birds in the Winter.

When the summer is past and the young birds have been safely reared to maturity, the great tide of bird migration begins to set backward from the northern woods. This is the time of year when frugal nature forgets her economies and is in a bounteous mood. Through the long summer days and sunny autumn, while insects and cater-pillars furnish ample repasts for her feathered children, she was accumulat-ing treasures of seeds, grain and berries against the return of the wanderers, to whom she gave such stinted largess in the spring. Nearly every tree, shrub and vine holds a store of food. All the gay meadow possesses of the past season—grass, sedge and flaunting flowers, even sedge and flaunting flowers, even coarse and unsightly weeds—are heavy with hearvest. This is the season when hirds need a concern the season when birds need a generous diet. They are thin and worn with the care of young and the moulting and the renewal of their plumage. Why wonder if they give themselves up to banqueting? At this time families are broken up.

The various tribes gather in flocks, forgetting their song, and proceed leisurely to literally eat their way through to the south. The insect eatproceed ers pass through at a comparatively early date, but the seed and berry eaters remain until driven southward by the cold. Numerous as these are, it is impossible for them to exhaust the seeds, but by the time the last travelers have departed most of the berries are consumed. All the low-growing varieties of cornus—white, black and blueberries—are swept clean. One morning you may find a tree or cornus florida literally alive with robins and golden-winged woodpeckers, and an hour later not a berry of its shining red coral will be left.

The ash trees bear a wealth of winged seeds fashioned like tiny Indian paddles. These hold out for perhaps a month, but even they gradually disappear, until naught is left of summer's garnering but a shower of empty seed cases beneath the trees. Successive flocks of hungry birds hold high revels here. One day it will be the pine finches, on another the chattering thistle birds, and again the redpoil linear their cases always a cleaning linear their cases always a linear cases always a linear their cases always a linear cases and the case always a linear cases and the cases are cases as a case of the case of the case of the cases are cases as a case of the case of the case of the cases of the cases of the case of the nets, their rosy plumage gleaming like satin in the morning sun.

Out in the open fields and roadways numerous flocks of the sparrow family find rich harvesting. Great patches of pigweed and climbing false buckwheat form tangled coverts where security and plenty are assured. A quiet approach to one of these spots will afford a surprise. Not a feather is in sight, but beneath you can hear the birds feeding, the crocking of seeds and the clicking of innumerable little bills swelling quite a volume of sound. Shake the thicket and out rush the birds with a great whirring of wings. Tree sparrows, swamp spar rows, gold-finches and juscos are there, the twinkling white feathers of the latter showing conspicuously as they pitch about in their peculiar flight. For a moment they appear like a torrent of leaves swept before a November gale, and then disappear in the next tangle of weeds.

For the most part the birds feed silently, but the tree sparrows always sing light little notes, sweet and tink-ling. When November has passed most of the summer visitors and birds of

TRY THEM FOR Coughs, Colds, sthma, Bronchitis, Hoarseness, and Sore Throat. The & Renn Im on every

passage have departed for the south, that land of plenty and perpetual summer. Were it not for this wise provision of nature the food supply, great as it is, would not hold out until the coming of another warm season.

Under the working of this migratory impulse there is comparatively plenty left for the winter residents. Pines and hemlocks hold within each scale of their cones the tiny nuts which the hooked mandibles of those erratic wanderers, the crossbills, will open later. The waxwing likewise has his own special preserves. There are the blue green berries of the cedar and the frozen fruits of orchards and wind apple trees, which grow in thickets and hedge rows. The waxwing is the cultured gentleman of his tribe, quiet of tone, gentle and refined in manners, never quarreling over his food.

A friend assures me he has seen a row of these birds sitting on a bough and systematically passing a frozen crabapple up and down the line, each one taking a bite and passing it on to the next, just as convivial souls would send around a bottle. That was in the hungry time of the year, too, when the instinct of self-preservation might well engender selfishness.

The fruit of the sumac and bittersweet seem to be reserved for necessity for only late in the spring, when food is scarce, have I seen any birds at-tempt to eat it; but the white berries of the poison ivy are acceptable to many of the finches. Almost anything will do for the jays and crows. They are omniverous, taking anything they can get, but the grubs and larvae imbedded in the trunks and limbs of trees furnish food for the woodpeckers. Their stout bills are able to chisel through almost any intervening bark and wood to reach them. Some species eat ants and crickets, and often disappoint the entomologist by opening the cases of chrysalids and drawing out their contents. Many a time have I struggled through a tangled mass of osier or cat brier for a promising cocoon, only to find that the enterprising woodpecker had been ahead of me.

The white, wax-coated fruit of the bay-berry, Myrica cerifera, is the fa-vorite food of the yellowrump, or myrtle bird, and wherever there is an abundant crop of those berries there the myrtle birds may be found in great abundance. The myrtle bird is the only one of the large tribe of warblers that can endure the cold of our winters.

The others of this numerous family vend their flight southward early in the season, and many cross the gulf, going as far beyond the equator as the Argentine Republic. With the exception of kinglets and hummingbirds, these are the smallest of our birds. Think of those tiny, slender wings crossing that

vast extent of country twice a year!

The myrtle bird, however, defies the cold of a northern winter, trusting to the bayberries, which furnish another set of adventurers on these harsh shores with a light to cheer the cold gloom of a New England winter. In the days of the Puritan the waxcoated fruit of the bayberry gathered and boiled in water. wax was then skimmed off and run into candles. These must have burned like incense, as every part of the bush is aromatic.

When the snows lie deep and heavy on the fields the weeds and grasses hold above them an abundance of food for the seed eaters. One of the pleasant sight in winter is the imprint of many little feet among the scattered seeds beneath these clumps. The bird lover feels glad when he sees these signs that for one more morning at least the hunger of the birds has been satisfied. Few things are more appealing than the trust of a bird for the continuance of its food. One winter, during a cold and driving storm, the hunger-driven birds these established, the miles downward overcame their timidity sufficiently to the earth's axis were easy of comcome in at the open kitchen door for the food which we scattered near the threshold, and after satisfying their need they flew away to some unknown shelter. The next morning we arose considerably later, and on the freshlyfallen snow of the porch was evidence that the birds had come again seeking food. They had alighted on the steps hopped along half the length of the porch, and the trampled footmarks at the kitchen door showed that they had waited patiently for some time, expecting it to open. It has been my custom for several winters to hang up bones and bits of gristly meat in some trees before my window to attract the birds. I am rewarded by the sight of wood-peckers, nuthatches, chickadees and brown creepers coming almost daily to nibble on these tidbits.

Toward the end of February the food supply of the birds is greatly dimin-

ished and the demand increased by the first arrivals from the advance rank of the spring migration. Then if a heavy fall of snow occurs, ending in what may be called a glacial period for their world, the birds are in a sad plight. The insect eaters are a little better off than the seed eaters, for even with wet, clinging snows and ice-encrusted forests one side of the trees is usually exposed, but by this time most of the seeds from weeds and grasses have been beaten to the ground by the fierce winter storms and lie beyound reach until a thaw uncovers them. At such times very shy birds are sometimes driven by hunger to seek refuge around barns and dwellings.

Two springs ago, after a late March snowfall, a fox sparrow made a filli-bustering expedition among the English residents of my back dooryard. It is frequently asserted that the English sparrow will wage successful warfare on any of our native birds, but the fox sparrow's visit disproved it. The latter is a shy and a retiring bird, even in his native thickets, and his stay with us in the spring is a brief one of two or three weeks. When I first heard his feeble "seep" in my garden, he was sitting on a lilac bush, with drooping storm-worn plumage, in a dejected and humble attitude. But never did prosperity work a greater alteration of character. He soon developed the most despotic manners, and, finding the English sparrows gave way to him, he allowed them to take nothing he coveted. I could see even by the way he hopped how his arrogance grew daily. His poor subjects might well have asked "Upon what meat does this, our little Caesar, feed, that he hath grown so great?" For a brief period he was an interesting study, but with the melting snows he vanished from sight, to resume, no doubt, his onward journey to the summer land of his desire.—Sarah T. Woodworth, in Recrea-

The Size of the World.

The earth has been measured by the United States Government, or rather by the Geodtic Survey Department, and some figures have been made public. Thus it is stated that the equatorial diameter of the earth is 7,926 miles and the polar diameter 7,899 miles, or that the diameter of the world is 27 miles less when measured from pole to pole than when measured through the equa-The iconoclastic hand of the investigator has thus disproven another fallacy which had been firmly implanted in the mind during the school days. Then the teachers found the simple orange an excellent example of what the shape of the earth was supposed to be, showing as it did to the eye a visible flattening at the top and bottom, which were supposed to represent the poles. Science has proven now that the flattening is so slight as not to be visible to the eye, even if expressed on the largest sized globes. It has taken Uncle Sam thirty years to weigh and measure the earth, and has cost over half a million dollars. As the poles have never been reached it is readily seen that no actual measurements have been made, and it is interesting to note the methods by which the Governmental scientists made these measurements

As a basis for reaching the diameter of the earth the United States survey cast the longest straight line ever measured by intruments. It was laid along the thirty-ninth parallel of lati-tude, from a point near Cape May light, at the southern tip of New Jersey, straight westward to Point Arena, in Mendocino county, California. This line was begun in 1871, and only re-cently was the last triangle laid, showing that the absolute distance between Cape May light and Point Arena is 2,625.6 miles. With the distance between

putation. The exquisite care with which the calculations were done is shown by the following facts: By actually laying bars of metal end to end the surveyors, in the course of this stupendous measurement, marked off the base lines essential to their triangulation work. temparature of each bar was carefully measured by thermometers aside, and its effect upon the length of the bar was taken into strick account. A single pair of these complicated bars cost \$1,500. Stretched across the country, they were not rested upon the ground, but upon tripods carefully leveled. One style of measuring bar utilized in this delicate work was carried in a trough filled with melting ice, and was thus kept at the freezing point. Being always at the same temperature, its length never varied.

And the net result of the investiga-

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Housekeepers, wives, mothers, every oman who has the care of a family or household, has at one time or another spells of backache, nervous weakness, sick headache and disorders in the digestion, caused as a rule by domestic worry, overwork, irregular meals or habitual constipation. To all women who suffer in this way, we

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DRUGGISTS SELL IT. Price \$100

tion is to show that Mother Earth is somewhat broader than she is tall. Let us suppose that there are two tunnels, dug in precisely straight lines, one joining the North and South poles and the other connecting two directly op-posite points upon the equator. The latter tunnel would be 26.8 miles longer han the former.—Cincinnati Times.

About the Buffalo.

According to an article in Nature, a curious census has just been taken by Mr. Mark Sullivan. It was for the purpose of determining the number of living buffalo on the North American continent, and the result as given by Mr. Sullivan is as follows: Bison in cap-Sullivan is as follows: Bison in cap-tivity, 684; running wild in British Columbia, the Yellowstone park and a few other places, 340; total 1,024.

Peace After War.

"You say you never quarrel with your husband?"

'Never. You see we were members of the same choir before we married, and we got all over that by the time we were man and wife."—Yonkers Statesman.

A system regulator is a medicine that strengthens and stimulates the liver, kidneys, stomach and bowels. PRICKLY ASH BITTERS is a superior system regulator. It drives out all unhealthy conditions, promotes activity of body and brain, restores good appetite, sound sleep and cheerful spirits.

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references are given.
All advertising intended for the current week should reach this office not later than Monday.

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NOTICE EXTRAORDINARY. BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year and no single subscription will be entered for less than this price, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year for one dollar. Come, let us immediately double the circulation of the "old reliable" KANSAS FARMER. Address, Kansas Farmer Company, Topeka, Kans.

We want a good reliable man or woman in every county to act as local agent for the Kansas Farmer. We offer a good proposition to the right parties. In answering please give some one as reference and also state how much time each week you can give to the work. Address

THE KANSAS FARMER, Topeka, Kansas.

The ninth annual meeting of the Dorset Horn Sheep Breeders' Association of America will be held at Pittsburg, Pa., on Tuesday, January 15, 1901.

P. D. Armour, of Chicago, the great meat packer, died at his home in Chi-cago last Sunday. Mr. Armour did much to organize the packing industry and amassed an immense fortune. He was a liberal giver as well as rapid money maker.

It was intended to publish in this number of the Kansas Farmer the full proceedings of the Kansas State Horticultural Society. The illness of the of-ficial stenographer of the society made it impossible for her to write out the discussions, so that it has become necessary to hold the report over until next week.

The caucus of the Republican members of the Kansas legislature has agreed upon Hon. J. R. Burton, of Abilene, for United States Senator to succeed Hon. Lucien Baker, of Leavenworth. Since the present legislature has a strong Republican majority, the caucus nomination assures the election of Mr. Burton.

The Kansas Improved Stock Breeders' Association, the Kansas State Dairy Association, and the Kansas State Board of Agriculture, all in annual session at Topeka this week, to say nothing of the convening of the legislature, make life sufficiently varied at the capital city. Full reports of the proceedings of the three meetings concerned with farming will appear in the KANSAS FARMER in due course.

E. A. Burnett, professor of animal husbandry in the University of Ne-

braska and Agricultural Experiment Station, has written to the Kansas State Board of Agriculture an urgent request to be supplied with 150 copies of the board's Eleventn Biennial Report, for the use of students in the school of ag-riculture. Prof. Burnett in his letter, says: "I fear that such a request is imposing upon generosity, even if it is possible to grant the same, but we would be willing to incur some expense in securing this volume for our students, as it contains more information relative to the questions of live-stock and meat-production than any other volume I am able to secure. If possible to grant this request, would it be possible to secure an equal number of copies for the same purpose of your quarterly reports upon 'Pork-Production' and 'The Beef Steer'?"

WHAT OF A HUNDRED YEARS?

The populations of most countries are increasing. In some the rate of increase is very great while in others it is very small. The retrospect of the century just gone shows that the domination of the world is rapidly passing to peoples of European lineage. Indeed, in the determination of the course of events of world-wide importance, little consideration is given to the views of any people which has not an anchorage in Europe either in present holding or in ancestry. The scepter of influence of these European nations is far from equality in potency. The developments of the century have been diverse. At its beginning the United States had small influence in international affairs. With a population of 5, 308,000 in this country against 15,669,000 in the United Kingdom of Great Britain and Ireland, 27,349,000 in France, and 22,000,000 in Germany, and other powers correspondingly potent, all the world outside of North America might be carved without much reference to American ideas or interests.

It is interesting to note the populations of the several European countries at the beginning of the century

ı	and now, as compute	d by II	enry Cre	
ı		Cl	ose of Pr	. ct.
ı		1800.	century. i	
ı	United Kingdom	15,600,993	40,500,000	159
ı	France	27,349,003	39,000,000	46
ı	Germany	22,000,000	53,900,000	145
ı	Russia, in Europe	40,170,000	110,000,000	174
ı	Austria-Hungary	18,000,000	43,700,000	143
ı	Italy		34,000,000	95
ı	Spain	10,351,000	19,000,000	
۱	Portugal	3,630,000	5,500,000	52
l	Belgium		6,675,000	76
	Holland	2,760,000		84
	Sweden	2,159,000		131
	Norway	884,000		143
١	Denmark	926,000		154
١	Switzerland	2,392,740	3,150,000	32
1				_

163,450,736 370,025,000 126

The United States whose people are nearly all of European origin, makes population showings as follows, according to the estimates of the Treasury Department:

Close of Pr. ct. United States......5,308,000 77,080,000 1,452

The changes in national influence have during the closing years of the century shown even greater disparity than the changes in population. These changes have been entirely favorable to the United States.

What another century may bring ticians are not averse to assuming that the population of the United States will double in about 30 years. If this shall be so, then 1931 should find us 144,160,-000 strong. Doubling this for the next 30 years, or allowing that the increase will be somewhat retarded and that the last doubling will not occur be-fore the end of the century our descendants should look into the twenty first century with gladness or woe depicted upon 576,640,000 faces.

Should current rates of increase be continued in other parts of the world a complete revision of the earth's production of food will be necess before the close of the century to prevent universal famine. At present the people of Europe are drawing heavily upon the United States for bread, meat, and clothing materials. With 500,000, 000 more people to feed and clothe than now, how much can this country spare to Europe, and what will be the price required for what does go? ily the problems that confront the new century are as great as the world has ever had to solve. Perhaps the strife going on for possession of Southern Africa may contain a suggestion as to the solution that will be proposed by some people. In times past earth's belligerent children have settleu all great questions by the sword. The leading nations are inclined to regard war as the final arbiter. By this court the dominion seems now to be decreed to the armed camps of Russia, Germany, Great Britain and the United States, with respectful consideration for Ja-pan. Nations which held places of prime importance 100 years ago are

now almost lost to view. Some have predicted that before the next 100 years shall be made into history the powers which will determine great interna-tional questions will be reduced to two— Russia and the United States. The figures of the last 100 years lend plausibility to this view.

NOTABLE PLANT IMPROVEMENT.

The successes achieved in the improvement of the sugar beet by processes of plant breeding have stimulated attempts to improve other plants by similar processes. Not many years ago it was discovered that tropical sugar cane produces seed. Prior to this discovery all reproduction of cane depended upon planting canes. These grow at the joints. This process is much like ayering shrubs or vines. There is very little variation in succeeding generations of plants produced in this way. But the canes produced from seeds vary in a manner similar to that of trees produced from seeds of grafted Stock.

The cane sugar growers have been diligent in taking advantage of this variability and have carefully selected such seedlings as promised to develop valuable characteristics. It has been found necessary to propagate these seedlings by planting the canes for sev-eral years before it can be determined what will be the exact character of the fully developed cane. While this has made the experimental work rather tedious, it has added no insurmountable difficulty.

With commendable zeal the Louisiana Experiment Station, encouraged by the Louisiana sugar planters, has ed-dressed itself to the task of improving sugar cane. The latest reports show that gratifying success has resulted from these well directed efforts. Since this experience with cane is a fair example of what may be expected with other useful plants, a brief review will

be useful.

The seedling in question seems to have originated at the botanical gar-dens at Georgetown, Demerara, and was there known as Seedling there From this botanical No. 95. garden it was obtained by Dr. Stubbs of the Louisiana Experiment Station. In 1897 a few canes of this seedling were obtained from Dr. Stubbs and planted in the garden at Helvetia Plantation, in St. James Parish, Louisiana, and carefully nursed. The resulting crop furnished stalks enough to plant nearly twenty for one in the succeeding fall and, with careful handling, the quantity of canes from this beginning proved enough to plant in the fall of 1899 an area of 9.88 acres.

The growth of this cane was on a parity with that of the other canes which constitute the crop of the plantation, and it was not until the resulting damage from a gale on September 8 began to be estimated that it became apparent that the seedling canes were enabled to resist the effects of wind and rain better than the other canes on the place. The other canes of good growth were badly blown about by that storm while not a single stalk of the new red cane was injured.

On the 12th of December the crop on the 9.88 acres was cut and ground im-mediately, and the following data obtained:

Area 9.88 acres, total tonnage 359 tons and 1,480 pounds. Tons per acre, 36.5.

Total first sugar weighed 50,396 pounds. Second sugar (estimated) 10,000 pounds. Total first and second sugar,

0,396 pounds. First sugar per ton of cane. 140 pounds.

Second sugar per ton of cane, 28 Total sugar from ton of cane, 168

pounds Total first and second sugar per acre, 6,214 pounds.

These figures show an average per ton of about 25 pounds more sugar than was obtained at the same time from the other canes ground on this plantation. The increase per acre is above 900 pounds of sugar. This re-sult is sufficiently gratifying to induce a continuance of the work of improve-

Opportunities in no wise inferior to those which gave these results are to be found with every useful plant grown on the farm. The most hopeful field open to the experiment stations lies almost untouched.

English Idioms.

Ben (reading)—So he slipped on his coat and went down stairs.

Len—Did he hurt himself much? Yale Record.

Characteristics and Needs of the Several Wheat Districts of the United States.

(Continued from page 35.)

fore varieties hardy in this respect are desirable.

The wheats at present grown in the southern wheat district are either soft or semihard, and usually amber or reddish in color. They are either bearded, as in the case of the Fulcaster, or beardless, of which the Fultz and May wheats are examples. In Arkansas and the Carolinas, Nicaragua wheat, a durum variety, is grown somewhat, but to no great extent as yet. Wheat from the Southern States is always more likely to be infested with weevil than that from other districts, and occa-sionally much annoyance as well as injury to the grain results from this cause. Nicaragua and the hard red wheats are more resistant to weevil than are the soft wheats.

SUMMARY OF CONDITIONS AND NEEDS OF THE DISTRICT.

(1) Principal varieties now grown: Fultz, Fulcaster, Red May, Currell's Prolific, Rice, Everett's High Grade, Boughton, Purple Straw.

(2) Present average yield per acre, about 9% bushels.

(3) Needs of the grower: (a) Rust resistance. (b) Early maturity. Resistance to late spring frosts. Stiffness of straw.

HARD SPRING WHEAT DISTRICT.

The hard spring wheat area com-prises the states of Minnesota, North Dakota, South Dakota, the larger part of Wisconsin, portions of Iowa and Ne-braska, and small portions of Montana and Colorado. In this district, because of the rich, black soil and dry, hot summers, there is grown the highest grade of spring wheat in the world, excepting the spring varieties of the middle Volga region in Russia, which are very simi-

Two general types of wheat prevail throughout this district—the Velvet Blue Stem and the Fife. A large portion of the farmers in this region know no wheat which does not belong to one of these types. The cnaff of the Velvet Blue Stem is covered rather closely with small hairs, and the plants are bluish gray near harvest time. In both types the heads are beardless and the grains are medium or small, hard, and red. There are several strains or varieties of each type. The gluten contents of these wheats is comparatively very large, and especially of that quality which gives great lightness in bread making. The average annual wheat produc-

tion of this district is larger than that of any other similar area in the world, and is about 30 per cent of the entire production of the United States. The average yield per acre, however, is not very large—certainly far below what it might be. Almost everywhere the self-binder is used in harvesting the grain, and in sime localities the farms given entirely to wheat culture cover many thousand acres. On these bonanza farms 50 to 100 self-binding harvesters are sometimes at work at the same time. The large size of the farms to the property connected. is one of the worst features connected with wheat growing in the Northwest. From this cause not enough attention is given to details of the work. Opera-tions delegated to the best of foremen and other employees are never so carefully performed as when done under the direct scrutiny of the man who owns the farm, and whose interests are therefore at stake. Little things that are of importance when summed up are overlooked. The tillage is not thorougly accomplished, weeds are not down, there is more or less waste of land, and the grain is allowed to de-generate in quality.

The needs of the grower in this district are not so great as in some others, though there is much to be desired. In the northern portion earliness of maturity is needed to enable the wheat to escape the early autumn frosts which sometimes catch the crop before harvest, while in the southern portion chinch-bug depredations and rust at-tacks might often be avoided through possession of the same quality. A combination of earliness and rust resistance in the same variety would be especially desirable. The average yield could be made very much larger, as already stated, but this is a matter depending fully as much on methods of culture as on the improvement of varieties. Proper seed selection, however, should be rigidly practiced. The establishment of hardy winter varieties in place of the spring varieties now grown would no doubt be an improvement of the utmost value in Iowa, Nebraska, and portions of Wisconsin, and perhaps a small part of Minnesota. This border is now the battle ground between win-ter and spring varieties, and it should

be the constant aim to carry the line farther to the north, thus increasing more and more the winter-wheat area. Such purpose can be accomplished either (1) by the introduction of winter varieties, of similar quality to the spring sorts now grown, from the Crimea, north Caucasus, and southern Volga region of Russia, or (2) by the actual origination of hardier winter varieties of good quality through hybridization and selection. As an example of the effectiveness of the former method, we have only to point out the work already accomplished by Turkey wheat—a Crimean variety—in extending the winter-wheat area in Nebraska and

SUMMARY OF CONDITIONS AND NEEDS OF THE DISTRICT.

(1) Principal varieties at present grown: Saskatchewan Fife, Scotch Fife, Powers Fife, Haynes's Blue Stem, Bolton's Blue Stem, Wellman's Fife. (2) Average yield per acre, about

13 bushels.
(3) Needs of the grower: (a)
Early maturity. (b) Rust resistance.
(c) Hardy winter varieties. (u)
Drought resistance.

HARD WINTER WHEAT DISTRICT.

In this district is comprised approximately the middle states of the plains, including Kansas, a large part of Missouri, portions of Iowa and Nebraska, and the larger part of Oklahoma. As the name implies, it is characterized by the production of hard winter wheats, such wheats as are rarely found, but which are of the very best quality. The only other wheat region in all the world that is exactly comparable with this one, so far as known, is that including northern Crimea and the country directly between the Sea of Azov and the Caspian Sea. The latter region, however, at present produces better wheats than are produced in this district, and therefore should be drawn upon for all improvements that are attempted through introduced sorts.

duces better wheats than are produced in this district, and therefore should be drawn upon for all improvements that are attempted through introduced sorts. The wheats of this district have slender, stiff stems, narrow, compact heads, usually bearded, and medium or small, hard, red grains. In this region there is the most interesting example of the changes that may take place for the better in the development of the wheat industry. Twenty-five years ago the softer wheats (often white-grained) were chiefly grown over a large portion of this district, and the cases of winter wheat sowing as against spring wheat sowing were much fewer than at present. Now the hard red-grained varieties are principally used, and only in Iowa and Nebraska are spring varieties grown to any extent. The introduction of these hard-grained winter sorts has added remarkably to the certainty and value of the wheat crop, and has greatly decreased the ravages from rust and chinch bugs.

Such improvements are after all but fairly begun, and there is yet great demand for hard-grained sorts and varieties that will resist the winters of Iowa and Nebraska. As the wheat area extends farther westward—to the one hundredth meridian and beyond—there is also a special need for drought-resistant sorts. In fact, in this and the district just described there is the most exacting demand of the entire country for hardy varieties. The extreme severity of the drought and winter cold combined forms a greater obstacle to winter wheat culture than exists in any other district. The average yield per acre is always low, but the problem in a considerable portion of the region is not so much to increase the yielding power per acre as to make sure of a crop every year, since there are so many complete failures from drought. A constant average of even 12 to 15 bushels per acre from year to year would be considered good.

Early maturity is of importance in this district in order to allow an escape from the worst effects of the drought in the western portion and from the rust in the eastern portion. Rust resistance is also important, but not so much so as in the states east of the Mississippi River.

SUMMARY OF CONDITIONS AND NEEDS OF THE DISTRICT.

(1) Chief varieties at present grown: Turkey, Fulcaster, May, Zimmerman, Fultz. (2) Average yield per acre, about

12% bushels.
(3) Needs of the grower: (a) Hardy winter varieties. (b) Drought resistance. (c) Early maturity.

DURUM WHEAT DISTRICT.

The area contained in this district is comparatively small and includes a large part of north-central Texas, the southwestern portion of Oklahoma, and a small portion of the southwest corner of Kansas. It also properly includes a portion of Colorado, but can not be so

indicated on the map, as the particular portion is not yet definitely outlined. Some of this region (southwestern Oklahoma) nas only recently been opened to settlement, but wheat culture has developed rapidly in the new lands. The soil is generally black and rich in humus, just as in the district last described, and produces wheats with a large gluten content, which quality is further increased in the western portion by the dry, hot summer weather. The general demand is for hard-grained, drought-resistant varieties, and such sorts are already grown to a considerable extent. In recent years there has been an increasing tendency toward the cultivation of the durum or macaroni wheats, the chief variety grown so far being Nicaragua, which has become quite popular. This variety is very hardy, yields well, and the grain is extremely hard and glutinous. It is quite similar to Kubanka, Arnautka, and other macaroni wheats grown in southern Russia, and for which there is so much demand in France and Italy. Notwithstanding the usual notion concerning such wheats, Nicaragua has been very successfully ground into flour by a well-known milling company at Fort Worth, Texas. By mixing slightly with other wheats an excellent bread flour is made. However, the chief profit to be gained from the cultivation of this variety in turne will no doubt arise from its use in manufacturing macaroni, just so soon as the possibility of furnishing a sufficient supply becomes certain. Though its distribution is not yet very wide, Nicaragua is, nevertheless, grown over a large portion of Texas and also sparingly in Oklahoma and Colorado. For this reason, and because of the evident adaptation of such wheats to this region, it seems proper to call it the durum wheat district.

These durum wheats grow rapidly,

These durum wheats grow rapidly, are tall, and have wide leaves with a harsh surface, and large heavy-bearded heads, compactly formed. The grains are very large and long, and yellowish-white in color, becoming darker the blacker the soil in which the crop is grown. It being once proved that durum wheats succeed well, there is bound to be a still greater demand for them, so that the further introduction of such varieties becomes at once one of the needs of the districts. Aside from macaroni varieties, the redgrained winter wheats, similar to those described for the hard winter wheat district, are best adapted for the larger part of this region. The best example is the Mediterranean, which is very

commonly grown.

In central and southwestern Texas rust is very destructive, so much so that wheat culture has been completely abandoned in many places on account of it. There is, therefore, a great demand for rust resistant varieties. The durum wheats have the advantage of being highly resistant to orange leaf rust, but succumb to black stem rust. In the western portion of the district the oft-recurring droughts are very detrimental, and therefore in that portion drought resistance and early maturity are important qualities.

SUMMARY OF CONDITIONS AND NEEDS OF THE DISTRICT.

(1) Chief varieties at present grown: Mediterranean, Nicaragua, Fulcaster, Turkey.

(2) Average yield per acre, 11½ bushels.
(3) Needs of the grower: (a) Macaroni varieties. (b) Drought resistance. (c) Rust resistance. (d) Early ma-

(To be continued.)

turity.

A NEW FEATURE.

The attention of our readers is called to a new feature in the Kansas Farmer this week, namely, "Transfers of Pedigreed Stock." So much interest has been taken in our reports of rublic sales of pure bred stock that we feel that the great volume of private sales has been overlooked, when in fact the transactions of this class greatly exceed those made at auction. In order that our readers may keep posted as to the movements of all classes of improved stock, the KANSAS FARMER provides this new department in behalf of this great interest, and invites the coöperation of both buyer and seller to keep us promptly advised of all such transactions. It is a matter of interest to know what is being done each week with the different breeds of live stock. In sending the information give the name, breed, sex, and registered number of the animal bought or sold, as well as the name and address of buyer and seller. In case the animal trans-

sire's name and number. If the animal is named and not recorded, then state the volume of the record to which he is eligible if recorded.

The Apiary.

Conducted by A. H. Duff, Larned, Kans., to whom all inquiries concerning this department should be addressed.

The Apiary in Mid-Winter

About the only attention that bees require now is to let them strictly alone. See that no stock gets near the hives and that the apiary is in perfect solitude. Do not now try to accomplish any work that you may have neglected to do in the fall, unless it be that you erect some kind of a windbreak far enough from the hives that the bees do not have any knowledge of it.

Bees, of course, are active during a warm day, and if warm enough, will come out and take a flight. This is a good thing for them, as by frequent flights during winter they keep in the best of health. There is no cause for alarm from bees not wintering well in a winter like the present one. We will find when the proper time comes to examine them, which is early in March, if the weather is favorable, that they have not drawn heavily on their stores and consequently have plenty of honey for spring use, if they had a good supply in autumn.

While it is safe to open hives and examine bees any day they are flying freely, yet, from the first of January until the first of March, I would not open the hives, for we can not close them again so well as they were before opening them, and bad effect may result. March is the proper time to look after the welfare of the bees, and in this latitude we may do the work early in this month if the weather is suitable. but not otherwise. If a fine spell of weather does not present itself during March so that the bees can take a good fly, better wait until it comes, even if

when the right time comes do not put it off until to-morrow, but do the work that day. In earlier days the apiarist, or person who kept bees, was usually termed a lazy person, and adopted beekeeping because the bees work for him for nothing, and board themselves and no effort was required on his part. It would seem that there may be some truth in this, when we see a beekeeper walk out among his hives on a fine day, just at this most critical period, and finding bees flying nicely from every hive, decide in his mind that the bees are all right and in fine condition, and turn away and leave them without touching a hive. No time in the whole year is it so important to find the condition of every hive as at this time. Nor does it require our attention at this time only, but from this period on, until entirely out of the winter with every colony in first class condition, and as strong as we can get them in numbers, with a good supply of stores for both present and future use until the honey harvest opens.

On inspection in early spring thus, two important things to first look after are, first to see if a queen is present in the hive and in evidence of usefulness, and to look for brood in the ness, and to look for brood in the combs. Nearly every good queen will now have considerable brood in the combs if the colony is fairly strong, and the presence of brood is all the evidence you require to know if the queen is there. The second important thing is to see if they have stores sufficient to at least corry them along a month to at least carry them along a month or so later, or until warm weather pre-dominates, so they can be fed sirup. Better not be hasty about feeding sirup thus early, but if a colony is nearly ashore for food, give them candy to carry them on a little later. When opening hives on this occasion during March, be very careful to place every frame of comb back in the hive in just the same place, and in the same position it formerly occupied. Close up the hives very carefully and securely, and leave no cracks or openings for the next severe cold spell to cause your labors to be a damage rather than a benefit to the bees.

If a colony is found to have lost their queen it may be united with another at this time if the weather is very fine, but it is usually better to just close up the hive and let them remain so until nearer the opening of spring, but keep a look out for robbers, for they will surely find it sooner or later.

Larned, Kans. A. H. DUFF.

A Pleasant Duty.

well as the name and address of buyer and seller. In case the animal transferred is eligible to record and is unnamed, then give simply sex and the assure you.—Tit-Bits.

Mrs. Jones—Don't trouble yourself to see me to the door, Mrs. Smith. Mrs. Smith—No trouble; quite a pleasure, I

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Borticulture.

Seasonable Hints.

EDITOR KANSAS FARMER: - Much has been written about fall planting and spring planting, about the planting of large trees and small ones, about pruning, grafting and the general management of the tree, shrub, or flower above ground. What about the root growth beneath the ground? We are taught many things about plant life, but of the earth and its general conditions we know very little. All trees require air and moisture for their roots. Some trees are capable of adapting themselves to almost any kind of soil and do fairly well. Notably standard apple, black locust, catalpa and others. Yet we find each of the above prefers some given location and soil. The cypress of the lower Mississippi valley loves a moist or wet soil and could not be expected to grow on the prairies of

Successful gardeners of the old world who grow azaleas and rhododendrons would not think of planding in a stiff clay soil. Great pains are taken as to the condition of the soil, because that has more to do with the success of the plants than any other one thing. If the grower wanted these plants to succeed he would not want my soil, which is limestone, and it would be useless to undertake to grow such plants, but he digs out the uncongenial soil and replaces it with an open, porus, spongy soil. Thus he overcomes the unnatural conditions, so that he may enjoy the beauty of rare flowers. Stiff, waxy soll may be greatly benefited by an application of broken stone gravel and top plication of broken stone gravel and top dressing of well rotted manure. We may increase the beauty and fruitfulness of our trees by giving them some attention in the way of mulching and so forth. I find late summer cultivation to be a wonderful help to growing trees or shrubs. As a rule we have plenty of moisture up to about July 4 when the unfavorable season causes 4, when the unfavorable season causes many trees to perish. Take the planting of evergreens—I believe 95 per cent of all such trees planted in Kansas die, while as a matter of fact I find no trouble to make 90 per cent of them grow. The same is true of other trees and shrubs. Winter cultivation will help the growth of all forest trees. Such work could be attended to while general farm work is not so great. For single trees a spade is a useful instru-ment. Dig the ground roughly, leaving until spring. The action of the frost is just what the soil needs.

Do not expect any soil to grow too many crops. I have seen people who planted a small city lot full of cotton-woods, and then expected to grow a crop of flowers, shrubs, grass and weeds when the strong growing trees required all the strength of the land. Another illustration: How much corn can a farmer grow within 20 feet or a large hedge fence? The strength of the soil is limited. If any given crops is crowded it must of necessity be stunted, and should the crop be a mixed one, one form of plant life will surely rob its neighbor.

GEO. W. 'TINCHER. Topeka, Kans., Dec. 12, 1900.

Veranda Climbers.

PROF. E. A. POPENOE KANSAS EXPERIMENT STATION.

The genus Clematis comprises some climbers that recommend themselves both by neat growth and by a profusion of rich and often fragrant bloom. The range in these respects is sufficient to meet most demands of plants suitable for training to veranda pillars, as well as for screens to clothe unsightly walls or to hide other undesirable features the view. The Kansas Experiment Station has had the more important plants of this group on trial for several years and the following notes upon the behavior of some of them in this locality are presented as of interest to

growers. Clematis Jackmani, a hybrid form, with reasonable care is fairly hardy and satisfactory. Its flowers are four to six rayed, of a rich velvety purple, and when well grown measure four to six inches across. They are produced abundantly upon green wood of the season's growth, either from buds on old wood or from the crown of the plant after the old wood is killed back by the winter. It is best grown with an

eastern or northern exposure, and wherever placed should be given a good bed of rich black loam, with winter protection for the roots in the winter protection for the roots in the form of a heavy mulch of well-rotted manure. The wood sometimes lives through the cold weather without serious injury, but it is better to lay down the vines and protect them with a good covering of clean soil, leaves or hay. Upon replacing the vines in the spring all weakened parts should be cut off, and for the largest flowers the sound branches should also be cut well back. This is the most satisfactory of the hybrid Clematis varieties.

hybrid. Clematis Henryi, another bearing six- or seven-rayed flowers, creamy white and of the largest size, is a free bloomer and a striking plant, but has shown itself much less hardy here than the preceding under the same treatment. Its general growth and cultural requirements are the same. Its showy and abundant bloom render it worthy to be grown in large pots or tubs, for veranda decoration, the plants being removed during winter to a cool cellar to prevent injury by frost. Clematis Viticella, a species native

to southern Europe is grown with fair to southern Europe is grown with lair success. It is moderately vigorous, with lilac or purple flowers, four-rayed, spreading about two and one-half inches. Where variety is desired this species may be admitted, but for display it is quite inferior to its hybrid, Jackmani, and is little superior to it

Clematis Viorna, the "leather flower," native to the eastern United States, varies in the Southwest into the more beautiful red flowered form Coccinea. The form is a slender vine of neat growth with solitary bell-shaped flowers about an inch in length. When well grown the plant attains a height of eight feet, and by its clean habit is well adapted to the purposes of a pillar plant. It is only of moderate hardiness, demanding a favorable situation and winter covering.

Clematis Pitcheri, growing wild in

copses throughout eastern Kansas, while somewhat less neat in growth than the preceding, is greatly improved under cultivation, and deserves a place in every collection. Its flowers are single, bell-shaped, about an inch in length, and of a dull purple color, followed by conspicuous silky clusters. It is perfectly hardy.

Clematis Flammula, the European fragrant "Virgin's-bower," has shown itself with us a very desirable wall The growth is strong and in plant. The growth is strong and in protected situations nearly or quite hardy, furnishing, in average seasons, its pure white, star-shaped, fragrant flowers in great profusion throughout late summer. The foliage is of a healthy rich green, the leaves remaining on the plant until midwinter. After flowering the plant is still conspicuous by reason of the abundant feathery seed-clusters. seed-clusters.

Clematis Paniculata, a Japanese species much like the foregoing, is apparently still more vigorous and hardy, and on account of the large flowers, also more beautiful. Since its introduction it has become a great favorite as a varanda or wall climber, and it may be seen in good condition in many city and country places in eastern Kansas. The flowers being produced upon new growth, the best results are produced by close pruning, where the wood survives. This species and the Flammula do well when fully exposed to the sun, if their roots be in soil rich, deep and cool. Where but a single Clematis can be grown the Paniculata will prove the most satisfactory in ordinary treatment.

Clematis Virginiana, or "Native Virgin's-bower, grows wild in some of the eastern counties of this state, forming eastern counties of this state, forming a strong woody vine of rampant growth, perfectly hardy in good soil. It is useful as a sceen plant, though in bottom. ful as a sceen plant, though in beauty much inferior to the two preceeding. Its abundant flowers are small, and creamy white, and are followed by numerous feathery seed-clusters. It spreads naturally by layering, and may soon be brought to cover a large space, appearing to greatest advantage in the less formal parts of the lawn, as on a rocky slope or against a rough wan. From such a base it will climb upward into the lower branches of an overhanging tree, when its true use and beauty are fully apparent.

Is a Timber Famine Imminent?

In the manufacturing investigations of the Eleventh Census, made in 1890, lumbermen and mill owners were asked how much timber land was owned by them, and what was the stand of timber upon it. These questions were quite generally answered, and the replies showed that a total area of 27,664,626

acres, or about 43,200 square miles, was reported upon, with an average stand upon it of 7,830 feet per acre. Nearly all of this area was in the Eastern States. The stand of timber averaged by states ranged from 3,000 up to 41,000 feet per acre, the latter stand being in the state of California. The average stand in the Southern States, including pine and hardwood, was 6,000 feet, and in New England 6,500 feet. These figures of average stand, however, are mis-leading, since they represent not the average of the timber land of the country, but the best of it, quality having largely determined the selection of lands. It would, therefore, be unsafe to accept these figures of stand as the average, even for the lands which are covered with merchantable timber. The average stand of the wooded regions of the eastern country must be far below these figures. Indeed, estimates of the stand of southern pine show the much lower average of about 3,000 feet per acre for the entire region.

"Judging by the above facts and num-erous other straws of evidence which it would be tedious to enumerate here," says Henry Gannett, in the October Forum, "I have come to the conclusion that the average stand upon the wooded lands in the East probably does not exceed 1,500 feet. The area of woodland in this part of the country is a little less than half a billion acres. The stand of timber upon it, therefore, may be in the neighborhood of 750 billion feet (B. With that estimate in the West, 630 billions, the total stand in the country would appear to be, approximately, 1,380 billion feet (B. M.). In 1890, the cut was about 25 billion feet, and since then the annual cut has somewhat increased. The present stand would therefore supply the present rate of consumption for about fifty years. As a random statement, then, it may be said that we have timber in stock sufficient to last the present demands of our industries for nearly two generations. Some species, however, which are applicable to certain purposes, such as the southern pine, the redwood, and the red fir, will last longer than others, and some species, like the black walnut and the white pine, are already very nearly exhausted."



R. M. Kellogg, Three Rivers, Mich. The Newly Elected President of the Michigan State Horticultural Society.

Mr. Kellogg was unanimously elected resident of the Michigan State Horticultural Society at its recent annual meeting in recognition of the work Mr. Kellogg has done for horticulture in levating the standard in fruit growing

throughout the country.

His book entitled "Great Crops of

The old time fruit growers were slow to accept these theories, but now after repeated trials and scientific investigation by the Agricultural Department at Washington as well as many state experiment stations, it is shown that Mr. Kellogg was not only correct in theory but results of his methods were greater and more far reaching than he claimed.

Mr. Kellogg is well known to Kansas readers because of his advertising announcements every season in the Kansas Farmer for several years past.

Seeds that Surely Grow.

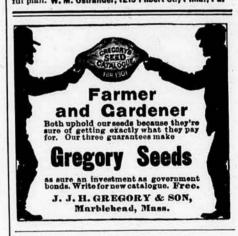
The cost of seeds compared with the value of the crop is so small that a few cents saved by buying second rate seeds will amount to many dollars lost when the harvest is gathered. Farm ers have found out by many costly Kansas Farmer.

failures what a risky thing it is to buy seeds without being pretty sure that they are reliable and true to name. The latest catalogue of the seed house of D. M. Ferry & Co., of Detroit, Mich., is a reminder that thousands of farmers in the United States and Canada have pinned their faith to the reputation of this great firm. During a business career approaching half a century in time Ferry's seeds have won an an-nual increase in popularity, which is perhaps the best evidence that they grow and give satisfaction. Ferry's Seed Annual for 1901 is a useful guide in selecting seeds for the farm, the truck garden and the flower garden. It is sent free on application.

The city of Worcester boasts the proud title of "The Heart of the Commonwealth." It boasts a noble history and its life to-day is one of great energy. It is an immense manufacturing center, with business interests more varied than those of almost any other city in New England. Its educational life is noteworthy, its institutions of learning, from its public schools to Clark University, being such as any city might well be proud of. It has had a long line of distinguished sons and citizens from its foundation down to the times of George Bancroft and George times of george Ballerott and George F. Hoar. It is altogether a representa-tive New England municipality. A gen-eral article upon such a city could not fail to be interesting and valuable; and emphatically so is the article upon Worcester by Hon. Alfred S. Roe in the January number of the New England Magazine. The past and the present of the city have equal treatment, the pages abound with attractive pictures, and the article will appeal to every son and daughter of the "Heart of the Commonwealth."

Mr. R. Bradley, of Abilene, Kans., is placing on the market for introduction a new Kansas peach called "Dean's Orange." It is a yellow free stone, a sure reproducer, and is reported to be of high quality. It was originated in Saline County and is especially adapted to Kansas conditions. For further information write to Mr. Bradley.

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Geo. S. Josselyn

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A. H. DUFF, Larned, Kansas.

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In the Dairy.

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

Cost of Keeping a Cow.

The cost of feed varies greatly in different seasons and in different localities, and it would be impossible to lay down any arbitrary figures in dollars and cents. It is no more than right, however, to charge the cow with feed at the price at which it would be sold on the local market minus cost of on the local market minus cost of hauling. This of course does not include any fertilizing value where the feed is consumed on the farm. Where common cows are fed a balanced ration and given practically all they will eat the Kansas State Agricultural College found that the herd of 28 cows consumed an average of 2,350 pounds of grain and 6,166 pounds roughness per cow per annum. At the prices prevail ing in Manhattan during the year 1898 and 1899 the average cost of this feed was. \$29.86.

But the cost of feed is not the only item to be considered. Labor is an important factor. In reply to a number of requests sent out by the Kansas experiment station to practical diarymen asking for information upon the number of cows kept and the time it took to milk, feed, clean the stables, and wash milk utensils, it was found on the average that it took 125 hours per cow per annum. Figuring this time at the low price of 10 cents per hour, it will cost \$12.50 per annum to care for a cow. The value of the dairy cow is at least \$40, the interest at 8 per cent would amount to \$3.20. In averaging up a herd account must be taken of the risk of failure of cow to breed and the loss of calves by death. In the absense of records on this point from dairymen we will call this cost \$2.75 per annum. The estimated loss in raising beef cattle as given by J. D. Gillet, the king feeder of the last generation. We will assume that the calf is worth \$20, figuring skim-mlk at 15 cents per hundred pounds, grain at ½ cent per pound, hay at \$3 per ton, labor \$2.75, we have found at the agricultural college that it will cost \$9 to raise a calf until it, is 6 months old.

Adding together the cost of labor. the interest on the money invested, the loss from the failure of the cow to breed, and the loss of calves by death, and the cost of raising the calf until 6 months old we have a total of \$27.45. Subtract from this the value of the calf (\$20), and we still have \$7.45 charged up to the cow; that is to say, a dairy cow, to be really profitable, all things considered, must produce dairy products to the amount of \$7.45 above the cost of feed.

D. H. O.

Some Conditions Necessary for a Successful Creamery.

J. H. STEARNS.

Conclusion—In conclusion let me say that the establishment of creameries in our midst will tend to the promotion of thrift, enterprise and intelligence and increase the prosperity of all that comes within the range of their influence. Good habits are catching, as like begets like, so thrift begets If A is seen to prosper, B, C, and D begin to inquire the cause there-of, and if it is found that the cows he keeps is a factor in his success they too will want such cows. If his treatment of them is another factor they will learn to give theirs the same. If the learn to give theirs the same. uses to which he puts them is still another factor they will hasten to do likewise. In doing all this, they will learn that the battles of life are not won on the street corner or at the grocery stores, or their situation improved by growing a crop of dumps or blues while sitting around the family fireside.

Good cows and good dairymen are the two essentials to success. On these two hang all the law and the profit. But good cows and dairymen are in a large sense the products of evolution, and I know of no good reason why they may not be evolved right here in Linn

All great industries require time for complete development and especially so when a large number of persons have to be educated minutia pertaining there-

Cream L Separators

are placed on ten days' approval and sold under strong guarantee. Capacities, 100 lbs. to 3000 lbs. per hour. Prices. \$40 to \$500.

Hints on butter making and catalogue free U. S. BUTTER EXTRACTOR OO., 221 Orange St., Newarle, N. J.

to. At present there are very few farmers in the country who have had the training along the line of dairying which leads to the goal of sure success. Hence discouragement, partial failures and even complete failures may for a time be expected. But over all these grit, enterprise, intelligence will ride triumphant.

Manufacturing Milk Compared with Manufacturing Soap and Camphor. O. A. SEATON.

Now we come to the question, "How do you feed your cows?" Well, that de A young cow, that is worth pends. keeping for a milker, should have differ-ent food from an old one that has been listed for the butcher. The food you give them makes meat or milk, beef or butter and it makes heat. milch cows is not quite like making soft soap, but it is very much, if not exactly, like making camphor. All the ladies understand that if you use too much lye, or grease, or water, either one, you don't make any soap, and the mixture isn't salt or sugar either. But in making camphor, if more gum is used than the alcohol will dissolve, or cut, the excess of gum is useless, and if more alcohol is used than is needed to cut the gum, the extra alcohol is wasted, though neither one injures the cam-phor. So if you feed the cows more of the carbohydrates than is necessary for the protein they eat the extra carbohydrate is practically wasted. There is very little danger of your feeding too much protein, for it is more expensive, but if you should it would be like putting more gum in good camphor.

There are some other facts that strike me very forcibly which many farmers do not seem to realize, or at least do not live up to: It costs no more to feed cattle on food that is bought than on the same kinds that you have raised. There is just as much profit in feeding 35 cent corn and \$5 alfalfa that has been bought, as in feeding 35 cent corn and \$5 alfalfa that you have raised. And it would be much better to sell some corn and prairie hay or straw to buy bran and alfalfa than to feed only corn and prairie hay and straw. Bran, oats, alfalfa, etc., produce red meat and milk, while corn, cane, hay, etc., are more especially adapted to furnish tallow and heat.

What is milk? Perhaps you might answer as a school boy once did when asked "What is salt?" He said: "Why, salt is just salt." He had no idea salt was chloride of sodium, or anything else than just salt. Many persons appear to think milk is just milk, or, at most, water colored white, but the fact is milk is composed of many substances, —phosphates, chloride of potash, soda lime, magnesia, etc. According to good authority the milk a first rate cow will give in a year contains 285 pounds fat, 376 pounds milk-sugar or lactose, 220 pounds casein and albumen, 49 pounds ash and about 2 4-5 tons water.

Under a microscope milk is said to appear as a clear fluid with fat globules incased in casein, floating around in it, thick as gruel. Milk is a complete food. It contains all the elements necessary for the perfect growth of the animal body, whether that body belongs to a human or a brute. It contains all the protein, carbohydrates, fat, ash and other jaw-breakers that are necessary to make it a balanced ration. And there are very few other things except milk and green grass that, taken alone, are balanced rations. Milk is not only food, but it is a medicine as well. It is much used in hospitals, and the cream is especially valuable in place of cod-liver oil for consumption. I have seen a statement that milk has been kept perfectly fresh and sweet for five or six years, but I believe it would not be hard to convince a creamery man its patrons do not understand the process.

A strange thing about milk to my mind is the fact that the cream seems to rise to the top of the milk in the cow's udder, somewhat the same as when set in the pan. The first milk drawn comes from below, the last, or the strippings, from above and a pint of these same attributes. of those same strippings contains about three times as much butter fat as the same quantity of milk first drawn.

Now it is plain to be seen a cow can not produce all of the substances in milk for nothing. In fact she can con-

milk for nothing. In fact she can create nothing at all. But she will select, from the cheap feeds given her, the materials necessary and combine them into meat or milk as you wish. "Yes," you will perhaps say, but "how do you feed your cows?" Well, I aim to feed "Yes," them all they will eat, all the time. Sixty per cent of all a cow can eat is required to sustain her body, without making any gain. If no more is fed that much good food and the labor are

thrown away. If fed all she can digest there ought to be a profit to the amount of the milk or meat the 40 per cent of the food eaten will produce. In summer they have all the green grass they want, and nothing else, ex-cept salt and water, when the grass is good. Perhaps the good Lord has created something better than plenty of good grass for milch cows, but I doubt it. I have tried graining cows on grass and summer feeding steers on good pasture, but have decided the grain is nearly thrown away. But, as soon as the grass becomes scarce or old and tough, give them something else to help out. Don't, under any circumstances, let the cows shrink in their milk, if you can help it. Any one can pull a loaded wagon down hill, but it takes a long, strong pull, with no let up, to get it back again. So it is with milch cows: Any one can make them shrink in their mess, but the best feeders, with their mess, but the best feeders, with their choice of feeds, have a long, tedious struggle to get them back to their best flow again. In fact I have come to the conclusion that, if the average cow is full-fed all the time, she will shrink a structure of all that little every month in spite of all that can be done. Of course, cows poorly fed in the spring will increase when put on good pasture, and, if half starved through July and August, when the flies torment them nearly to death, they will improve in their milk when they go on the green wheat in the fall. what I am trying to get at is the fact that it is natural forthem toshrink You don't have to worry about that. You can put in your best licks to keep them from it and only partly succeed. But it is much easier and very much more profitable to keep the milk flow up, as well as you can, than to bring it back after it is gone down, like Mc-Ginty, to the bottom of the sea.

Good pasture is all right, but, when it begins to fail, is the time to begin to feed. What is the use of letting cows go hungry in summer more than in winter? A little alfalfa hay every day, or some green sweet corn, is the best thing I have found to help out the pas-

In winter we feed as much of a variety as is convenient, but change carefully from one kind of food to another. The cows have all the roughage they will eat.

Corn-fodder, or millet and alfalfa hay, cut before the seed is formed, is my choice for roughness though any kind of straw or fodder will be greedily eaten occasionally for a change. If you have any kind of roughness the cows do not seem to relish, just build a shed of it, making the backs and ends four feet thick and you will doubtless change your mind about their not liking it by the time they have eaten their way through it a few times.

The grain fed is ground wheat, oats, corn, rye and Kaffir-corn with bran, each cow is fed by herself, and the amount of each kind of grain regulated by my idea of the cow's needs.

When first put upon grain, we begin with two quarts of chop at each feed and gradually increase the quantity until each cow has about all she can clean up, giving more oats and bran to young heifers and fresh cows and more cornmeal to old cows and strippers that are intended for beef. All grain is fed dry. Wetting the feed, or feeding slop, has been no good for me.

We feed the grain while we milk, though some persons object to the practice. It seems to me that if ever a cow feels in a good humor it is when she is eating a liberal feed of chopped grain, and if she is contented she will give down all the milk she happens to have with her. And it seems more than likely she will notice the bite of the flies less, and, of she has a cracked teat, she will pay less attention to it than she would if she had nothing else to think about.

After we are done milking we feed any cabbage, turnips or other food that might give a rank taste to the milk.
We intend our cows to have all the

salt they will eat, to increase the milk flow by aiding digestion and as a preventive of derangement of the stomach to some degree. And, if for no other reason because they seem to enjoy it so much.

Publishers' Paragraphs.

Attention is directed to the new advertisement of McBeth & Kinnison, Garden City, Kans., who make a specialty of alfalfa and other forage crops. This firm has had experience with alfalfa since its first introduction in Kansas, and consequently are recognized as an authority on the subject. Write them for anything you want in the way of seed or any information pertaining to alfalfa culture.

The Pierce-Williams Company, South

SAVE \$10. - PER COW

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Haven, Mich., are making a first-class quality of fruit and vegetable baskets and boxes. These packages are very strong, light, convenient, and attractive in form. Carefully and safely packing a shipment materially increases its value; but the packages sent out by this company are so neat and attractive in appearance that the fruit in them brings better prices and sells more readily in market. If you are a shipper—large or small—write for their free catalogue. You will get better returns if you pack properly.

J. B. Armstrong's famous seed corn distributing establishment at Shenandoah, Iowa, is to be found represented in Kansas Farmer this week. It is the opening shot of the seed corn campaign and its echoes should be heard all along down the line throughout the farming sections of the country. Kansas is essentially a corn growing state and it is little wonder that enterprising growers of the best improved varieties of field corn should seek a market for their wares in this land of sunshine and rich soils lying within the boundaries of Kansas. As many Kansas Farmer readers know, Armstrong's Pleasant Valley Seed Corn Farms are located in the fa-mous Nishnabotna Valley country of southwestern Iowa, a section of country eculiarly adapted to the development of the best there is in the genus corn. The distribution of the stores of seed here housed in early fall, and carefully gone over and sorted and dried, and finally sacked and shipped to customers in all parts of the country, has grown to be a business of wonderful proportions in Mr. Armstrong's hands, insomuch that it now taxes his best endeavors to meet the requirements of his trade. But Armstrong has proved equal to the occasion so far. The finely equipped and commodious establishment at Shenandoah has already put on new life thus early in the season, the sorters or pickers being busy at their work, and the elevators clearing the way. After a while it will be up to the sheller and the sacker and the shipper. The Early Yellow Rose and Snow Flake White are the two principal and popular varieties propagated on the Armstrong farms. A visit to the place recently by a representative of Kansas FARMER was full of interest. It showed large stocks of good corn from which the 1901 seed crop is to be selected. It was also found that Mr. Armstrong has carefully prepared for the use of his customers, both old and new, a complete catalogue, rich in illustrations and replete with the sort of information that should come home to all good farmers who are seeking to make the most of the greatest and most important crop known to American com-merce. The enclosing of a red stamp to help pay postage will secure this fine catalogue. This 1901 catalogue does not stop with corn. It gives room to information regarding fine varieties of oats and wheat as grown by Armstrong. You will be interested in every feature of this excellent and complete catalogue. When you write for it or any other information please mention the KANSAS FARMER.

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The Poultry Hard

Automatic Chicken Waterer.

EDITOR KANSAS FARMER: -I have been a reader of the FARMER only since January last. I read and examine the descriptions and cuts of farm appliances and conveniences very carefully. I want to tell its readers how I made an automatic chicken fountain. I will describe how I made mine. Others may vary according to the material at hand.

First-I sawed off the end of a barrel, between first and second hoops, for a trough. I then stood old staves up around the trough about 2 inches apart fastening each with a shingle-nail. I then drove a hoop over trough staves and all to hold them fast. The object of the staves is to keep little pigs, dogs, or even chickens from getting into and mussing up the water. They need not be over 2 feet high.

Second—Take a small keg, with both ends in, bore a hole in one end, which I shall call the bung. Bore a 5-16 hole in the side at same end between first and second hoops, which I shall call the vent. Now-fill keg with water (stick a plug in vent as soon as keg is full so no water can run out), put a finger over bung and turn keg upside down in trough and remove plug from vent be-fore taking finger from bung, when the water raises in trough high enough to close vent it will stop. The keg should be set so the vent will be closed just before the trough runs over. When vent hole can be seen above water the keg is empty. The above will work perfectly when once adjusted.

A hog waterer may be made in the A nog waterer may be made in the same way by using a barrel and setting it in a shallow box just as big square as the diameter of the barrel; the hogs drinking at the four corners. If the waterer is filled only every two or three days it will be processed. three days it will be necessary to fill the chine on the upper end to keep it from drying out. If the keg leaks air it will not work. H. A. NORRIS. Clifton, Kans.

Feed and Care of Belgian Hares. EDITOR KANSAS FARMER:-From the

great number of inquiries on the care of Belgian hares, it would seem that many people think the handling of these pets a very complicated matter. This, however, is not the case at all. I have been a pet stock breeder for 25 years, and my Belgian hares are the least trouble, and I may say the least expensive to me, of any pet stock I have ever handled. If my Belgian hares can get a little clover hay, or leaves from the fruit trees, and a few twigs to strip the bark from, they are happy. I feed my hares grain twice a day, morning and evening. I also give them water in vessels large enough to hold the required amount to last them all day. Hares will eat about any kind of grain, but oats is their preference.
Unlike most of other pet stock, you can not over feed Belgians, as they will take a full meal from the feeders, and at the proper time will return and take another full meal, and so on until the feeders run empty. But I would not recommend this way of feeding. About the only thing we must be careful about the next to change from dry feed to green is not to change from dry feed to green feed in heavy quantities, for a case of diarrhoea will frequently result. Carrots make a good change in winter, but feed them sparingly. Alfalfa-clover hay is perhaps the best hay, but red clover will answer, and also bokhara clover. Quite a good many keep their hares in common dry goods boxes (that is among the beginners), but I do not like the "dry goods box rabbitry." Better use some out-house that has a floor, and divide this floor space off into hutches 4 or 6 feet square, with a board in bottom a of 1-inch wire netting for partitions. These hutches will accommodate a doe

hutches compels it. Larned, Kans.

Feeding for Winter Eggs.

and her young, or several grown hares,

but must be kept clean. Have plenty of light in the building, and by no

is not necessary to make outside runs, unless the crowded condition of the

A. H. DUFF.

means confine them in dark places.

C. H. WISE, IN NOR'-WEST FARMER.

The great ambition of everyone who keeps hens is to be able to procure eggs during the winter months. The accomplishment of this is the most advanced step in poultry culture. Every-one can have eggs during spring and summer, but to get them during winter is the question that is having great consideration. The first thing to be considered is, have you fed your grow-ing stock with winter eggs as the ob-ject in view? The food consumed by

the hen furnishes feathers, flesh and warmth for her body. The replacing of her feathered coat in the fall calls for an increased supply of the proper food. If this is furnished, the conditions of nature continue in their natural course; if not, some of the tissue supply that is stored for an emergency must be consumed a debilitated according must be consumed, a debilitated condimust be consumed, a definition must result and count against the future winter eggs. If properly fed and cared for during molting period, the old hen as well as the pullet returns more quickly to a normal condition. The sooner this is accomplished the sooner will they begin egg producing during late fall and early winter.

The main cause for hens failing to

produce eggs is the radical change of their surroundings in winter quarters; it is such as to deprive them of the ab-solute necessities for egg production. reeding on one particular food all the time will not produce eggs. If you pre-fer an exclusive grain diet, give them a variety of grains, and see that they have plenty of litter of some kind on the floors to dig amongst for the grain. Also supply green food of some kind, plenty of clean fresh water, good sharp grit, and animal food such as cut bone.

Consider for a moment the different kinds of food the hen at freedom in summer can find, and supply as nearly as possible the same ration, or its equivalent. The nearer you approach the natural summer food of the roamthe natural summer food of the roaming hen, when she produces eggs without any effort on your part, during the winter months, the greater will be the egg supply. Proper exercise is of the greatest importance. All grain fed in winter should be scattered in the litter such as cut straw or chaff. This continual hunt for grain gives the much needed exercise that is essential for the laying hen. laying hen.

No hen will produce eggs in winter unless she has sufficient exercise to keep her in good health and vigor. Idle hens are mischievous, non-productive, grow fat and are lazy, giving no returns for their food. When we fail to give them inducements to dig and scratch for their food we are responsible for their idleness.

Never put grain in troughs or on the bare ground, for the simple reason that it is soon eaten up and little or no exercise derived from procuring the same.

If they can be kept at work the whole day, digging and hunting for small grain, and by so doing can secure just enough for their wants, plenty of eggs will be the result. Proper exercise is as nccessary as proper food. Some people prefer the feeding of a mash every day during winter, instead of a wholly grain ration. This is all right if you can exercise judgment in feeding it, by not giving too much and thereby coursing giving too much and thereby causing the hens to stand around because they are full and hunger is completely satisfied. Another point that is much discussed just now is the time to feed the mash. Some say the morning, because the birds, after a long night, are empty and want something to digest quickly. Others prefer to feed the mash at night before going to roost, because in the morning they are extra hungry, and therefore more active and willing to scratch for grain, and get thoroughly warmed up by the exercise. I, for my part, always found the best results accrue from the grain ration, viz: Wheat in morning, cut vegetables at noon, and a few scraps and barley and wheat alternated at night, and every other day cut bone at mid-day. Of course, I am taking it for granted that the hens are properly housed.

Now, to sum up the situation, the proper management of our fowls during fall and winter consists in furnishing them as nearly as possible with sur-roundings that at least partially approach the conditions of spring and summer seasons.

likely to be avoided by all except poultry fanciers. Animal food for poultry is usually too hard to get and too expensive to be used on the tarm. But the hens must have plenty of protein if they are to produce many eggs. This they find in various plants and in the many insects devoured in summer. The cheapest and most satisfactory way to supply protein in winter is to give the hens plenty of clover or alfalfa leaves, soy-beans, or cow-peas, or the cured vines of either. — Editor Kansas FARMER.]

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13				992	4.10
	COLC	DATA	מחדם ב	EDG	
99 stk 74	774	4.15	78 fdr	902	3.90
74	830	3.771/2	147stk	842	3.771/2
	IO	WA S	TEEF	RS."	
30	819	4.05	22 fdr	924 560 660 671	3.85
32	659	3.75	36	560	3.60
52	786	2 05	15	671	3.00
24	WE	STER	N CO	ws.	2.10
2	850	3.25	6	1011	2.60
5	866	3.25 2.60	6	650	2.00
	SOU	THWE	ST C	ows.	
1	740	3.00		1080	3.00
11	620	2.75			
TE	XAS A	ND I	NDIA	N COW	S.
27 5 3	897	3.30	23	68	4 2.90
5	624	2.65	4	54	
S	103	TIVE	COV		2.00
6	1996	3 82		128	0 3.75
2 2 3	935	3.75	2	133	5 3.60
2	810	3.75 2.35 2.25	3	106	6 2.50
3	866	2.25	2	98	5 2.40
	NAT	IVE	FEED	ERS	
24	1117	4.60	18	101 110 95 101	2 4.40 2 4.35
6	946	4.30	3	95	0 4.25
24	945	4.00	2	101	5 4.10
	NAT	IVE S	TOCK	ERS	
51	472	4.50	54	80	1 4.15
51	415	4.00	2	85	0 3.50
STC	CK C	ows	AND	HEIFE	RS 02 3.25 00 5.15 05 2.85 et was 5
14	571	3.30	18	100	2 3.25
2	600	3.25	3	ba	5 9 85
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to 10 ce	nts hi	gher.	closin	g strong	g. Rep-
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No.Av. 67270 81264 74246	Pricel	No Av	D-I	A ATRIA	. Delas
67270	\$5.2216	6626	8 \$5.22	16 7523	7 \$5.20 1 5.171/2
81264	5.20	4933	1 5.17	1/2 85:.22	1 5.171/2
74246	5.15	8119	3 - 5.15	7021	8 5.15
7232	5.15		0.15	927	2 5.12½ 8 4.35
81264 74246 7232 9682 8974	5.15 4.30 4.35	24 9 49 9	9 4.30	218	5 3.25
Sheen	Kece	ints. 1	,280.	The mar	ket was
RIPACIV	ana ac	ctive.		sentativ	re sales:
459 Col	lms. 77	\$5.50	199 1	mbs It.lms wes	76 \$5.40
459 Col. 26 lam 6 ewe	bs 87	5.35 2.50	298 T	t.lms	67 5.30
6 ewe	s 85	2.50	5 e	wes	102 2.50
10	92	1.50	25	•••••	80 2.00
7.5	Ch.		14	Stock	
· F	Unic	- U.T.	LIVE	Stock.	to 10 000

Chicago, Jan. 7.-Cattle-Receipts, 19,000. Good to prime steers, \$5.25@6.00; stockers and feeders, \$2.75@4.50; Texas fed steers \$4.00@4.85.

Hogs—Receipts, 38,000. Butchers, \$5.05 @5.35; bulk of sales, \$5.15@5.30.

Sheep—Receipts, 20,000. Good to choice wethers, \$3.75@4.25; native lambs, \$4.00@5.75

St. Louis Live Stock.

St. Louis, Jan. 7.—Cattle—Receipts, 4,-000. Native steers, \$3.25@5.50; stockers and feeders, \$2.40@4.50; Texas and Indian steers, \$3.40@4.55.

**Eeers, \$3.40@4.55.* Hogs—Receipts, 8,500. Pigs, \$5.50@5.55; butchers, \$5.20@5.30. Sheep—Receipts, 600. Native muttons, \$3.50@4.25; lambs, \$4.25@5.75.

Omaha Live Stock.

Omaha, Jan. 7.—Cattle—Receipts, 1,500. Native beef steers, \$4.00@5.40; western steers, \$3.75@4.40; Texas steers, \$3.00@3.75;

steers, \$3.75@4.40; Texas steers, \$3.00@3.75; stockers and feeders, \$3.00@4.50.

Hogs—Receipts, 4,200. Heavy, \$5.15@5.22; bulk of sales, \$5.12½@5.17½.

Sheep—Receipts, 4,000. Fed muttons, \$4.00@4.40; lambs, \$4.25@5.40.

Kansas City Grain.

Kansas City, Jan. 7.-Wheat-Sales by

sample on track:

ample on track:
Hard—No. 2, 69½@71c; No. 3, 68@69c.
Soft—No. 2, 72½c; No. 3, 70@72c.
Mixed Corn—No. 2, 34½c; No. 3, 34¼c.
White Corn—No. 2, 36c; No. 3, 35½c.
Mixed Oats—No. 2, 24c; No. 3, 23½c.
White Oats—No. 2, 26c; No. 3, 25@25¼c.
Rye—No. 2, nominally 47¼c.

White Oats—No. 2, 20c; No. 6, 25025 20c; Rye—No. 2, nominally 47½c. Flaxseed—\$1.45. Prairie Hay—\$5.00@10.00; timothy, \$6.00@ 11.00; alfalfa, \$8.00@10.00; clover, \$8.50@9.00; straw, \$4.25@4.75.

Chicago Cash Grain.

Chicago, Jan. 7.—Cash Wheat—No. 2 red, 76@79c; No. 3, 73@75c; No. 2 hard winter, 70%@75c; No. 3, 70@74c. Corn—No. 2, 37½c; No. 3, 37¼c. Oats—No. 2, 24@24½c;

80. 3, 231/2024c.
No. 3, 231/2024c.
Futures: Wheat—January, 75c; Feb-Futures: Wheat—January, 75c; February, 75%@75%c. Corn—January, 36%@37c; February, 37%c; March, 37%c. Oats—January, 23%c; May, 25%c.

St. Louis Cash Grain.

St. Louis, Jan. 7.—Wheat—No. 2 red cash, elevator, 73%c; track, 76½@73c; No. 2 hard, 72½@73c. Corn—No. 2 cash, 36½c; track, 37½c. Oats—No. 2 cash, 2½c; track, 25@25½c; No. 2 white, 27½c.

Kansas City Produce.

Kansas City, Jan. 7.-Eggs-Fresh 17½0 doz.

Butter—Creamery, exira fancy, separator, 21c; firsts, 18c; dairy, fancy, 16c; packing stock, 11c; northern cheese, 124c; Kansas and Missouri, 114c.

12½c; Kansas and Missouri, 11½c.
Poultry, Hens, live, 6½c; roosters, 156
17½c each; spring chickens, 7c; ducks,
young, 6½c; geese, young, 6c; turkey
hens, 6½c; young toms, 6c; pigeons,
50c doz. Choice scalded dressed poultry
ic above these prices.
Game—Wild ducks, Mallard, redheads
and canvasback, \$2.50@3.00 per dozen;
mixed, \$1.50@1.75; rabbits, 50c; squirrels,
50c.

Potatoes—Home grown, 30@40c; Colorado, 85@90c; northern, 55@70c; sweets, 25@35c per bu.

per bu.
Apples—Fancy, \$2.00@3.00 per barrel.
Cranberries, \$8.00@9.50 per barrel.
Vegetables—Green beans, home grown,
\$1.00@1.25 bu; tomatoes, California, \$2.25 per crate. Navy beans, \$2.20. Cabbage,
home grown, \$1.00@1.25 per cwt. Onions,
\$1.10@1.25 per bu. Cucumbers, \$1.50@2.50 per
doz. Egg plant, Florida, \$2.00@2.50 per doz.
Hubbard squash, \$1.00@1.50 doz. Celery, 20
@40c doz. Cauliflower, Long Island, \$3.00
per doz: California, per crate, \$3.00.

THE MCINTOSH & PETERS

per doz; California, per crate, \$3.00.

Live Stock Commission Co

EXCHANGE BLDG., KANSAS CITY STOCK YARDS.

They give any bank in Kansas City or Topeka for ref erence. Furnish market reports to feeders and ship-pers gratis, and will be glad to furnish any desired information at any time covering their market or its

Special Want Column

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

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.

FARMS AND RANCHES.

FARMS FOR RENT—160 acres in Leavenworth County, 3 miles from railroad station; 140 acres in cultivation, remainder prairie grass meadow; four-room house, comfortable stable, good well.

280 acres in Leavenworth County, 1 mile from railroad station; 100 acres in cultivation, 20 acres clover, remainder pasture. Never-failing stock water in pasture; four-room house; barn for 8 horses; large, wholly enclosed cattle shed; specially adapted for cattle or sheep farm. The Helmers Mfg. Co., Leavenworth, Kans.

worth, Kans.

350-ACRE RANCH—Do you want a strictly choice property in this line—all Kaw bottom land, 40 miles west of Topeka, one mile to U.P. Railroad, a farm with all conveniences for cattle and sheep feeding, with breeding pens for fancy hogs? When adjoining property yields as high as 20 per cent to investors under tenant's care? Twelve acres of timber protection, 20 acres of alfalfa fenced hog tight, 3 corralls for 1,000 head of cattle, 150 plank bunks, windmills, scales, tanks, and hydrants, 40 horse-power grinding plant and elevator with capacity of 1,000 bushels of shell, 500 bushels of corn. Two good dwelling houses, with all necessary out buildings. Easy terms. Cut out this ad. If you wish to investigate. Address Box 306, Wamego, Kans.

FOR SALE—One good improved farm of 320 acre in Sheridan County. B. D. Schlicher, Hoxie, Kans.

160-ACRE improved farm in eastern Kansas; snap; \$16 per acre. G. E. Winders, Ottawa, Kans.

FOR SALE—Fine ranch of 880 acres on prong of hundred acres in fine cultivation, balance prairie grass, perennial water. Good barns, scales, cribs, and timber shelter. Large frame farm house, lately new. Two and one-half miles from railroad depot of Hiattville. Reason of sale, sudden total blindness of owner. Value \$25 per acre, one-half cash, one-half in 10 years at 5 per cent semi-annual interest. Address E. F. Ware, trustee, Topeka, Kans.

STOCK FARM WANTED—I want for a customer a stock farm of from 400 to 640 acres. Must have fair buildings, fences, and not over 5 miles to railroad station, and not more than 100 miles from Topeka, south or southwest preferred. These parties have about \$8,000 in good residence property in Topeka to trade for a stock farm that suits. Will send full description on upplication. Address, John G. Howard, Land Dealer, Topeka, Kans

HORSES AND MULES.

GYP FOR SALE—Thoroughbred Shetland stallion lack, beauty; pargain. A. Docking, Manhattan

FOR SALE—Fine combination saddle and harness stallion, 16 hands. 1,100 pounds, coming 4 years old, shows all the saddle gatts. Will make twice his cost next season. F. H. Foster, Mitchell, Kans.

JACKS FOR SALE—At a bargain—10 big, black, mealy-nosed jacks; also 5 registered stallions. Address S. A. Spriggs, Westphalia, Kans.

CLYDESDALE AND HEREFORDS—I have one very fine stallion, coming 3 years old in the spring; also 5 Hereford bull calves, April calves, large, growthy fellows. My stock is all recorded. Write for prices. J. B. Osburn, Erie, Kans.

FOR SALE—Cleveland Bay stallion, 6 years old, works in any place Also a 3-year-old Spanish jack; a good one. Price \$400. One and two years time given. J. C. Hyde, Sedgwick, Kans.

FOR SALE OR TRADE—Two black Percheron stallions, and two fine black jacks. Write me. or come and see them. W. Q. Hyatt, Carbondale, Kans.

FOR SALE—Draft stallions at a bargain. For particulars, call on or address A. I. Hakes, Eskridge, Kas

FOR SALE—The Percheron stallion Beldemeer No. 14927. Black with small star, 10 years old, weight 1860. Isined by old Brilliant 1217 (755) (winner at World's Fair). Beldemeer is sound; weighs 1850 pounds, is a fine breeder, a good individual and a great shod horse. Also 2 standard bred stallions. An imported French Coech stallion and Jack. Do not write, but if you want to buy come and see them soon at my barn, 218 West Fifth Avenue, Emporia, Kans. W. H. Richards, V. S. FOR SALE-The Percheron stallion Beldemeer No

PROSPECT FARM—CLYDESDALE STALLIONS, SHORTHORN CATTLE, and POLAND-CHINAHOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kans.

Ship Your Produce Direct.

There is no way to get full value for your produce except by shipping direct to market.

The fewer hands the products of the farm passes through before reaching the consumer the more profit there is for the producer.

WE DISTRIBUTE DIRECT TO THE CONSUMER.

We receive and sell-

We receive and sell—
BUTTER, ECGS, VEAL, POULTRY, CAME, FUR, HIDES, PELTS, WOOL, POTATOES,
SEED, BROOMCORN, POP CORN, BEANS, HAY, CRAIN, GREEN AND DRIED FRUIT
of all kinds, or anything you may have to dispose of. We Guarantee Prompt Sales and Quick
Beturns for all shipments, also full Market Price and Full Weight. We guarantee to get you
more money for your product than you can get at home. One shipment will convince you of this
fact. We are reliable and responsible; you run no risk in shipping to us; have been established
bere for 27 years. Write us for prices, shipping tags, or any information you may want.

SUMMERS, BROWN & CO., COMMISSION MERCHANTS AND RECEIVERS FOR THE PEOPLE,

Reference, Produce Exchange Bank, Chicago, and this paper. 198 S. Water St., CHICAGO.

CATTLE.

FOR SALE—Ten head of registered Hereford calves, 10 months old—4 bulls and 6 helfers, for \$100 per head, Write for description. D. V. Turner, Frederick, Kas

FOR SALE—75 high grade Hereford bull calves, age 7 to 12 months, extra firm; 22 head registered Hereford bull calves, 8 months old; 15 head registered Hereford heifer calves, 8 months old; 15 head registered Hereford heifer calves, 8 months old; 12 high grade Hereford bulls, 18 months old; 15 high grade Shorthorn bulls, 18 months old; 55 high grade Hereford heifers, 7-8 to 15-16 bred; 10 registered Shorthorn bulls, 8 to 18 months old; 6 registered Shorthorn heifers, 2 years old, bred; 4 Shorthorn heifer calves, registered, 7 to 8 months old; 10 high grade Shorthorn bull calves. Prices reasonable. This stock is all high grade and registered animals from the best families. Louis Hothan, proprietor, Carbondale, Kans.

REGISTERED HEREFORD BULL CALVES—For sale; nearly I year old; good ones. Write or come and see them. H. B. Clark, Geneseo, Kans.

BULL FOR SALE—I offer for sale King of the Roses, a 4-year-old Shorthorn bull, deep red, fine breeder. Bred by Hon. G. W. Glick, sired by Winsome Duke 11th, whose portrait appeared December 13 in the lowa Homestead. King is head breeder and bred in the blue. C. W. Sample, Kingman, Kans.

TWO SCOTCH-TOPPED Shorthorn bull calves sired by Glendower, and out of pure Bates cows. Also a fine lot of B. P. Rocks, both sexes; some nice show birds. I have won more prizes on B. P. Rocks than any other breeder in central Kansas. F. W. Ross, Alden, Rice County, Kansas.

REGISTERED SHORTHORN BULLS—Quality best, prices low. M. C. Hemenway, Hope, Kans.

FOR SALE—Five registered Holstein bulls, als high grade Shropshire rams and ram lambs. E. W Melville, Eudora, Kans.

SWINE.

FOR SALE—My herd boar, Wren's Model 17400, sired by Klever's Model 14684; good animal, sound and in fine condition. Will sell cheap, because I can use him no longer. Geo. M. Pierce, Station D., Topeka, Kans. Farm one mile west of Seabrook.

FOR SALE—A few very choice Poland-China and Berkshire gilts, bred. Also four young boars. O. P. Updegraff, Topeka, Kans.

PEDIGREED POLAND-CHINAS—No better any where; \$5 each. M. C. Hemenway, Hope, Kans.

SHEEP.

FOR SALE—220 one-half and three-fourths bred Shropshire ewes, 1, 2, and 3 years old, unbred and in good condition. Cleland & Benedict, Olpe, Kans.

MISCELLANEOUS.

GUARANTEED DEHORNER—One cent per head; supply for 100 calves prepaid, \$1. Send stamps or check. Sawyer & Co., Syracuse, Kans.

PEACH TREES—\$10 a thousand; wholesale lists. Nursery, Seneca, Kans.

BY MAIL-Strong, well rooted cuttings, Carnations, Coleus, Fuchias, Geraniums, sorts, Salvias, Hellitropes, etc., one cent each; (stamps taken, no order taken for less than 15.) Tyra Montgomery,

WANTED—Alfalfa, Cane, Kaffir-corn. Highest market price. Send samples. Kansas City Grain & Seed Co., Kansas City, Mo.

WANTED—Cane and Kaffir corn in car lots. Send samples and quote prices. McBeth & Kinnison, Gar-den City, Kans.

FOR SALE—Feed mills and scales. We have two No. 1 Blue Valley mills, one 600-pound platform scale, one family scale, and 15 Clover Leaf house scales which we wish to close out cheap. Call on P. W. Griggs & Co., 208 West Sixth Street, Topeka.

FALL OR WINTER BARLEY—Seed for sale, have a very fine quality of this grain for seeding, and it should be tested in Kansas. Price \$1 per bushel or cars at Leoti, Wichita Co., Kansas. Address Jerome Boren, Leoti, Kans.

WANTED-Alfalfa, red clover, timothy, English please correspond with us. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

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

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

:CREAMERY:

For Rent.

At ATCHISON, KANSAS.

Building and Ice House on refrigerator plan, and equipment and cold storage complete. Probably the best creamery plant in Kansas. Rental less object than permanent use. Both steam and electrical power. Six to 12 skim-ming stations are at hand. No such opening now exists elsewhere.

W. W. GUTKRIE, Atchison, Kansas.

WANTED Men to learn barber trade. We teach the work in 2 months, present tools, grant diplomas, and guarantee \$15 weekly when competent. Comparatively no expense. Catalog and particulars free. MOLER BARBER COLLEGE, St. Louis, Mo.

Christian Science cures thousands daily.
Are you sick and has medicine failed to cure you'
Try Christian Science, no matter what and how
bad your troubles are. Send for absent treatments.
Terms, \$3.00 per week; \$10.00 per month. Consultation
free. DR. SCHULZ, Christian Science Heaier, 111 Myrtle Avenue, El Paso, Texas.

160 ACRE FARM FREE.

Send 20 cents and get illustrated Guide, with fine map, describing Colville Reservation, in the balmy state of Washington. Its valleys, plains, springs, timber, streams, fruits, grains, grasses. Use your citizen's rights, and get 160 acres of Government Land FREE. Address COLVILLE LAND GUIDE.

Box 2587, St. Paul, Minn.

..FARMERS' SONS WANTED...

with knowledge of farm stock and fair education to work in an office; \$45 per month with advancement; steady employment; must be honest and reliable; branch offices of the Association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Association London Canada

A HAPPY NEW YEAR TO ALL.



Farmers!

If you have any Fencing to do, the best way to make yourselves happy is to Buy a SUPERIOR FENCE MACHINE and build your own fence. You can have the best fence for the least money, built on the ground to fit. Oatalogue Free. Price of Machine \$4.75 prepaid. Good agents wanted.

SUPERIOR FENCE MACHINE CO., 80 Grand River Avenue, Detroit, Michigan

WORTH THE MUNEY.

Peach Trees Grown from Cuttings.

If you have a fine variety of Peach trees and wish to increase their number without cost of buying more trees, you can grow them from cuttings without any trouble. For fifty cents I will send instructions how and when to plant the cuttings for producing the same kind of fruit as the parent tree. Address—

M. W. ALLEN, Fruit Grower,

Eldon, Miller County, Mo. መመመ የሚያ የሚያ የመመመ መመመ የመመመ የመመመ መመመው መመመው መመመው የመመመው የመመመ የመመመ የመመመ የመመመው የመመመ የ

OFFICIAL STATEMENT OF THE FINANCIAL CONDITION OF THE

AMERICAN BANK

At North Topeka, State of Kansas, at the close of business on the 13th day of December, 1900.

RESOURCES.

Joans and discounts	20,100.00
Loans on real estate	599.42
Overdrafts	300.64
Real estate	8.785.74
Furniture and fixtures	600.00
Expense account	
Cash items, other than reserve	and the same
items	508.17
Cash and sight exchange, legal reserve	Burner .
reserve	12,787.79
Total	\$54 748 26
Total	PUT, 170. 20
LIABILITIES.	

 Capital stock paid in
 \$22,600.00

 Surplus fund
 14.27

 Interest
 5,859.86

 Exchange
 191.83

 Individual deposits
 22,833.16

 Demand Certificates
 3,249.14

Weekly Excursion Sleepers leave Kansas City via the M. K. & T. Ry. every Saturday at 9:05 p. m. for San Antonio, Les Angeles and San Francisco. First Sleeper leaves Kansas City, Nev. Srd.

Kansas Farmer's Handy Guide

Contributed from various sources, including correspondents, sorap-books, and farm papers. Compiled and arraged by J. Clarence Norton, Moran, Kans.

CANNING AND CANS.

canning Tomatoes.—Peel with a sharp knife without scalding. Place enough for a can into a vessel (porcelain is best) leaving them whole. I always select medium sized ones as they will go in the cans without breaking will go in the cans without breaking. Let them came to a boil, which is sufficient to heat them through. Have your can ready, and with a large spoon dip them up one by one and place in the them up one by one and place in the can, shaking it gently to settle them. When full put enough juice on them to cover them, which won't be much if you have shaken them enough. Seal up quickly and keep in a cool place. They keep for me equally well in glass as in tin. All that have eaten or mine procures them equal to the heat canned nounce them equal to the best canned tomatoes on the market. I opened some less than a week ago, and they were as good as when canned, and the beauty of them is they are entirely whole and can be cooked to suit you.

Canning Fruit.—We preserve fruit by means of salicylic acid. This is a white powder which can be purchased at any drug store. It may be dissolved in water, but it is much better to use alcohol. Add 1 teaspoonful of acid to enough water to cover a gallon of fruit. Wash the fruit but do not peel. Place it in jars—two gallons being preferable—and cover with the mixture. Cover the jar tightly and set in a cool place, and you can eat fruit just as picked from the tree at any season of the year. The acid taken in smaller doses is known and used as a remedy for rheum-

[There can be no objection to the use of salicylic acid on the outside of fruits when the latter are afterwards peeled. Possibly the drug may be serviceable as a preservative in many cases in this manner. We will give a very valuable recipe for keeping eggs as good as fresh for months by means of salicylic acid. But don't use the drug with fruit or vegetables in such a way that it has to be taken in the stomach. It is only to be used as a medicine and on physician's prescription. Its use in some countries is even forbidden by law.]

Soda in Canning.—I use a tiny bit of baking soda in canning pie plant in-stead of sugar, and for canning goose-berries and sweet corn. Have never had any spoil.

Canning Corn and Tomatoes.—Get a good variety of tomatoes, scald and peel. Now have sweet corn that is nicely in the milk, shave from the cob, taking care not to cut too deep. Cook together, fill your cans, seal carefully, and if you are fond of both, you will surely can every fall in this manner. Be careful and use only one-third corn, as it will ferment and your labor be lost. Canning corn alone is a long, laborious task, and not often a success.

Canning Tomatoes.—I take nice, ripe tomatoes, wash and scald them, and put on to cook with a little salt. As soon as they boil I have my can in hot water ready to fill. I take the cans out and fill, then seal and turn them bottom side up to see of they are tight, and set them on a table until cool. Tighten again and put them in a cool, dry place, and darken by putting paper over them, and there will be no trouble in keeping. I have some of last fall now canned. They are as nice as if taken out of the garden.

How to Save Tin Fruit Cans.-Take clean, fresh lard and a soft, white cloth; rub the inside of can, also lid, with a small portion of lard. The cans will last three seasons, instead of one. This sons, instea is splendid to save cans in which to-matoes are put, also pears and peaches. It will not hurt the taste of the fruit a particle, as I have practiced it for years.

Broken Cans.—Do not throw away

good cans or jars because they have no tops. Procure 1 pound of rosin, 2 of gum shellac, 1 of beeswax, melt slowly together. Cut covers from new unbleached muslin large enough to cover top of can and tie around the neck. Smear with the thin, hot wax and apply smoothly to the can, wax side down. Tie neatly and then give the top a slight coat also. It is the only kind of sealing wax we use, and equally effectual with a 6-gallon crock of peach butter or bottle of catsup.

To Fill Fruit Cans.—Take a milk strainer in which the wire is worn out, remove the wire and you have an article by which you can fill the cans

easily and quickly.
Canning and Other Hints.—We have been using canned corn and tomatoes this winter that are splendid, and canned the tomatoes cold, just as we

can rhubarb, after skinning them. They are fine. Anyone subject to dyspepsia will find them the best medicine they can use. The corn I cooked in the boiler in the usual way, then packed in the cans gently with an old-fashioned potato masher, putting salt between each layer as I filled the can. This way beats any other I have ever tried, as it is so easily done. The salt is what preserves it. If one wants a funnel to use in filling fruit jars swiftly and neatly, try my invention. Remove the cone from an old oil can with a pair of shears, then the little top where the cover screws on, and insert the funnel in the jar and the filling is easily and nicely done. beats the store funnels, as the tubes of the latter are too small for anything but liquids and have to be held up by the hand as the filling proceeds. tried the baking powder can to cut up potatoes when frying. It was not satisfactory, as the suction of air drew up too much potato inside. I removed the bottom also, and now it chops perfectly, acting more as a circular cutter. I use it over the dasher in churning so the cream cannot splash out.

CARPETS.

Carpet Beetles.—For keeping dresses and clothing from carpet bugs, we have found the following a great convenience as it saves the time and labor spent in shaking garments. Have a blacksmith make you two slender iron rods about 18 inches long, with threads cut on one end and the other bent to form a ring. Now get a pole about 10 feet long, and 1½ inches square. Put the rods through the pole about 1 foot from each end and fasten with nuts. In the ceiling over-head put 2 screw hooks, from which suspend the pole by the iron rods. On each side of the pole put small hooks about 6 inches apart, on which to hang dresses, coats, etc. Be sure that nothing on the pole touches the wall at either end. It is best to suspend the pole through the middle of a room, as the burst can all the sides, but can the bugs can climb the sides, but can-

not hang on overhead.

Remedy for Carpet Bugs.—One year ago, after several years' sickness, I was able to get up stairs to my chamber. I found both buffalo and common moths. The carpets had been taken up early. Opening closets and bureau drawers, I had an iron pot brought, putting in a pint or so of sulphur, with a few shavings on top. It was lighted with a match on the piazza roof; the rooms were kept closed over night. No more live moths were seen last season. I was so successful, I shall pursue the same method this year. I have never seen the moth miller so abundant. Do not inhale the sulphurous gas. We often use it as a disinfectant. Early in the seventies my husband carried his horses safely through the epizootic that raged so generally through New Eng land, by burning sulphur each day in the stables.

About Carpets.-Floor rugs made from pieces of carpets are mean about curling up at the edges. If they are slightly dampened on the wrong side at cleaning times, they will lay smoothly; also in refitting carpets all unsightly creases will soon come out by wetting

with a cloth on wrong side. One good way of catching and allaying the dust, is to wet the broom, beating it until it won't drip, and repeating this a num-ber of times while sweeping; being careful to wash the broom free from dust each time. To keep carpets dust each time. To keep carpets bright and new looking, sweep often, and the dust will not grind the color out. If there is an unavoidable dust while sweeping, a good plan, which I always follow, is to tie a loose cloth over the mouth and nose; for the breathing of fine house dust is very injurious and uncomfortable. Brooms will last a third longer, and sweep much better if occasionally scalded in water.

Sweeping Carpets.—If you will use old clean newspapers, torn into pieces and crumpled up, dipped into water and squeezed partially dry, and then throw them around on the carpet, you will find they will take up the dust and work much nicer than salt, tea leaves or anything else. By putting broom onto two or three pieces and using it under stove, bed or any furniture that can be swept under but not easily moved, you will get the floor cleaner with less dust than any other way. For your hard, wood floors, after washing clean, take one-half raw oil and one-half kerosene oil, and with an old mop handle filled with short pieces of woolen cloth, making a mop not over three or four inches long, you can oil your floor quickly and easily, and it will last long and look well. Clean and oil once in 1 or 2 weeks.

Wall Paper for Carpet.—For a cheap carpet for spare bedrooms, take old papers, paste on floor; when dry put paste on papers, put on wall paper; when dry put on a light coat of varnish. when dry put on a light coat of varnish. This makes a nice and cheap carpet. rubbed this well over the carpet. When

Rag Carpet.—For small Mending holes that will get burned, or even quite large ones, take any kind of (use colored Canton flannel) smear with good flour paste, lay on hole, and press with hot iron until dry;

hole, and press with not from danswill last as long as the carpet.

Items on Carpets.—We had a good carpet that was badly faded. After and tacking down, I mixed cleaning and tacking down, I mixed some diamond dye in a small tin vessel, and using an old tooth brush applied it as hot as possible, following stripes of figures. I used red and blue. It was a great success. In fitting a car-pet, always sew on the machine or backstitch each side of the place you aim to cut. It will prevent raveling. It is a great saving of time and work when having a carpet woven, to take the measure of the room, and to have the weaver weave a couple of inches of chain and thread wherever it is necessary to cut and hem.

Carpet Beater.—Take a piece of 1/8
No. 9 smooth fence wire about 3 or 4 feet long, fasten one end to end of round stick (an old broom handle will do) for a handle; then bring other end around so as to form an elipse, and fasten to handle. Hang carpet on line or fence and beat with wire end of beater. Think carpet can be cleaned cleaner, sooner and easier than by the old way of shaking or beating with a straight stick.

Kitchen Carpet.—A carpet of this kind has been in use in my home for a number of years. It was an old rag carpet, well worn. I washed it, patched all worn and thin places, then tacked it to the floor, stretching it tightly. I made a pail of flour paste, the kind

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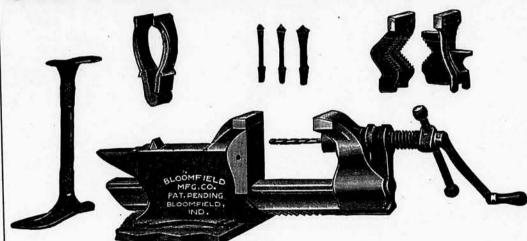
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this was thoroughly dry I put on a good coat of paint. When dry, I added another coat. This will make a carpet as good as oilcloth and is easy to keep clean. A new coat of paint applied once a year will keep it in repair.

Carpets, Matting and Sweeping.—We all want short cuts this cold weather for sweet comfort's sake. One I find full of solid satisfaction is a strong matting well tacked to the floor, and covered with rugs, or bits of carpet around the fire, bed, and wash-stand. These can be removed when sweeping, which can be done with comparatively little dusting, which after sweeping a heavy carpet, is the most wearisome of jobs. But if one has carpets they may make matters much easier by making less dirt. After taking up the top dirt from the corners and elsewhere, a good way, if you have no carpet sweeper, is to dampen the broom slightly, in a small tub or basin half full of water, and go over the second time, moving the broom forward to your side. Never thrust it before you, pull back, or run it under turniture. A good broom the second time is the second time to the second time to the second time to the second time. furniture. A good broom thus used will remain good many months, even years, if only one person, who knows, uses and cares for it. Why buy and re-buy such little things and never have anything left with which to purchase luxuries, and give to those who really need. Only the rich can afford to help the world along by extravagant ways. We want short cuts.

Sewing Carpet Rags.—If you have carpet rags to sew together, you (or a child) can do it without sewing and three times faster, doing equally as good work. Take a piece of board, drive through it a knife-blade—a wide plade of an old pocket knife sharpened for two edges is good. Also drive for two edges is good. Also drive through a dull nail towards the other end of board. Now lay the board in your lap. Take ends of two rags, over-lap them and make a hole through both by pressing them on the blade. Now take the other end of one rag, put on the protruding nail and push through the hole; pull through the whole rag and continue as before.

Sewing Carpet Rags.—Anyone who has made regularies and sewed the rags by hand, which is such an everlasting job, will appreciate the novel way of sewing them on the sewing machine. It can be done in less than half the time it takes to sew them in the old Where rags are not too short, 1 pound can easily be sewed in an hour, besides it can be done much neater and better. Lap the rags together and start in at the right hand corner, sew diagonally across; loop the rag and sew as be-fore, looping the rags to right and left. Any child can sew them this way and can easily cut them apart. Try this and you will be delighted.

Sewing Carpet Rags.—A quick way to sew carpet rags when the pieces are straight on the ends, is to lap the ends of the pieces over each other, leaving one edge out further than the other the width you want your cornet. the width you want your carpet rags, run them through the sewing machine three of four times, sewing near the To tear the rags, begin with the edge that is left out, and tear round and round, cutting across the seam.

An Excellent Carpet Stretcher.-Get board (1 by 5 inches) about a foot shorter than width of the room, drive about 4 wire nails angling through near the end of the board to prevent sfipping on the carpet when you push. One person drives tacks, another uses the board, stands against the wall on opposite side of the room, so his weight won't hinder the free stretching of car-pet. The tack driver must move the board to every tack and pull to him every time so as to keep carpet stretched even both ways. With this one can put down a carpet as nice as with a patent stretcher.

4, 14 inches long; drive 8-penny wire nails 1½ inches agart, at angles of 45°. Let nails project through ½ inch and file to a point. Then take a limber board—a piece of flooring is about right—1 foot shorter than your room, and nail top of block, in center. Set nails firmly into carpet; let opposite end rest against a perpendicular board, to protect wall paper, 3 or 4 feet from floor, then spring the board down gently a little at a time, until you have carpet sufficiently tight, and tack. Place strip across windows and archways for per-

perpendicular board to rest against.

Stretching Carpets.—Take two pieces of 2 by 4 scantling, 1 piece about 3 feet long and the other to be in length according to the width of the room. Put a nail through the middle of the short or interest. short one into the end of the long one, making a T. Place your feet against the cross of the T while on your knees. Place the other end of the T against the opposite side of the wall. Grasp the carpet with both hands and push it in

place, while an assistant tacks it. Straightening the body stretches the carpet. In this way you can stretch carpet better and easier than with a patent stretcher, and it won't hurt you nor the carpet.

Stretching Carpets.—First tack two sides of carpet to its place; then have a good, strong man with rubber boots on (rubber shoes will do). Start at the side of room already tacked, and go next to the side you want to tack, letting the man shove his feet, bringing them down hard as he goes. Let him them down hard as he goes. Let him go to within about 3 feet of the wall and then stop and stand on carpet while someone does the tacking. If it does not reach the wall the first time, repeat until it does. I can stretch a car-pet better and quicker in this way than with the best of carpet stretchers.

with the best of carpet stretchers.

To Take Ink Out of Carpets.—First get as much out as possible with a blotter, then rub hard with Ivory Soap and hot water. This never fails if diligently applied. Ink can also be taken out of white material by putting lard or mutton suet on both sides of spot, and then let stand all night after which and then let stand all night, after which wash in very hot water.

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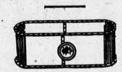
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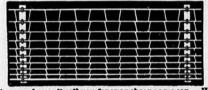


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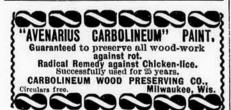
Send us your Cattle and Horse Hides, Calf, Sheep, and all kinds of Fur Skins to be tanned for Robes, Overcoats, Rugs, etc., to be returned to you. Left sort, smooth and moth proof We guarantee satisfaction. Send for circulars, shipping tags, and information. The Foster Robe & Tanning Co., 1629 5th Street, Southeast, Minneapolis, Minn.



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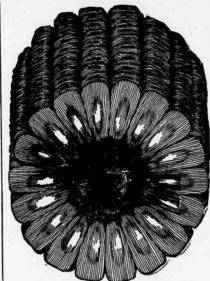
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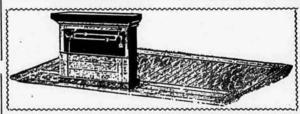
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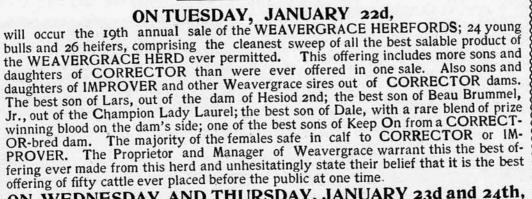






To be Held in the Magnificent New, Steam-Heated, Fine Stock Pavilion, Kansas City Stock Yards, Kansas City, U. S. A., January 22d, 23d, 24th and 25th, 1901.





ON WEDNESDAY AND THURSDAY, JANUARY 23d and 24th, the undersigned will sell for the RIVERSIDE HEREFORD CATTLE COMPANY of Ashland, Nebraska, 75 head of picked young cattle from the largest collection of pedigreed beef cattle in existence, including 40 females and 24 bulls "topped" from the greed beef cattle in existence, including 40 females and 24 bulls "topped from the celebrated SHADELAND HERD recently purchased by them, as follows: 12 bulls and 12 females by Acrobat; 3 bulls and 9 females by the "record breaking" EARL of SHADELAND 22nd; 4 bulls and 6 females by the celebrated English sire, Diplomat; 3 bulls and 3 heifers by Banker; I cow by the Royal Prize, Garfield, I cow by Tammany; I cow by the Champion SIR BARTLE FRERE, and I by the well known Gold Dollar; I bull by Gold Dust, and I by Clarence. This is the only opportunity ever offered to secure the tops of the Shadeland Herd, and the only offering from this herd by Auction in ten years. The remainder of the Riverside offering includes four heifby Auction in ten years. The remainder of the Riverside offering includes four heifers by their celebrated ADMIRAL, and one animal each from following well known sires: CORRECTOR, Washington, Lord Fulton, Java, Climax, Wild Tom, Silky and Almont. It is believed that numbers considered the equal of this offering has never been made.

ON THURSDAY, JANUARY 24th, immediately after the close of the Riverside sale, I will sell for the EGGER HERE-FORD CATTLE COMPANY, Appleton City, Mo., 12 bulls and 12 heifers by their celebrated sire, CHILLICOTHE, champion over all breeds and one of the best sons of CORRECTOR. For depth and smoothness of flesh, combining quality with scale, these are sure to prove a sensation. The heifers will have calves by their side or be heavy in calf by Salisbury 4th or Billy Cummings.

ON FRIDAY, JANUARY 25th,

I am instructed to sell for the following well known breeders: CLEM GRAVES, BUNKER HILL, IND., offers 20 head of the tops of his famous herd, including his entire show herd with the exception of Dale, Dolly 5th and Lady Help. This includes the celebrated Champion heifer, CARNATION, believed by Mr. F. A. Nave the best animal he ever exhibited, and all other females by such sires as COLUMBUS (sire of the \$5,050 Columbus 17th, and the \$7,500 Dale), Cherry Boy, Acrobat, Harold (sire of Corrector), Lyford, Star Grove 17th, and 8 bulls by such sires as Star Wilton 20th, Liberator (by Corrector), Imported Freedom and Tip Top.

MAKIN BROS., LEES SUMMIT, Mo., will offer seven females and three bulls, 3 of which are by their celebrated prize winner JURYMAN; 3 by Stanley (a son of Hesiod), 3 by the prize winner Dixie, and one by Stripes. The females will be bred to or have calves at side by PRINCE HESIOD, son of Hesiod.

A. F. M'CARTY, Humbolt, Kan., will offer two bulls and four heifers bred from the blood of GARFIELD, FORTUNE, BEAU DONNALD, etc. The heifers in calf to RIGHT SORT (by Corrector). ON FRIDAY, JANUARY 25th,

(by Corrector).

GEO. W. DENNIS, Cisco, Mo., will offer one well known bull, Young Shadeland, by the Champion SIR COMEWELL, (son of CORRECTOR), also two bulls and three heifers by the IMP. LINCOLN and out of richly bred dams.

J. C. ADAMS, Moweaqua, III., will offer a daughter of the \$1,000 cow Blendress, by CORRECTOR; 3 splendid heifers by the \$1,575 EXCELLENT, champion over all breeds, and a son

of Imported Freedom.

D. W. BLACK, Lyndon, O., will offer an ANXIETY-bred bull by MILLITANT, and the WILTON-GROVE-ANXIETY Bull, But Cut 3d.

GEO. B. CONLEY, Marshall, Mich., will sell KANSAS KING, the only calf that ever beat Mr. Nave's Perfection

SALES WILL COMMENCE EACH DAY AT 1 P. M. SHARP. The cattle of each breeder will be sold separately, each contributor's consignment being a distinct sale by itf. Fifty head will be sold each day; in all, 200 head. The sale will be conducted under my rules and manageint. This will be the best 200 cattle of any breed that ever passed at one time under the Auctioneer's hammer.
Auctioneers: Col. J. W. Judy, Col. R. E. Edmonson, Col. F. M. Woods, Col. J. W. Sparks, Col. Carey M. Jones, and

Col. H. W. Graham.

For further information see reading matter in this paper, or address the undersigned. Sale catalogues ready

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January 10th. Persons whose names are on my list will receive catalogues without writing for them.

January 10th. Persons whose names are on my list will receive catalogues without writing for them.

MILTON W. BROWNE, Cashier.

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