

KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, NOVEMBER 28, 1901.

ESTABLISHED IN 1863
\$1.00 A YEAR

Breeders' Directory.

DUROC-JERSEY SWINE.

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

Registered Stock, DUROC-JERSEYS, contains breeders of the leading strains.
N. B. SAWYER, - - Cherryvale, Kansas.

M. H. ALBERTY, - - Cherokee, Kansas.
DUROC-JERSEYS.
100 head for this year's trade; all eligible to record.

MAPLE AVENUE HERD **J. U. HOWE**,
DUROC-JERSEYS. Wichita, Kans.
Farm 2 miles west of city on Maple Avenue.

FAIRVIEW HERD DUROC-JERSEYS.
Have sold all spring males, but have about 60 fine pigs of September and October farrow at reasonable prices.
J. B. DAVIS, FAIRVIEW, BROWN CO., KANS.

DUROC-JERSEY SWINE—REGISTERED
Write for prices on what you want; 100 to select from.....
NEWTON BROTHERS, Whiting, Kans.

STANDARD HERD OF Registered Duroc-Jerseys
PETER BLOCHER, Richland, Shawnee Co., Kans.
Herd headed by and others. S. C. B. Leghorns.

100 Duroc-Jersey Pigs.
For Sale—100 March and April pigs from the Rock Dale Herd of Registered Duroc-Jersey Swine. The get of 8 herd boars. Prices right. Address
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V. B. HOWEY, Box 103, Topeka, Kansas.
Breeder and shipper of Poland-China hogs, Jersey cattle, S. L. Wyandotte chickens. Eggs in season.

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RIVERSIDE HERD OF POLAND-CHINA HOGS.
80 head spring farrow, both sexes, fancy bred, prices reasonable. Also Commodore Dewey 46187, the prize-winner of southern Kans. Write for prices on this noted show hog. M. O'Brien, (Riverside), Liberty, Kas

W. P. WIMMER & SON, Mound Valley, Kans.,
...Breeders of...

FASHIONABLE POLAND-CHINA HOGS
Young stock for sale at all times. Prices reasonable.

T. A. Hubbard,
ROME, KANS., Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES.
Two hundred head. All ages. Twenty-five boars and 45 sows ready for buyers.

SUNNYSIDE HERD OF Pedigreed Poland-China Hogs
We now have for sale some extra good young boars, and a lot of gilts 8 to 10 months old. All good. Gilts will be bred or sold open as desired. This is a choice lot of young stuff that will be priced cheap, quality considered.
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For Sale: 12 head of the best early boars that I ever produced; large, heavy-boned, and smooth. Ten head of May, June, and July boars that are fancy; also one last fall's boar that is a show pig.
E. E. WAIT, Altoona, Kansas.
Successor to WAIT & EAST.

High-Class Poland-China Hogs
Jno. D. Marshall, Walton, Harvey Co., Kans.,
Breeds large-sized and growthy hogs with good bone and fine finish and style. FOR SALE—Thirty October and November gilts and 15 boars; also 100 spring pigs, sired by Miles Look Me Over 18879. Prices right. Inspection and correspondence invited.

POLAND-CHINA SWINE.

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FOR SALE: 125 fall and spring boars and gilts, sired by Dandy U. S. 17448, and Model Boy Jr. 2400. The sire of each of my herd boars cost \$1,000. Choice pigs offered at reasonable prices. Write at once to
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THOROUGHbred POLAND-CHINA HOGS.

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(Express Office, Leavenworth.)

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BREEDER OF

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For sale, 180 head of the best blood known, including Prine's famous Noras and other popular strains. Foundation stock supplied to breeders.

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Farm is two miles northwest of Reform School.

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We have 70 pigs, mostly sired by Balance All 11927, the champion hog of 1900 at leading State Fairs and the International Live Stock Exposition. Address **DORSEY BROS.**, Perry, Ill.

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ENGLISH RED POLLED CATTLE—Pure-bred Young Stock For Sale. Your orders solicited. Address: **L. K. HASELTINE**, DONORSTOWN, GREEN CO., Mo. Mention this paper when writing.

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1221 West Douglas Avenue, WICHITA, KANS.

Registered Herefords
Of either sex, at private sale. I also have 140 % to % high-grades at private sale.
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Alfalfa Meadow Stock Farm, Shady Bend, Kansas.
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SCOTCH, AND SCOTCH-TOPPED SHORTHORN CATTLE, POLAND-CHINA SWINE
Herd Bulls, Sir Knight 124403, and The Baron 121327.
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OHIO GALLOWAY CATTLE.
I have registered Galloway bulls for sale.
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D. P. NOERTON'S Breeder of Pure Bred SHORTHORNS }
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Breeder of REGISTERED Hereford Cattle.
Herd headed by Dandy Dolan 102528 full brother to famous Dandy Rex.

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Bulls in service, Sempstress Valentine 157069, and Mayor 129229. A fine string of young bulls and a few heifers for sale.

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EXTRA FINE, LARGE, PURE-BRED **M. B. Turkeys**, Embden and Toulouse Geese, Pekin Ducks, White Guineas, and 6 kinds of fancy chickens for sale.
Also Yorkshire Pigs, Cotswold Sheep, and Angora Goats
Send stamp for circular. **A. A. RIEFF**,
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The Oldest and Largest in the United States
Splendid recently imported bulls at head of herd Registered animals on hand for sale at reasonable prices at all times. Inspect herd at Allendale, near Iola and La Harpe; address Thos. J. Anderson, Manager, Iola, Allen Co., Kans., R. R. 2, or—
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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 service. Visitors always welcome.
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Herd Foundation Stock A Specialty.
A few choice Females and 14 Bulls for sale. Inspection or Correspondence invited.

CATTLE.

Silver Creek Shorthorns.

The Scotch bull, Gwendoline's Prince 180918, in service. Also the imported Scotch Missie bull, Aylesbury Duke. 100 head of the best Scotch, Bates, and American families. High class Duroc-Jersey swine for sale. J. F. STODDER, Burden, Cowley Co., Kans.

Remember the three days' Combination Sale at Winfield, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Short horns by J. F. Stodder, and February 13, 1902, Draft horses by J. C. Robison and Snyder Bros.

H. R. LITTLE, HOPE, DICKINSON CO., KANS., Breeds Only the Best, Pure-Bred

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Herd numbers 185, headed by ROYAL CROW, 125698, a pure Cruickshank, assisted by Sharon Lavender 148002.

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Herd Headed by the Cruickshank Bulls Imp. Nonpareil Victor 132573

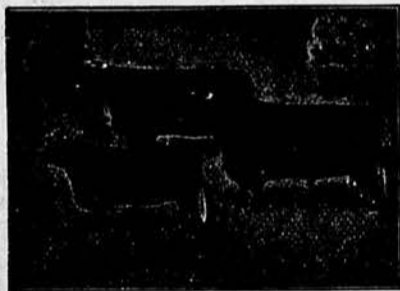
Sire of the champion calf and junior champion bull of 1900

...Grand Victor 115752...

Himself a show bull and sire of prize-winners.

FEMALES are Scotch, both imported and home-bred, pure Bates, and balance 3 to 6 Scotch tops. STOCK FOR SALE.

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GLENDALE SHORTHORNS, OTTAWA, KANSAS.

Leading Scotch, and Scotch-topped American families compose the herd, headed by the Cruickshank bull Scotland's Charm 127264, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Twenty bulls for sale. C. F. WOLFE & SON, Proprietors.

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Imported and American Bred SCOTCH SHORTHORN CATTLE, AND ...REGISTERED PERCHERON HORSES.

The Property of HANNA & CO., Howard, Kansas.

Bulls in Service: IMP. COLLYNIE 135022, IMP. MARINER 135024, AND IMP. LORD COWSLIP.

HERD is rich in the best Cruickshank blood and contains 10 females imported direct from Collynie and Uppermill. For Sale—10 bulls—head headers—of choicest Scotch and Cruickshank breeding. No females for sale at present.

Registered Percherons (Brilliant) in Service. DIRECT 18889 (by Bendago by Brilliant, dam Fenelo by Fenelon by Brilliant.) Bendago's dam the famous prize-winner Julia by Le Ferte. FOX SALE—Three 2-year-old stallions by Direct

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GARRETT HURST, Breeder, ZYRA, SUMNER COUNTY, KANSAS. Young stock for sale of either sex. All registered.

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Pure Percherons.

The largest herd of Percheron horses in the west and the best bred herd in America. A choice collection of young stallions and mares always on hand. Prices consistent with quality. Address, or come and see at

Wakfield, Olay County, Kansas.

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PHILIP WALKER, Breeder, MOLINE, ELK CO., KANS

25 Mammoth, Warrior, and Spanish Jacks Now For Sale.

Quality and Breeding Unexcelled. Inspection and Correspondence Invited.



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Breeder of

OLYDESDALE HORSES, AND SHORTHORN CATTLE.

For Sale—25 Olydesdales, including 3 registered stallions of serviceable age, and 18 mares. Inspection and correspondence invited.

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R. E. EDMONSON, late of Lexington, Ky., and U. S. Tattersall's (of Chicago, limited), now located at 208 Sheldley Building, Kansas City, Mo., offers his services as Live Stock Auctioneer. All the Herd and Stud Books. Wire before fixing dates.



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SALES made everywhere. Thoroughly posted and up-to-date on breeding quality and values. Have a large acquaintance among and am selling for the best breeders in the country. Terms low. Write for dates.



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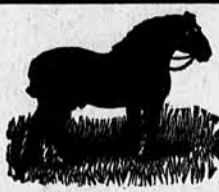
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H. L. RITCHIE, 504 N. Y. Life Bldg., Kansas City, Mo. Sketching, and photographing live stock a specialty. Write for particulars.

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70 First Class Young Percheron Stallions

Now in our Shenandoah stables. Our last importation arrived October 1, 1901—mostly black, 3-year-olds, 30 imported stallions. An elegant string of 25 big two's and three's of my own breeding. Thirty years in the business. Come and see the horses. M. L. AYRES, Shenandoah, Iowa

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Importer and Breeder of PERCHERON, and FRENCH COACH HORSES, and SHORTHORN CATTLE.

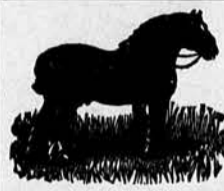
For Sale—A few Shorthorn heifers, and Percheron stallions; also a Special Bargain on 9 Registered Hereford Bulls, 2 years old, and a few Full-blood Percheron Mares.

WE ARE NOT THE LARGEST IMPORTERS

In the United States, neither have we all ton horses. But we do make five importations each year. Our stables at Lincoln, Neb., and at South Omaha Union Stock Yards are full of first-class Percheron and Shire stallions. If you want a good one for what he is worth, it will pay you to see us. Our horses won sweepstakes in all draft and hackney classes at Nebraska State Fair. Address all correspondence to

WATSON, WOODS BROS. & CO., Lincoln, Neb.

SPECIAL NOTICE: Woods Bros., of Lincoln, Neb., have two cars of Short-horn and Hereford bulls and cows at a bargain.



German Coach, Percheron, and Belgium Horses.

OLTMANN'S BROS., Importers and Breeders, WATSEKA, ILLINOIS.

Three Importations in 1901. 100 Stallions For Sale.

No other firm enjoys such buying facilities; the senior member being a resident of Germany is personally acquainted with the best breeders in France, Germany, and Belgium. We can save you money. Come and see us. We shall exhibit at the International Live Stock Exposition, Chicago, Dec. 1-7, 1901.

S. A. SPRIGGS, Westphalia, Kansas,

BREEDER AND DEALER IN

Registered Mammoth, and Imported Spanish Jacks and Jennets; Also Registered Stallions.



All stock guaranteed just as represented. Correspondence solicited.

SNYDER BROS., Winfield, Kans.,

Breeders of

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

For Sale at Special Prices—17 BOARS, and 25 GILTS, farrowed mainly in November and December. They are extra well bred and very thrifty.

8 Polled Durham Bulls, of serviceable age. 17 Stallions over 2 years. 2 Mammoth Jacks. Remember the three days' Combination Sale at Winfield, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Shorthorns by J. F. Stodder, and February 13, 1902, Draft horses by J. C. Robison and Snyder Bros.

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Percherons, Shires, and Clydes.



We have a selection that are sure to suit you. As grand a lot of young stallions, of serviceable age as can be found in the country. We do not claim to have every color or kind of a stallion, you or anybody may want, but what we claim you will find true if you pay us a visit. All of our selections are made by a member of our firm, who has been at this line of work the past decade and has absolutely a first choice from the leading breeders of Europe. Our last importation, consisting of the three great breeds, and 88 head in numbers were selected in the early part of February, before any of the shows and to-day are ready for sale. Write us, or come and see us, if you or your community are in need of the best to be found.

KEISER BROS., Keota, Keokuk County, Iowa.

America's Leading Horse Importers

Won at the Two Last Universal Expositions

At the Paris Exposition, 1900, our Percherons won Every First Prize with a possible exception. At the Pan-American Exposition, Buffalo, 1901, our stallions won Every First Prize including the Grand Sweepstakes over all draft breeds.

We import more horses than any other three firms in America, and more prize-winners than all others. We buy the best, can buy them cheaper and will sell them for less than anybody else.

If you want the kind that will improve your stock of horses, call on or write—

McLAUGHLIN BROTHERS,

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PERCHERONS.

J. W. & J. C. ROBISON, Importers and Breeders, TOWANDA, BUTLER CO., KANS.

LARGEST HERD IN THE STATE. IMPORTED, AND AMERICAN BRED STALLIONS AND MARES For Sale at all times.

Prices reasonable. Inspection invited. Seventeen young stallions for sale.

Remember the three days' Combination Sale at Winfield, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Shorthorns by J. F. Stodder, and February 13, 1902, Percherons by J. C. Robison and Snyder Bros.



Agricultural Matters.

Problems and Possibilities in Plant-Breeding.

H. F. ROBERTS, IN INDUSTRIALIST.

A very prevalent idea is, that a hybrid plant is a "high-bred" plant, and the work of the plant-breeder is popularly supposed to be the origination of improved varieties by hybridization. This conception doubtless owes something of its origin to the brilliant part-colored advertisements in the florists' catalogues, in which this and that hybrid petunia, orchid, or hyacinth is exported as a rare and choice production. Such may be the case with respect to the plant advertised, but what the public does not know is, that it is a single desirable among a hundred undesirable and mediocre productions of the plant-breeder's work. What hybridization does effect most commonly is a sort of a general unsetting of the species, so that the progeny tend to vary greatly from each other and from the parental forms. It is this tendency to variation which the plant-breeder most desires as a basis for his principal and most fertile line of work; conscious selection toward an end.

Occasionally, to be sure, the direct result of hybridization is a striking and

are nearly related; "hybrid," to a "cross" between parents unsexually related. So that in the case of seed plants, all fertilization where the reproductive cells come from different flowers would be entitled to be called cross-breeding, and would vary in degree according as the point of origin of the reproductive cells was on the same branch of the same plant, on different plants of the same "horticultural variety," on plants of different horticultural varieties, plants of different "species," and so on. The more distantly related the parents the more likely is the process of crossing to be called "hybridization," and the result is a "hybrid."

The plant-breeder soon learns to shake off any conscious or unconscious feeling that there is sacredness in "species," and that "crosses" and "hybrids" are anything but names which have degree of difference as their only distinction.

VARIABILITY.

The plant-breeder may begin with "wild" plants, in which he finds a certain fixity of type, a certain rigidity, owing to long reaction to the same environment, and to the limitation of whatever tendency to vary they may have had, by reason of their lively struggle with other plants, and with animals, for privilege to exist. In wild plants, variations which encumber their possess-

as a source of food, and the improvement of no cereal means so much to the world in an economic sense as does that of wheat. The breeder who is dealing with the wheat plant has in the first place carefully to consider the local conditions of his station and the general type of plant most likely to succeed there. The breeder in the Dakotas would not experiment with winter, nor the breeder in Tennessee with spring wheats, for example. Nor will the breeder in Kansas or Nebraska expect to succeed with the types of wheat regarded as standard in the moister eastern States. Every locality has to develop its own type of wheat. In Kansas, there is but one agricultural experiment station, with a territory 400 miles in length and 200 miles in width, as its field of operation, and comprising considerable variations in climatic conditions, within the general variation which it presents as a whole to the States bordering the Mississippi river on the east. The wheat breeder of Kansas must hold in mind the fact that wheat is raised in every county of the State, but that the same kind of wheat can not be successfully raised in every county, and that wheat breeding, say for Grant County and Rawlins County farmers, must have a different wheat ideal, so to speak, from wheat breeding for Douglas or Shawnee Counties.

Only a Penny To Get Well.

I ask only a postal, stating which book you wish. No money is wanted. I want you to know how nerve power alone operates each bodily function. If some organ is weak, and fails in its duty, I want to tell you how more nerve power will correct it. I want you to know, as I do, that a permanent cure can come in no other way. I have spent my lifetime on this problem.

I will send with the book an order on your nearest druggist for 6 bottle Dr. Shoop's Restorative. Every druggist keeps it. I will ask you to accept the Restorative and test it for a month. If it cures, pay \$5.50; if it fails it is free. I will pay your druggist myself for it.

This offer in five years has been accepted by 500,000 people. Practically all of them had difficult troubles, long endured. Most of them were discouraged. Yet 39 out of 40 who received those six bottles paid for them. They paid because they were cured, for otherwise no druggist asks a penny for it.

I can not better prove my own faith in this remedy. No physician can do more than pay for your treatment if it fails. No other does so much. Won't you write a postal to learn if I can help you?

Simply state which book you want, and address
Dr. Shoop, Box 529, Racine, Wisconsin.

Book No. 1 on Dyspepsia
Book No. 2 on the Heart
Book No. 3 on the Kidneys
Book No. 4 for Women
Book No. 5 for Men
Book No. 6 on Rheumatism

Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

the shattering habit must be bred out by crossing with non-shattering wheats, of which we have an abundant number.

"XEROPHYTIC."

Another end to be aimed at in all wheat breeding in Kansas is ability to stand very dry conditions of soil and air, which often do not come, but which are a permanent possibility here during the period between the middle of September and the middle of June. However good a yielder, if a wheat is not "xerophytic," as a scientific phraseology puts it, it will not do for Kansas; and the farther west we go in the State the more xerophytic the wheat must be. Resistance to attacks of parasitic fungi, notably the rusts, is an important characteristic. We are fortunate in having within our grasp the macaroni wheats of southern Russia and the Balkan states of Europe, which possess in the highest degree xerophytic characteristics and rust-resisting powers. But the macaroni or durum wheats are exceedingly rich in gluten—too rich for their satisfactory use as bread wheats as the present taste for bread exists in America to-day. In many European countries, however, this more glutinous flour is greatly liked for bread-making. It is all a matter of local taste and prejudice. Perhaps we may alter our tastes somewhat after a time. In the meanwhile we shall cross our best local bread wheats with macaroni wheats to improve them in the respect in which the latter possess superior qualities. We shall cross our local wheats with the heavier yielding club wheats of the Pacific coast, and we shall expect to find innumerable variations as the result of these crosses. From among these varieties we shall rigidly and carefully select the best and most promising offspring and seek to "breed up" better wheats for this region.

CONTINUED SELECTION.

But the work of the plant-breeder is useless if these carefully bred and selected wheats are carelessly planted and the best seed is no longer selected for planting by the farmers into whose hands these wheats may come. Soil impoverished in the chemical constituents needed by the wheat plant, owing to too long continued wheat cropping with no rotation to leguminous crops to restore the lost nitrogenous compounds, will not produce good crops with seed from the best high-bred wheats.

A succession of wheat crops raised



THE IMPORTED PERCHERON STALLION, CABRAL (44917) 27058

Owned by McLaughlin Bros., Columbus, Ohio, and Lawrence, Kansas.

valuable form, but far more often such forms are to be obtained only by years of careful selection among the varying progeny of the cross.

LIMITATIONS OF CROSSING.

Nature has set certain barriers to the crossing of both too nearly and too distinctly related species. But inasmuch as the "species," "genera," and all other systematic groups are matters of judgment, and inasmuch as the validity of judgments as to what organisms are entitled to be classified together in such biological assemblages, depends on the personal equation of the men who do the arranging, it is clear that no one can say beforehand, except within very wide limits, what individuals will or will not cross, on the basis of their more or less commonly accepted place in a scheme of scientific classification. In general, however, it is known that individuals too distantly or too closely related tend to be sterile to each other.

A FINE DISTINCTION.

A word as to the distinction between a "cross" and a "hybrid." Such distinctions are really verbal ones. In customary use, "cross" is the name applied to a hybrid where the parents

mark them as objects of extinction, although these variations may be beautiful, valuable, or advantageous in the eyes of man. If, however, a plant-breeder seizes upon such a variant form and transfers it to an environment where competition is artificially kept down, the basis may be laid for the development and inflation by subsequent selection, of absolutely new forms, very different from the original wild native form. Such is the history of the origin of many cultivated fruits and vegetables.

On the other hand, the scientific plant-breeder may begin his work upon a form which man for economic reasons has, for ages, wherever he has made his home, kept out of competition with native plants. In such a case he is usually dealing with a plant in which the inherent tendency to vary has already been given considerable scope by virtue of cultivation for generations; for variation is most apt to show itself where abundance in the food supply and freedom from unduly limited competition have given full play to all the activities of the organism.

WHEAT FOR SPECIAL CONDITIONS.

Such plants are our cultivated cereals, the history of most of which, as the servants of man, antedates written records. Of all of them, wheat is the most universally desired and desirable

YIELD.

It goes without saying, that an abundant yielder is a primary need. The plant-breeder can do something in this direction, especially by breeding a wheat which will have a fuller head. Now, a wheat "head" is simply a series of "spikelets" arranged spirally around an axis. Each spikelet is a small branch bearing 3 flowers, of which, in the wheats commonly grown here, the central one is weak, inferior, and tends to abort. If every spikelet on a head can be made to carry to maturity 3 instead of 2 grains, and those grains be large and heavy, the wheat yield can be increased. Wheats with this tendency well developed exist among the "club wheats" of the Pacific coast. These, however, often have the "shattering habit"—that is, the "glumes" which enclose the grain open and let it fall to the ground easily. In a windy region like Kansas such a habit is fatal, and

FINE SEED CORN

CATTLE KING, medium early, from 60 to 100 bus. per acre, is one of the best cattle corns grown. EARLY REED, light green, matures in 100 days, will yield more than any other early variety. MAMMOTH WHITE—We think this variety the very best for those wanting white corn, medium early, ears from 9 to 14 in. long, white cob. Our corn is all selected, tipped, shelled, sacked, and f. o. b. cars. Anything under 10 bushels, \$1.25 per bu.; above that amount, \$1 per bu. Write for samples.

W. W. VANSANT & SONS, Farragut, Iowa.

TO CURE A COLD IN ONE DAY
Take Laxative Bromo-Quinine Tablets. All druggists refund the money if it fails to cure. E. W. Grove's signature is on each box. 25 cents.

from seed, unselected, ungraded, uncleaned, full of the seeds of weeds, small inferior grains and chaff, will inevitably degenerate, and that very rapidly, however creditable its original source.

In a way every farmer can be a wheat breeder; not by crossing, for that usually demands too much time, technical skill, and patience for us to expect it to be generally made use of; but by careful annual selection of seed from the best and most vigorous plants. Let this seed be run through a first-class seed cleaner and grader, of which several are on the market, and let only the large, heavy, "No. 1" grade be planted. In this way the efforts for the improvement of wheat can be substantially aided in every wheat-growing locality of the State.

[The importance of breeding wheat is extremely important. The KANSAS FARMER hopes to sometime record an enthusiasm for breeding corn, oats, barley, Kaffir-corn, sorghum, millet, broom-corn, alfalfa, soy-beans, cow-peas, clover, timothy, and all the other meadow and pasture grains, both cultivated and wild; indeed, every plant that is grown upon our farms. Editor.]

What I Have Learned About Soy-Beans.

A year ago I knew very little about the soy-bean. I was first led to experiment with it from reading Mr. Coburn's article about it in the Kansas Agricultural report, in which, many of our readers will remember, he says that repeated experiments at their agricultural station showed that, when fed in connection with corn or Kaffir-corn, the soy-bean added greatly to the value of the food, and by putting 1 bushel of them with 4 bushels of corn the gain of the hogs was practically doubled, so that a bushel of soy-beans fed in this way was worth 4 bushels or more of corn. The following table, showing the analysis of soy-beans, linseed-meal, and corn, also proves the great value of the soy-bean as a stock food:

	Protein.	Carbo-hydrates.	Fat
Soy-beans.....	29.6	22.3	14.4
Linseed-meal (O. P.)	28.8	32.9	7.1
Corn.....	7.3	66.7	4.3

This statement so interested me that I planted an acre or two of soy-beans in 1900. I did not know at that time that there was more than one variety, and happened to get a late kind, which did not mature until October, and then we found it was difficult to cure them and they were finally put in the mow too damp, and were damaged so I could not offer them for seed. I, however, experimented with them for feeding during the summer, and was greatly pleased with the result. I planted them on the thinnest land I could find on my farm, without fertilizer, in order to test their value on such land, and the yield was 15 bushels to the acre. I had 2 young sows, which raised 17 pigs from their first litters. These were weaned late in July and the sows were suckled down thin. I put them on a small blue-grass pasture, and fed them about 3 quarts of soy-beans a day. The beans were fed whole and dry, thrown out on the grass for them to eat. They had no other grain food, but gained and fattened rapidly on this light food, and I sold one of them six weeks late, her weight being 300 pounds.

EARLY YELLOW SOY.

During the year I corresponded and watched the papers to learn all I could about them, and found there were some early varieties of soy-beans that ripened as quickly or quicker than corn.

The beans which I planted last year were plump, and it required only about 150 of them to weight an ounce. The seed I received from Kansas was small and shrunken, and quite inferior looking, and it required between 300 and 400 beans to weigh an ounce. I am glad to say that these shrunken seeds produced this year, in many cases, fine, plump beans. I was fortunate in May to find where I could get a peck of medium green soy-beans, which I planted and raised a few bushels from, and these ripened as soon as corn, but were not quite as early as the yellow beans.

BLACK SOY.

Late in the spring some one mailed me a teacup of black soy-beans. These proved to be the earliest of all, but quite dwarf and so podded from the ground to the top as to indicate they will be fine yielders. I have not enough of this seed to offer any for sale this year, or to send out sample packages, but I have saved about 12 quarts, and shall be able another year to grow quite a quantity of them.

Stops the Cough and Works off the Cold.
Laxative Bromo-Quinine Tablets cure a cold in one day. No Cure, No Pay. Price 25 cents.

DROUTH RESISTERS.

The soy-bean has fully substantiated, this season, that it is a great drouth resister, for in the locality where I live the drouth was extreme, not enough rain falling to lay the dust from June 27 until August 17, a period of fifty-one days, and, as my green soy-beans were not planted until the second week in June, they had no rain from the time they were fairly up and beginning to make the second leaf until the pods had formed on them.

In order to fully test different plants the past year, I set aside a quarter of an acre of land as an experimental plot and planted on it 4 varieties of soy-beans, 5 of cow-peas, 2 of rape, 1 row of velvet bean, 1 of teosinte, and 1 of beggar-weed. Then, in order to test the matter more thoroughly, I planted 2 rows of sweet corn and 2 of garden peas, the Champion of England, and Marrowfat, besides them. They were planted on May 12, and had exactly the same cultivation. The soy-beans and the early cow-peas made a good growth and a good yield, while the sweet corn, with exactly the same cultivation, did not make a single ear, and the peas were almost a failure, as we gleaned a single mess for the table from 2 rows 11 rods long. As we were fifty days without rain just at the critical time when the peas and corn were setting, this was about as severe a test as they could well be put to.

HOW TO PLANT.

I did not know how the beans should be planted, and, unfortunately, made my rows entirely too wide. I have reached the conclusion that with dwarf kinds, which I think are the most profitable to grow, the rows should be 2 1/2 feet apart, and the plants single, 1 foot apart in the row. Quite a number who have reported gave the number of beans to the plant, and reported that where there was a single plant in a hill they gave as large a yield as with 3 plants, and, from the many reports sent in, the distance which I recommend planting is, I think, the best. There were many failures through planting on heavy clay land just before a rain. Beans of all kinds find it difficult to lift heavy wet land, and will rot instead of coming up.

As the early varieties of the soy-bean will mature in from less than ninety to one hundred and twenty days, it is not best to plant too early. I would recommend that the land be plowed late in April or early in May, and then worked until there is a perfect seed bed, and planted, if possible, soon after a rain as the ground will work mellow, in the hope of them coming up before another rain falls. I would advise planting June 1. We can not always foretell the weather so as to avoid planting just before a rain, but attention to this usually will give a good stand.

NOT FORAGE, BUT BEANS.

I began experimenting with the soy-bean with the idea that it was a forage plant, but, with the experience I have had, I would not class it under that head, but would grow it for the seed, and not for the foliage. The late varieties are apt to give trouble about curing, as it is impossible to mature them so as to keep in the mow, or even if thrashed when damp they mold in the bin. The cow-pea will be found profitable as a forage plant, and sorghum is best of all, but the soy-bean should be raised with the idea of saving the seed. The late variety of the soy-bean can be grown, however, to be either hogged off or cut and fed to the hogs late in the fall. It does not, like many plants, blossom and produce seed while having blossoms, half-grown pods and others nearly mature at the same time, but it blossoms all at once and the crop ripens in the same way. The blooms are so inconspicuous that one will scarcely notice them. In fact, I did not know my black soy-bean plot had blossomed at all, although I passed within a few feet of it every day, until they were almost ready to harvest. The soy-bean, if it is hogged off, will waste very little, as the hogs will tear it down as they want it, and the beans will not shatter until nearly ripe, and they would be ripe enough so that frost would not be likely to hurt them, and the hogs can gather them all through the fall up to late in November. It seems like considerable work to cut and draw them to the hog lot or house to feed, and yet a man will cut and bring in a feed in less than half the time it would require to husk and feed corn.

CURING.

The tall-growing late varieties should be planted in rows 3 feet apart, as they grow from 3 to 4 feet high, but the plants may be the same distance in the row as the dwarf varieties. One thing which makes the dwarf soy-bean easier to cure is that as soon as the beans

Years for Health
Lydia E. Pinkham

How Truly the Great Fame of Lydia E. Pinkham's Vegetable Compound Justifies Her Original Signature.

Lydia E. Pinkham's Vegetable Compound.

It will entirely cure the worst forms of Female Complaints, all Ovarian troubles, Inflammation and Ulceration, Falling and Displacement of the Womb, and consequent Spinal Weakness, and is peculiarly adapted to the Change of Life.

It has cured more cases of Backache and Leucorrhoea than any other remedy the world has ever known. It is almost infallible in such cases. It dissolves and expels tumors from the Uterus in an early stage of development, and checks any tendency to cancerous humors.

Irregular, Suppressed or Painful Menstruation, Weakness of the Stomach, Indigestion, Bloating, Flooding, Nervous Prostration, Headache, General Debility quickly yields to it.

Womb troubles, causing pain, weight, and backache, instantly relieved and permanently cured by its use. Under all circumstances it acts in harmony with the laws that govern the female system, and is as harmless as water.

It quickly removes that Bearing-down Feeling, extreme lassitude, "don't care" and "want-to-be-left-alone" feeling, excitability, irritability, nervousness, Dizziness, Faintness, sleeplessness, flatulency, melancholy or the "blues," and backache. These are sure indications of Female Weakness, or some derangement of the Uterus, which this medicine always cures.

Kidney Complaints and Backache of either sex the Vegetable Compound always cures.

No other female medicine in the world has received such widespread and unqualified endorsement. No other medicine has such a record of cures of female troubles.

Those women who refuse to accept anything else are rewarded a hundred thousand times, for they get what they want—a cure. Sold by Druggists everywhere. Refuse all substitutes.

are grown the plant sheds its leaves, and by the time it is ready for harvest there will be few leaves on the plant. Our plan of curing them this year, and which, I think, is possibly the safest, was this: We set a row of bean poles a suitable distance apart, putting them down deep enough with a crowbar so that they will not blow over, then laid a couple of sticks of wood and a few pieces of board across to keep the beans from the ground, and built up a stack 5 or 6 feet high and only 3 feet or so in diameter, and in this shape they cure with no damage. I got this idea from seeing peanuts cured in Virginia. They might cure on the ground in a dry season, but if you try to cure them this way it will be necessary to turn them as soon as they have dried out after a rain or the under pods will sprout or mold. Be sure when they are taken to the mow that they have no external moisture, as in this case they will mold or must in the mow. I think, however, that they will be as easily cured and managed as the ordinary white bean.

Some of those who have reported think that they could grow 50 bushels to the acre. This is probably a large estimate, yet I have no doubt that this many could be produced under favorable conditions, but if we get 20 bushels to the acre, and they are worth for feeding as much as 80 bushels of corn, of which I think we have abundant proof, they will be a profitable crop.—Waldo F. Brown, in Cincinnati Gazette.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that can not be cured by Hall's Catarrh Cure. Toledo, O. F. J. CHENEY - CO., Props. Toledo, O. We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm. West & Truax, Wholesale Druggists, Toledo, Ohio. Kinnan & Marvin, Wholesale Druggists, Toledo, Ohio. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all druggists. Testimonials free. Hall's Family Pills are the best.

When the past season's crops are garnered Hope steps the senses of Disappointment in forgetfulness, so that she may again cheer and strengthen man!—Farm, Stock and Home.

At the Kansas City Market.
There is probably no live stock commission firm that does business at the Kansas City Stock Yards that can give you better service in the way of selling or purchasing stock than the Union Live Stock Commission Company. This company has a corps of competent men in all of the departments of the live stock trade. It furnishes this paper and market reports free upon application.
Directors: M. S. Peters, Jerry Simpson, F. E. Rowles, W. K. Greene, Henry O'Neill, Geo. W. Williams, L. C. Boyle.

BOWSER FEED MILLS
(Sold with or without Elevator.)
Grind corn with shucks, Kaffir corn in the head and all kinds small grain.
LIGHTEST RUNNING
Handy to operate.
7 sizes—2 to 25 h. p. One size for windwheel use.
C. E. F. BOWSER CO., So. Bend, Ind.

THE OLD RELIABLE ANTI-FRICTION 4-BURR MOGUL MILL.
No gearing; no friction; thousands in use. Four-horse mill grinds 60 to 80 bushels per hour; two-horse mill grinds 30 to 50 bushels per hour. We make a full line of Feed Mills, best ever sold, including the Famous Iowa Mill No. 2, for \$12.50. Also Feed Steamers, Farm BOLLERS, and Tank Heaters. Send for free catalogue. Manufactured and sold by the IOWA GRINDER & STEAMER WORKS, Waterloo, Iowa.

WROUGHT IRON PIPE
Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from 1/2 to 12 inch diameter. Our price per foot on 1/2 inch is 2c; on 1 inch 3 1/2c. Write for free catalogue No. 81.
CHICAGO HOUSE WRECKING CO.,
W. 25th and Iron Sts., CHICAGO.

Live Stock Judging at the International Exposition.

The intercollegiate live stock judging contest at the coming International Exposition at Chicago next week will be one of the features of the occasion.

No institution shall be represented by more than 5 men in each class.

All entries must be filed with the secretary, accompanied by entrance fee of \$1, at least two weeks previous to any contest, on blanks furnished by him for the purpose.

No student shall be eligible to compete in any judging contest unless he has been a regularly enrolled student for at least eight weeks in the institution which he represents.

No person shall be allowed to contest who has not taken or is not taking a regular course in judging at an agricultural college.

All students competing in the work of the association shall be regularly matriculated in the institution which they represent, either as undergraduates or graduates of the current year.

No person shall be allowed to contest who holds a position as an instructor, or who has at any time acted as an instructor in an agricultural school or college.

Any student having competed at any previous intercollegiate judging contest will be ineligible to again compete in any similar contest of this association.

Each contestant shall fill out a blank supplied by the secretary, on which he shall assign the animals their several places, with reasons therefore.

The rating of the student's report will be made on the following basis:

Table with 2 columns: Placing, Reasons, Time, Method. Placing: 50, Reasons: 40, Time: 5, Method: 5. Total: 100

The extreme time limit shall be thirty minutes. Each contestant finishing within twenty-five minutes gets the full 5 points for time.

Twenty-six minutes are consumed by the contestant in completing his report, 4 1/2 points will be credited for time.

The Spoor trophy shall be awarded to the institution making the highest aggregate standing on three men judging in all classes.

Cash prizes amounting to \$700 will be offered by the press and various breeders' associations.

Sotham's Southern Sale.

The first sale of Hereford cattle by the National Hereford Exchange, under the management of T. F. B. Sotham, of Chillicothe, Mo., was held at St. Louis, November 20 and 21.

The result of the sale was 51 bulls sold for \$6,425, an average of \$125.91; and 61 cows and heifers sold for \$12,045, an average of \$197.46.

The offering was hardly up to the average in condition of Herefords in the Kansas City Sale.

The breeders having consignments were: H. D. Smith, Compton, Quebec, 7 cows, 3 bulls.

J. A. Stewart, Columbia, Mo., 5 cows, 1 bull.

Delte Bros., Viessman, Mo., 1 bull, 3 cows, 6 bulls.

G. W. Hussey, Glasco, Kans., 14 cows, 6 bulls.

A. B. Bruer & Son, Pontiac, Ill., 4 cows, 6 bulls.

Geo. H. Adams, Linwood, Kans., 10 bulls, 6 cows.

T. H. Pugh, Carthage, Mo., 1 bull, 3 cows, 2 bulls.

F. B. Sotham, Chillicothe, Mo., 29 cows, 18 bulls.

but the enthusiasm remains; it has only been born. St. Louis has held her first registered blooded cattle sale, and it has been a success; the market has been established; the trial has demonstrated the eternal fitness, this location as a distributing point for pure-bred breeding cattle, and henceforth St. Louis will be recognized among the leading markets of the country in this special line of live stock commerce.

The sale which closed Thursday is only the forerunner of others of greater importance that will follow. The breeders have learnt to their entire satisfaction that the territory which is contiguous to this market affords some of the most wonderful advantages for the development of purer blood lines in its cattle.

When coming into this territory for a new market the Hereford breeders proclaimed that they were willing to make sacrifices for the ultimate good of the breed in the South and Southeast; that is they were prepared to take minimum prices for their offerings that they might accomplish greater things and reap their reward in the future.

The Hereford Association Sale Finish.

In view of the near approach of the International Exposition and the great sale of Herefords to be held in connection therewith on Wednesday and Thursday forenoon, December 4 and 5, we herewith print the announcement published in the sale catalogue:

"One year ago, on the afternoon of December 5, when the auctioneers' voices had ceased after crying the most successful sale ever held under the auspices of the American Hereford Breeders' Association, the question uppermost in the minds of the Hereford enthusiasts was 'Can we equal this sale next year?'

"The sale is a proper climax for the series of 1901. The show season will be over. This is the occasion on which the successful breeders reap the reward for their arduous efforts.

"With reference to ages a more desirable lot could hardly be offered. Of the 29 bulls, 20 are yearlings, 5 are 2-year-olds, and 4 are over three years old.

"The International Stock Food Co., of Minneapolis, Minn., reports that its business has shown an increase of 100 per cent during 1901 and factory No. 3 is to be completed by February 1, 1902.

J. D. Davis, of Fairview, Kans., owner of Fairview Herd of Duroc-Jersey swine, has become interested in Red Polled cattle, and is building up a fine herd.

W. G. McCandless & Son, of Cottonwood Falls, have decided to close out their herd of pure-bred Cotswold sheep, consisting of 52 head—30 of them being ewes.

The three-days' combination sale of Poland-China hogs, Percheron horses, Shorthorn cattle, by Messrs Stoddard, Lunt, Snyder Bros., and Robison, advertised for February 11, 12, and 13, for Winfield, has been changed to Wichita, and is to be held the same time as the Oklahoma Live Stock Association's annual meeting.

Snyder Bros., of Winfield, Kans., write that their stock is all in fine shape and that their herd of Poland-Chinas now numbers 400 head including 100 head of this month's farrow.

Many cattle are now being pastured on wheat fields. Wheat is in excellent condition and furnishes a splendid feed.

Wm. L. Wood & Son, of Cottonwood Falls, own a large ranch on Fox Creek, another beautiful branch of the Cottonwood River, and have it well stocked with

ARTHUR LANGGUTH

PRESIDENT OF THE MICHIGAN PRESBYTERIAN PUBLISHING CO.

An Interesting Incident in the Life of a Successful Man as Told in a Personal Interview.

Mr. Arthur Langguth is president of the Michigan Presbyterian Publishing Company and is known as a conscientious and reliable man as far as the official organ of that church, the Michigan Presbyterian, circulates.

"Several years ago, in some manner, I strained my back. Instead of getting better it became worse and the pain increased so much that I could not lie down on my back and when sitting I was obliged to lean forward.

"But as I was making my preparations for the trip, the wife of a minister who is a friend of our family advised me to take Dr. Williams' Pink Pills for Pale People and so strongly did she recommend them that I put off the journey and tried the pills.

"Well, it was wonderful. I improved from the very start. I had become extremely emaciated from the pain and loss of appetite, but by the time I had taken a box my appetite began to return, the pains began to leave me and I picked up in health.

D. Williams' Pink Pills for Pale People will not only effect a cure in cases similar to that above, but, acting directly upon the blood and nerves, are an unfailing specific for such diseases as partial paralysis, St. Vitus' dance, sciatica, neuralgia, nervous headache, after-effects of the grip, palpitation of the heart, pale and sallow complexions, and all forms of weakness either in male or female.

This is one of the leading establishments of the breed in the West. Write him your wants.

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J. I. Reynolds, President. (Formerly of Trumbull, Reynolds & Allen.)

KANSAS CITY GRAIN & SEED CO.

BUY AND SELL Millet, Cane, Kafr, Alfalfa, Red Clover, Timothy, Pop Corn, Seed Corn, Cottonseed Meal, Linseed Meal, Corn, Oats, Rye, Barley, Etc.

a superior quality of Hereford cattle. Mr. W. L. Wood is at present the treasurer of the county and may be found in his office "at home" to visitors and inquirers for information about these cattle. This firm does a large range business also.

Roy S. Wood, of Cottonwood Falls, Kans. has lately sold his interest in the Hereford cattle business of Wm. L. Wood & Sons to his brother and will engage in the business for himself.

J. W. Robison, Eldorado, Kans., is reported to have bought 8 carloads of cottonseed-meal last week, which he will mix with cracked wheat and corn-meal and feed to his cattle.

The Shorthorn combination sales to be held at Chicago during the International Live Stock Exposition the first week in December will be held on the 4th and 5th instead of the 5th and 6th as heretofore announced.

Snyder Bros. have just made a notable sale of their Poland-China boar, Ideal Corwin 21534, to Harry E. Lunt, of Shady Lane Stock Farm, Burden, Kans.

J. W. & J. C. Robison, Towanda, Kans., owners of the Whitewater Fall Stock Farm, report as follows: "Our recent sales are, imported Percheron stallion, Reveur (30216) 13640, to P. G. Heidelbracht, Sparta, Kans.;

In the same beautiful valley of the South Fork of the Cottonwood River lies the extensive ranch of the Norton Bros., of Cottonwood Falls.

J. W. & J. C. Robison, Towanda, Kans., owners of the Whitewater Fall Stock Farm, report as follows: "Our recent sales are, imported Percheron stallion, Reveur (30216) 13640, to P. G. Heidelbracht, Sparta, Kans.;

Messrs. Gudgell & Simpson, of Independence, Mo., recently sold to Mr. W. J. Todd, of Maplehill, Kans., a choice lot of yearling bulls that will be sent to the ranch of the Kansas Cattle Company at Fulson, N. M.

A recent visit to Prospect Farm herd of Shorthorn cattle and Clydesdale horses, owned by H. W. McAfee, of Topeka, reveals the fact that they have the best bargain lot of Clydesdale stallions and mares for sale in this country.

Among the fairest and richest valleys of the many fair and rich valleys of Kansas is that of the Cottonwood River and its sister stream, the South Fork. Fair, because nature made it so and man has adorned it with farms and houses and everything that goes to make a farm country

fair. Rich, because this is the home of the alfalfa and the blue-stem and consequently of the best that can be produced in live stock which is the farmers' mainstay and the one thing that makes possible a prosperous farmer. Without these conditions little could have been possible; with them perfection has been well nigh attained, as is shown by the herds of the breeders who have made this their home. Among the most successful of these breeders of pure-bred stock it is a pleasure to mention W. G. McCandless & Son, of Cottonwood Falls, whose herd of Galloways are thoroughly deserving of a wide reputation. Headed by Paul Neiter 15876 and Cyrus 12531, their herd of 75 registered breeding cows has brought them a goodly number of spring calves and every one of them a jewel. Messrs. McCandless now offer 20 young bulls of this excellent breeding and of individual merit and 32 spring heifers that are "as fine as silk." They also have a few excellent bulls that are ready for immediate service. Write them. Go and see them. It will do you good.

As previously announced Mr. Chas. W. Armour, brother of the late K. B. Armour, has succeeded to the management of the Armour herd of Herefords. He will have charge of the Armour interests at the Armour-Funkhouser public sale to be held at Kansas City, on December 10 and 11. He knew what his brother's ambitions were concerning this two-days' Hereford sale, and for this and other reasons a statement from him will be of special interest just at this time. His statement is as follows: "Since boyhood, the interests of my brother, Mr. Kirk B. Armour, and my own, have been so interwoven and so nearly identical that, while each of us has had some individual investments, as a whole we have always been partners. Our land interests were together, and while I have never acquired the breeder knowledge of cattle that he had, we went to the farm and enjoyed the cattle together, very often. The only pretense I have to a knowledge of the Hereford business is that natural absorption which will come to one from an association with them every few days, through a term of years. Last year my brother made a number of public sales, but he had practically decided that hereafter he would confine himself to one large annual sale. I have been with him a great deal during the past year and I think he talked more about this coming sale than any he has ever made. The selections were made by him early last summer and I know he had the conviction they would form his best public offering. He rarely, even to me, made any glowing comments about anything of his own breeding because, as he often said, it was for some one else to pass an opinion on what he had done, but when we came to animals that he had bought in this country or abroad, he would expand, and say, 'Isn't she a good one?' or, referring to a picked bunch of imported heifers, 'I think they are the best lot I ever saw together,' then he would usually add, 'I can talk about these. I did not breed them.' His own breeding in this sale will comprise females of his very best types, from yearlings to 6-year-olds, daughters of all the great stock bulls he has ever owned, and there will be a number of yearling bulls from sires in use within the last three years. In the imported division there are some 25 head of cows, from 3 to 4 years old, all of which have had calves or will sell with calves at foot, some 18 head of coming 2-year-old imported heifers, all bred, and 4 head of imported bulls."

The 4 animals consigned to the Angus sale at Chicago during the International Exposition from the herd of Anderson & Findlay, contain the blood of their grandly bred imported Pride and Erica bulls. The yearling bull, Lord Pacific, is by the imported Pride bull, Pacific, and out of a Queen Mother dam of the same strain as the champion and record-breaker, Gay Lad and Lucia Estill. He is a remarkably well-bred youngster and also offers great possibilities on account of his superior individuality. Coquette 15th of Allendale is just 2 years old, sired by the World's Fair prize-winner, Eulalie's Eric, a son of the renowned Heather Lad 2d, and out of Coquette 8th of Lake Forest, a descendant of the imported cow, Coquette 4th, whose daughter, Coquette 11th, was champion female in a class of 86 competitors at Smithfield, London Show. This grand Coquette heifer is in calf to the imported Pride bull, Pacific, a prize-winner at the Perth, Scotland, show and sale spring of 1899. Silvia 4th, a daughter of the Coquette bull, Conqueror 2d of Lake Forest, and the cow, Silvia 2d by Eros, unites the blood of the Ericas, Blackbirds, and Coquettes and is in calf to the fine imported bull, Elberfeld, from the Ballindalloch herd of Sir George Macpherson Grant. The fourth entry from the Allendale herd is the Fyvie Flower yearling heifer, Verbene 19th, also in calf to imported Elberfeld. D. K. Pearsons, Goldfield, Iowa, contributes the bull, Make Peacer, and 3 splendid females. Make Peacer is a son of the champion, Lord Woodlawn and Mathla of Longbranch 2d, by the champion Heather Lad of Emerson 2d. This youngster is one of the best of the get of the celebrated junior champion of the Trans-Mississippi Exposition and this is indeed high praise. A son of Lord Woodlawn, Woodlawn, was recently sold by Mr. McWhorter for \$1,750, and another son defeated all comers at the Iowa State Fair this year. The Lord Woodlawn bulls are very superior and there are two of them consigned to this exposition sale. Mr. Pearsons also includes one of the two daughters of Heather Lad of Emerson 2d consigned to the sale. She is a Duchess of Easter Tulloch, and a beautiful breeding cow just 4 years old. In the Pride heifer, Pride of Lakeside 2d by the illustrious sire, Heather Blackbird, out of a dam by Golden Abbott, Mr. M. A. Martin, Wall Lake, Iowa, has certainly contributed a gem. She is a beautiful heifer and half sister to the champion over all breeds, Barbara McHenry 13th. Mr. Martin has also done the proper things by the International Exposition Sale in contributing the 3-year-old heifer, Maggie of Lakeside, by the celebrated Black Jam and out of a dam that is a half sister to the \$2,000 cow in the Estill dispersion. Daughters of Black Jam are just about priceless as the owners of this bull, Messrs. Lantz, are selling no females from him, and Maggie of Lakeside presents a rare opportunity to secure one of the best of the get of this famous bull. Mr. Martin also includes the yearling bull, Royal Victor of Lakeside,

bred by Mr. McWhorter, sired by the Duke of Marlborough and out of a daughter of Victoria, the dam of Clansman Chief, the great Escher stock bull, and Black Victor, the bull in service along with Gay Lad, in the herd of Mr. Mattinson, of Ohio. Each consignment of the 26 contributors to this great sale, would justify having columns written about it. No such collection has ever before been offered to Angus breeders in this country. The individuals are absolutely choice and the catalogue reveals the fact that there are an even dozen of the record-breaking, champion-producing Queen Mothers, 7 of the aristocratic Blackbirds 6 of the renowned Heather Blooms, 4 of the historic Prides, and an equal number of the highly prized, high-priced Drumlin Lucys and all of the other famous families known to Aberdeen-Angus breeding are represented by one or more splendid specimens. Gay Lad, Gay Blackbird, Heather Lad 2d, Heather Lad 4th, Heather Lad of Emerson 2d, Moon Eclipse, Bell's Eclipse, Eulalie's Eric, Young Wellington, Golden Abbott, Heather Blackbird, McHenry Blackbird 6th, Lord Woodlawn, Imp. Pacific, Imp. Prince of Kerra, Black Monarch of Emerson, Beau Ida, and the Scotch bulls, Siberian, Field Marshal of Guisachan are among the noted sires.

Coming Events.

State Improved Stock-Breeders' Association, twelfth annual meeting, Topeka, January 6-8, 1902; H. A. Heath, secretary, Topeka.

State Poultry Association Show, Topeka, January 6-11, 1902; George H. Gillies, secretary, 603 Kansas avenue, Topeka.

Kansas State Board of Agriculture, thirty-first annual meeting, Topeka, January 8-10, 1902; F. D. Coburn, secretary, Topeka.

Vansant & Sons' Seed-corn.

Three very excellent varieties of field corn are to be exploited the coming season by the expert corn growers, W. W. Vansant & Sons, of Fragut, Fremont County, Iowa. A Kansas Farmer field representative recently visited Mr. Vansant's home farm of 800 acres, which is one of the best kept in that richest section of Iowa. Mr. Vansant was busy sorting and storing away the corn, and one could scarcely realize as he stood face to face with these big stores of golden ears, on the one hand, and those of pure white, on the other, that there could be complaint from any section regarding a light yield and inferior quality in the corn crop.

Mr. W. W. Vansant is an old-timer in the seed-corn-growing business, as a long sustained interest of thirty-five years bears witness; and no man can talk more intelligently than he upon the thousand-and-one points of interest presented in a single ear of corn. Mr. Vansant has for a long term of years conducted experiments along the line of cross-breeding the different varieties of field corn that have seemed to possess qualifications suited to make the best crop under the conditions of soil and climate confronting him. He has settled down to three varieties as the upshot of these experiments, viz.: The Cattle King, Early Reed, and Mammoth White.

This firm has a printed circular, which briefly points out the chief characteristics of each variety, and we are sure that Kansas Farmer readers will want to inform themselves in so vital a matter as this. Please note the Kansas Farmer advertisement when you write. At a little later date we shall present a fine photograph of a sample ear of Cattle King. This fine variety bids fair to become a prime favorite throughout the entire Northwest, as its merits become more generally known. The name is a suggestive one. The yellow ear has a tinge of pink. It is a good yielder, and requires a season of about one hundred days. Samples of all three varieties upon application.

Fleming Bros. Stock Remedies.

Fleming's Lump Jaw Cure, Fleming's Spavin Cure, and Fleming's Fistula and Poll Evil Cure must be known by name at least to every reader, for these famous stock remedies are advertised in our columns. Fleming Bros., Union Stock Yards, Chicago, are eminent chemists, who believe in a separate remedy for each class of disease they treat. The Lump Jaw Cure cures Lump Jaw, the Spavin Cure cures Spavin, and the Fistula and Poll Evil Cure cures these diseases, so Fleming Bros. assert, and prove it by offering to refund all money paid if their medicine fails to cure. They inform us that so nearly universal is their success, that their refunds under the guarantee average only two-thirds of 1 per cent. That is to say out of 300 cases they cure 298 cases. Our readers endorse them. We have never had a complaint. We believe in them, and in their remedies. If you own a lumpy jaw cow or steer, a horse with fistula or poll evil, or have horses with spavins, curbs, ringbones, splints, or any extraneous bony formations, write Fleming Bros. for full information and a pamphlet with testimonials of cures, mentioning catalogue No. 93 if you want to know about the Spavin remedy, catalogue No. 246 if for Lumpy Jaw, and No. 446 if for Fistula and Poll Evil. Fleming Bros. are adding hundreds of thousands of dollars annually to the wealth of American farmers and stock owners by curing as they do scores of thousands of afflicted animals.

Facts About Roofing.

Every time you have use for roofing or siding you determine to get the best. Sometimes you pay a high price and then don't get any better material than if you'd paid less. That's discouraging. Now other men in your position have learned to tell their trouble to headquarters and have their needs attended to correctly and promptly and without any fancy charges for material and none whatever for information and advice. Whether you want metal or fabric roofing (all fire and weather proof) or roof paint, a line to the Kansas City Roofing and Corrugating Co., 218-220 W. Third St., Kansas City, Mo., will put you on the right track and its information may be relied upon in every respect. It is headquarters for everything in roofing and siding.

The Sure Hatch Incubator hatches sure. See advertisement on page 1081.

BIG ROCKER SALE!

We have just received 100 Rockers like cut which we want to put in the homes of everybody. These Rockers were made to sell for \$5.00, but we are enabled to buy them very cheap and will make a price of \$2.95 on them while they last. . . .



THESE ROCKERS
ARE WELL MADE
AND WELL WORTH
\$5.00---WHILE THEY
LAST FOR...

REMEMBER
WHEN THIS LOT
IS GONE YOU CAN
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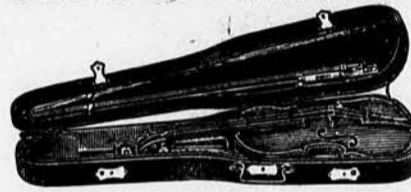
We want everybody to call and examine these Rockers--- they are the greatest bargains ever offered.

Mail orders will receive special attention. Your choice in oak or mahogany finish. Remit \$2.95 and the chair will be shipped promptly.

Geo. W. Moffitt,

538 KANSAS AVENUE, TOPEKA, KANSAS

FREE BOOK



for Violin instruction, set of Violin Strings, and Rosin. CHRISTMAS TIME—a present wanted—shall it be a Violin outfit for only \$4.75? We will give FREE with each complete outfit as above noted, one instruction book, set of extra strings and rosin, all for \$4.75. Send without delay. Make someone happy.

SEND ONE DOLLAR and we will express C. O. D. this fine violin outfit. You can examine it and if it suits and you find it as represented—one of the best values you ever saw—pay the express agent our special offer price \$4.75 and express charges less the \$1 already sent. This is a well built violin of a special selection for good quality of tone. We furnish also a nice neat violin bow and a handsome AMERICAN violin case with hasps and handle.

Catalogue of Farmers' Needs Free.

STIMSON & CO., Kansas City, Station A.

Wholesale prices to Cash Buyers.

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A Dictionary of English, Biography, Geography, Fiction, etc.
NEW EDITION. 25,000 New Words, Phrases etc.
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Send for book of information about the Beaumont field. Get in the right companies at the right time.
A. R. KROH, 307 Fort Dearborn Block, CHICAGO, ILL.

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FOR THE

International Live Stock Exposition.

On December 1st, 2d, and 3d from Kansas and Nebraska, and December 1st and 2d from Oklahoma and Indian Territories, the

Great Rock Island Route

will sell excursion tickets to Chicago at rate of one fare plus \$2.00 for round trip, with final return limit leaving Chicago December 8, 1901. These reduced rates give a splendid opportunity for a cheap trip to Chicago to attend this great Exposition, which in interest and in the number and excellence of exhibits will surpass any to its kind ever held. For full information consult nearest Rock Island ticket agent, or address **E. W. THOMPSON,** Assistant General Passenger Agent, Topeka, Kans.

The Home Circle.

THE OLD THANKSGIVING DAYS.

Sitting silent by the window while the evening's fading beam Turns to lonely gray the winter's silvered sky,
Not a voice to break the reverie of thought's too pensive dream.
Not a footstep—only memory and I.

From the past the veil seems lifted, and I am a child once more,
On the hearth again the old-time fagots blaze.
Hush! Again I hear the voice of the guests about the door,
In the greetings of the old Thanksgiving Days.

All the air outside is frosty, and in gusts the blithe winds blow,
And I hear the distant sleigh-bells faintly ring;
And against the time-touched windows comes the purring, stirring snow,
Like the brushing of a passing angel's wing.

But within, oh, see, the faces that are smiling 'round the board,
How they shine with love and gratitude and praise!
Hushed the voices are a moment for the thanking of the Lord,
In the blessings of the old Thanksgiving Days.

There were all the joyful kinsfolk gathered in that smiling host,
Aged sire and laughing children, sweet and fair.
Sorrow haunted not that banquet with her poor, unwelcome ghost,
Peace and gladness were the unseen angels there.

Oh, the stories, and the music, and the friendly, blithesome jest!
Oh! the laughter and the merry, merry plays!
Was there ever more of heaven in a happy mortal's breast
Then was with us in the old Thanksgiving Days?

That was years ago, and curfews for the loved have rung since then.
As to-night I watch the dawning evening star,
In my dreams I see the mansions Christ prepared in heaven for men—
It is there to-night the absent kindred are!

It is there their feast is ready, and I hold the fancy dear
That they often turn to earth their loving gaze,
And perhaps they, too, are dreaming, as they see me sitting here,
Of the sweetness of the old Thanksgiving Days.

—Ernest W. Shurtleff, in Congregationalist.

MEN WHO HAVE HELPED THE FARMER.

Louis Pasteur.

(Born December 27, 1822; died September 28, 1895.)

"I had come to see the destroyer of the theory of spontaneous generation, the demonstrator of the microbe origin of disease, the conqueror of hydrophobia. I had found something greater, perhaps, than all this—a perfectly gentle soul." So said Miss Tarbell, eight years ago, after having visited the great French savant at his home in Paris. Pasteur was then nearly seventy-one years old and still eager in the pursuit of his calling, still possessing one of the brightest of intellects.

Perhaps no other scientist of the last century was so profound a student of the deeper and more intricate problems which perpetually challenge the investigator, and at the same time so thoroughly devoted to the ideal of science as the servant of humanity, as Pasteur. No one was quicker to see or keener to appreciate the purely scientific bearings of any discovery, and no one was more prompt to subordinate the theoretical to the practical. And yet no man could have been more rigid in submitting his own discoveries to the last tests of the most exacting scientific methods. He announced no discovery till he was not only sure it was a real discovery, but till he was sure he could establish its claims as such.

Pasteur's father was a tanner, who had been decorated by Napoleon for heroic conduct as a soldier in the legions of the First Empire. The tanner was brave in another way. He had the courage to practice the most rigid economy in order that his son might have an education. "Louis," he said on one occasion, "if I see you one day a professor in the college of Arbois I shall be the happiest man on earth." The dream of the father was more than realized. While yet a young man, Louis became one of the most famous scientific investigators of his time, and his fame has been growing for fifty years. We have but little more than begun to realize the importance of his methods and his discoveries.

Within the limits of this article it is not possible to catalogue the achievements of Pasteur. His first great discovery was in the field of chemistry. The studies which led to this remarkable result trained the young scientist in

the most exacting methods. He dared not dispute the opinions held by the great men of his day without being absolutely sure of the facts which supported his own. But Pasteur was not to win his great fame as a chemist; yet his chemical studies led directly to the investigations to which he devoted his life and his great genius.

It had been suggested that fermentation was caused by the growth of living organisms; but the accepted doctrine among the great men of fifty years ago was that these organisms were only incidental to the process of fermentation, not its cause. Pasteur's investigations enabled him to refute the accepted doctrine, to establish the truth, and to lay the foundations of the great science of bacteriology. Alcoholic fermentation, the "working" of yeast, and the souring of milk were shown to be the work of minute living organisms—a specific kind for each kind of fermentation. This was a great triumph for the young man, and led to extraordinary scientific and practical results.

What is known as the theory of spontaneous generation had been accepted for thousands of years. Aristotle had declared that "every dry body becoming moist, and every moist body becoming dry, engenders animals." We are inclined to smile at the simplicity of the old philosopher; but when Pasteur began his experiments the fallacy of spontaneous generation was believed by most of the competent students of science. After Pasteur's proofs had been repeated before a commission appointed by the Academy of Sciences, and the secretary of that august body had delivered the opinion that "there is, therefore, no spontaneous generation," the attitude of nearly all scientific men was changed. They believed, as nearly all intelligent persons believe to-day, that "to still doubt is not to understand the question."

Pasteur then turned his attention to more practical subjects. The manufacturers of vinegar had all along followed the most empiric of methods. No one knew how vinegar came to be vinegar. Pasteur explained the whole process, the results of his studies being of great scientific importance, as well as of immense practical significance. Following this triumph in the domain of applied science, he turned his attention to a disease of wine. This he mastered. Then a silk-worm disease had to be studied and the remedy found. The brewers, too, were suffering heavy losses by reason of destructive ferments. Could Pasteur help them? He did. In all these cases it was a micro-organism that was doing the damage.

The destructive disease of cattle, known as anthrax, was costing the French nation losses amounting to millions of dollars every year. Its cause had been partly worked out by other careful students. Pasteur's genius mastered this dreaded disease and provided a preventative vaccine.

The greatest of Pasteur's labors, resulting in a cure for hydrophobia, can only be mentioned. So also his discovery of the nature of chicken cholera. The cause of each of these diseases was a different specific germ. But to discover the germ itself and its relation to the disease was the smallest part of Pasteur's great work. How to make the cause of the disease its prevention and cure—that was the great problem. The chief glory of Pasteur is that he solved it.

"Truly," said Lister, the man who revolutionized surgery by the application of antiseptics—"truly, there does not exist in the entire world any individual to whom medical sciences owe more than they do to you." It is a satisfaction to know that this merited tribute to Pasteur could have been addressed to the living man rather than be uttered at his funeral. For Pasteur lived to know that his labors were understood and his devotion to humanity appreciated.
D. W. WORKING.
Denver, Colorado.

In a Glass of Water.

Put a handful of *glazed coffee* in a glass of water, wash off the coating, look at it; smell it! Is it fit to drink? Give

LION COFFEE

the same test. It leaves the water bright and clear, because it's just pure coffee.

The sealed package insures uniform quality and freshness.

Farmers Wives and Daughters.

HARRIET C. LOOMIS, BEFORE THE GIRARD FARMERS' INSTITUTE.

In a recent Kansas City paper there appeared a statement that 200 Missouri teachers were asked the question, "who is the greatest woman in history?" and the answer that secured the prize was, "The wife of the Missouri farmer of moderate means, who does her own cooking, washing, and ironing, brings up a large family of girls and boys to be useful members of society, and who finds time for her own intellectual and moral improvement is the greatest woman in all history." The paper further stated that the prize was so awarded because the answer was so original. Thus discounting all the credit we farmer's wives could derive from the incident. But surely those judges knew the difficulties the western farmer's wives have to contend with in establishing and maintaining an ideal home. They also realized that truth and justice demand such a decision.

The fact that so many can not reach that goal of ambition (the ideal home) emphasizes the difficulties to be overcome, and yet, from the standpoint of one who has all her life lived on a farm, taking into consideration the surroundings of the rural woman of to-day, we are satisfied that with the proper cooperation of the husband, very many of those difficulties may be avoided. As work is the farmer's heritage, so we, his wife and daughters, must share it, therefore let us welcome it as a part of God's great plan, making it the means of building up a busy active life. But alas! for the woman who lets her work become her master until she descends to be such a mere drudge that if her life's routine was set to music, it would be as pitiful as Hood's Song of the Shirt:

"Work—work—work!
From weary chime to chime;
Work—work—work—
As prisoners work for crime!"
No time to read;—scarce time to pray.

We appeal to you mothers, for your own sakes and the sakes of your children, not to spend your strength "for that which satisfieth not." The little you can earn is no compensation for the lack of culture it necessitates.

When the advent of the ready-made garment has lifted the burden our mothers and grandmothers bore, why should we seek to carry other burdens equally heavy? Rather let us strive to be nobler, better women, making the home reflect a more cultured, intelligent life, knowing that it is our husband's prerogative to support the family and ours to make a pleasant home.

Our men would scarcely like to be classed with that poor fellow who said he "could almost make a living and it was a poor wife that couldn't help some."

A pleasant home? Yes, so pleasant that it will be a rest for the tired farmer to be there. So pleasant, that our boys will love their homes and prefer them to the worse than idle rambling, hunting and fishing on the Sabbath; so pleasant, that as they older grow the saloon and the billiard hall will have no attraction for them.

We must train our boys and girls to be honest, intelligent, God-fearing men and women. One of the most efficient helps in that direction is to furnish them with good literature for their leisure hours, and, although our means may be limited and our homes isolated, there is small excuse for ignorance, since our legislators have so royally treated the women of Kansas by placing, first the school district library and now the traveling library within their reach. These books, the best that money can buy, with one or two good papers for information on the current events of the day, can be made sufficient to cultivate a taste for the best of reading which in its effects will revolutionize many a home.

In all this work of the home the farmer's daughter is her mother's bulwark of strength, her efficient help in every undertaking.

Although there is a commendable pride in making the best bread, the best butter, and having the best kept house, let it be our boast that we raise the best boys, the best girls, the boys to be kings of the farm, the girls to be queens of the household.

Tenderness or aching in the small of the back is a serious symptom. The kidneys are suffering. Take Prickly Ash Bitters at once. It is a reliable kidney remedy and system regulator and will cure the trouble before it develops its dangerous stage.

When writing advertisers please mention KANSAS FARMER.

"Let the GOLD DUST twins do your work."



GOLD DUST

makes the clothes white and clean without injury to the fabric in any way.
Housework is hard work without Gold Dust.
For greatest economy buy our large package.

THE N. K. FAIRBANK COMPANY, Chicago.

Does it Pay the Farmers' Wife to Hire Help During the Busy Season? If so, Why?

MRS. NELLIE COPAS, BEFORE THE DENNISON FARMERS' INSTITUTE.

This is a subject of which I know very little, as I have had hired help only seven weeks during the eight and one-half years I have been on the farm. I would consider the farmer's wife's busy season three hundred days out of the year. I presume there are few women, when they are compelled to be wash woman, seamstress, nurse, chore boy, housekeeper, chicken raiser, and in fact maid of all work, when baby is cross and hired men to cook for, but what wish they could be six different people at once so they could do all the work that was to be done.

If I was to hire help for the farmer's wife I should select a boy in preference to a girl, because then you could give him all the heavy work, such as running the washing machine, emptying and washing the milk cans, churning, milking, hoeing in the garden, taking care of chickens, as well as helping in the house at house cleaning time. A hired girl would leave in twenty-four hours if she had all this work to do, consequently the heavy work would fall on the farmer's wife after all. We have had hired hands, who, with a little training in cooking, would have made excellent hired girls.

Would it pay the farmer's wife to have help? It would. She could have more time for rest and reading, more time to improve her mind, to visit the sick, to do more church work, and to be more neighborly. As it is it is not much pleasure to go visiting, because one has to rush around in the morning to do the work and get the children ready, and then in the evening hurry home and work twice as hard in order to catch up with the work left undone during the day, so it is much easier for her to stay at home than to go at all. The farmer has one advantage over his wife. There are rainy days in which he can read, sleep, and rest, or get on his horse and go to town or visit his neighbors, but his wife's work goes on just the same on a rainy day as on a bright one.

It would pay because she could have time to be a better mother. She would have more time to be with her children and when they asked her to go fishing or nutting with them she could go instead of being obliged to say, "No dear, mamma has fruit to put up or a garment that must be finished, so run along and don't bother mamma." In a few years they quit asking mamma because they think she is always too tired or too busy, and so they go out into the world and seek other companions and when they do something that makes our heart ache we think it would have paid if mamma had had time to have gone with them and been their chum and companion.

It would pay as she could be a better wife. She could be like the wives we read about. When her husband's work is over meet him at the door in a dainty wrapper, with a bright smiling face, and have his slippers ready for him, instead of meeting him with the milk buckets, with a tired face, and in a dirty dress, hair uncombed, and saying, "Come, John, lets hurry and get the milking done for I have the supper dishes to wash, table to set, floor to sweep, sponge to set, chickens to shut up, potatoes to prepare for breakfast, a dress to patch for Susie, and a ball to make for Tom before I go to bed."

You should take advantage of our "Two for One" offer. It is the best offer we ever made.

The Young Folks.

THANKSGIVING.

Sweet was the song of the robin,
Blithe was the hum of the bee,
In the day when the drift of the blossom
Was light as the foam of the sea,
Then deeply was cloven the furrow,
And gayly they scattered the seed,
Who trusted that rainfall and sunshine
Would surely be given at need.

The robin hath flown to the tropic,
The honeybee flitteth no more,
The reaper hath garnered the harvest,
And the fruit and the nuts are in store.
The flame hath died out on the maples,
We tread on the loose-lying leaves,
And the corn that was steady and sturwartz
Is gathered and bound into sheaves.

And sweeter than music of springtime,
And fuller of jubilant mirth,
Are the strong-fluted chorals o'erflowing
From the hearts where thanksgiving hath
birth.

The songs of the home and the altar,
The gladness of children at play,
And the dear love of households united
Are blending in praises to-day.

For pasture lands folded with beauty,
For plenty that burdened the vale,
For wealth of the teeming abundance,
And the promise too royal to fail,
We lift to the Maker our anthems,
But none the less cheerily come,
To thank Him for bloom and fruition,
And the happiness crowning the home.

Oh, the peace on the brow of the father,
The light of the mother's clear eyes,
The lilt in the voices of maidens
Who walk under dream-curtained skies,
The dance in the feet of the wee ones,
And the sparkle and shine in the air!
The year has no lull like Thanksgiving—
A truce to our fretting and care.

Sweet was the song of the robin,
Blithe was the hum of the bee,
In the day when the drift of the bloom
Was light as the foam of the sea,
But sweeter the silence of autumn,
That maketh a space for the strain
Of the joyance of home, when the harvest
Is gathered from hillside and plain.
—Anon.

"Mental Muscles Grow Like Physical Muscles."

We have ventured several times in these columns to quote things that show the wisdom of Napoleon and to ask attention to them. The letters we have received show that the practical good sense that Napoleon exhibited in the quoted remarks was found to be of interest.

There is one man in history who was as much wiser as he was in every way greater than Napoleon, and that is William Shakespeare.

Napoleon in his shrewd comments got hold of the everyday good sense of things for living after practical and not always very exalted ideals.

Shakespeare laid hold of all the profoundest motives that lie at the bottom of human life.

The difference was like the difference between a merely clever man that views things superficially for the sake of immediate success and a great thinker that understands the human heart.

No man can ever exhaust the wisdom of Shakespeare, and a lifetime of reading would not exact all the really valuable wisdom in him, the kind of wisdom that really reveals principles to build life on.

We are not going into Shakespearian commentary and we haven't the least idea of suggesting anything new about a man that has been more written about than any other man in three hundred years, but we should like in a humble way to give an instance of a very curious thing about Shakespeare:

Every page of his writings contains things that get hold of a fundamental guiding truth for all men of all times, put in a way that reaches straight home.

Who else, for instance, has ever put the following idea in such impressive words:

Macbeth says to the doctor, who tells him of Lady Macbeth's illness:

"Canst thou not minister to a mind diseas'd;

Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain,
And with some sweet, oblivious antidote
Cleanse the stuff'd bosom of that perilous stuff
Which weighs upon the heart?"

And the doctor says:

"Therein the patient must minister to himself."

And in another place Shakespeare says: "It is in ourselves that we are thus or thus."

It is not true that Shakespeare did not mean to suggest that each man controls his destiny, because destiny is a matter of circumstance and environment as much as of will.

But it is perfectly true that circumstances, environment, events, and even what we consider misfortune, are of no effect except as we think of them in ourselves.

In other words, the control of the mind is the greatest thing in the world. It is also the most difficult because all human weakness centers there. Nevertheless it is wonderful how much

control over their minds men have been able to attain.

Custom, necessity, and repeated effort are the things that teach and develop this faculty. Men learn to think clearly and act intelligently in the midst of tremendous noises (as in boiler factories) that at first nearly deafened and crazed them. Men have learned to think quickly and precisely in sudden and trying emergencies, as steamship pilots and railroad engineers. Men have overcome the weakness of dizziness at great heights, schooled themselves to disregard terrible spectacles as surgeons at autopsies or accidents, and learned to be cool and collected in the presence of dangers and imminent death as commanders in battle, or to be absolutely indifferent to pain as the red Indians were.

All these things indicate in a little way the power of the human will to control and educate the human mind.

It is interesting to reflect that this side of death there are practically no limits to this power. Any man that recognizes a particular defect in his character, for instance, can undoubtedly remedy it by patiently schooling his mind in the right direction. Some of the worst tempers in history have been cured by this kind of effort, and De Quincey cured himself of the opium habit, one of the most remarkable instances on record.

The explanation is, of course, that the mind is just like the muscles of the body. If you exercise one side of the mind persistently day after day it develops and grows strong and firm, just like the muscles of the arm if you practice steadily at lifting weights.

The reason there is not more mental and moral development on these lines is sheer laziness.

It is curious to reflect that two prize fighters that are going to pummel each other will devote months to preparing by strict diet and careful, systematic exercise, by developing their muscles, and scarcely any man is willing to work one half as hard to develop the mental fiber for things that are worth while.

Of course, Shakespeare did not mean to intimate that any kind of mental control or effort would have made tolerable such a terrible weight of guilt as Macbeth and his wife bore. The doctor's remark was a general prescription for bearing the misfortunes of life:

"Therein the patient must minister to himself."—New York Journal.

Young Man, Don't.

C. D. Thompson, of Port Huron, who has been for years supreme finance keeper of the supreme tent, Knights of Maccabees, confesses to defalcation of \$57,000 of the association's funds, and, among other things, says:

"I was engaged in a legitimate business venture in which I made a large investment, and found myself in a position where further money was necessary to save me from bankruptcy and ruin. I used the funds of the order, believing there was no question of my ability to replace them."

Young men, here is the rock upon which so many lives have been wrecked—using other people's money with the belief in ability to replace it. Undoubtedly, when Thompson decided to use that money, he did not consider it stealing. It was merely borrowing in his mind. He may have honestly intended to replace the money. The danger lay in just this condition of the man's mind. He was sure that his investment would succeed. There was, to be sure, a slight risk, which covered the happiness of his family and the brotherly love of his fellow Maccabees. He took that "little risk." He is to-day a self-confessed traitor and thief.

Young man, there is no middle ground of honesty in handling other people's money. The only safety lies in determination not to appropriate to one's own use, for any purpose, or with any excuse, a cent of funds intrusted to your care.

Beware the time when you begin to feel that you can use your employer's money and replace it. Not one young man in a thousand succeeds in this, and the one who does succeed in replacing his employer's funds is a little less a man, and the chances are 100 to 1 that his first success leads to other more dangerous risks, and, finally, to ruin.

The road to success in business life is not short and carpeted.

It is long and hard, but plain. Don't ever think that the using of other people's money is borrowing if you replace it, stealing only if you get caught. There is no half-way honesty, no imitation honesty. Don't compromise with your conscience, with any such idea.

"This above all—to thine own self be true; And it must follow, as the night the day, Thou canst not then be false to any man."

—Kansas City World.

Are Criminals Born or Made?

Are criminals born or made? The congress of criminal anthropology while sitting at Amsterdam discussed the question. Difference of opinion threatened at one stage to become acute until Signor Ferri, of Rome, restored harmony by a compromise. Some men are born criminals. But a man with a criminal stigma does not always become a criminal; his surroundings and his general mode of life have to cooperate. This statement is as cautious as it is correct, and expresses, we imagine, the last word of philosophic criminology. We may illustrate it by reference to another and more reputable class of persons, though indeed their calling also has on high philosophic authority been pronounced "a kind of madness;" we mean the class of poets. Now, as every school boy knows, a poet is "born, not made." But we know also that there are "mute inglorious Miltons." All poets are born; but not all born poets come to maturity of song. Surroundings and general mode of life must cooperate. Matthew Arnold, if we remember aright, laid it down in one of his letters—somewhat disputably, we think—that leisure and a banker's balance were among these cooperating inducements to song. But however that may be, there can be no doubt that criminal instincts, like poetic and all other instincts, may be either stimulated or discouraged by other influences. And this is the side of the matter which it is most useful for States to remember. There is, indeed, an heroic school of anthropologists which preaches the doctrine of "the sterilization of the degenerate;" but for immediately practicable purposes, "the reformation of the criminal," and "the prevention of crime" are better formulas. They should not be forgotten even in the case of criminal anarchism.—London Chronicle.

A Birdseye View of Kansas.

Kansas would now present an attractive picture to one high above the earth in a flying machine. The vivid green of vast rectangular wheat fields, the blazing crimson, purple and gold of forest trees in the winding valleys of Kansas streams, the gray prairies, the darker cultivated fields, these together form a mass of vivid color seldom seen in Kansas, never seen elsewhere.

It is said that not in twenty-five years have our forests shown such extravagance of color. It is said that in the East, and also in Europe, their autumn colors do not compare with ours.

There used to be times when autumn fires blackened the prairies of Kansas, when whole counties burned over in a day. There used to be times when myriads of birds and fowl darkened the sky in migrations from North to South.

Nature was a long time in getting Kansas ready for its present tenants. It has dressed the State in bright holiday colors and soon will show a change to peaceful white. There is less than 40 acres of this charming landscape for each person now in Kansas. What will Kansas show in 1950, compared with what was in 1850? Yet this is but a beginning of Kansas history. R. Medicine Lodge, Kans.

The production of oxygen and hydrogen on an industrial scale by the decomposition of water with electrolytic apparatus in Germany has led to the suggestion that hydrogen thus produced may find a wide field of employment as a lighting agent. It is now used for inflating military balloons. For lighting purposes it is compressed in steel cylinders. With a proper burner it is said to be a cheaper illuminant than acetylene, the relative cost for equal illuminating power being as 25 for hydrogen to 59 for acetylene.



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The Kansas State Horticultural Society will hold its annual meeting December 26, 27, and 28, 1901. The full program will appear in the KANSAS FARMER next week.

The famous Kansas City Stock Yards case was this week decided by the Supreme Court at Washington. The Kansas law, designed to regulate charges, was not sustained. Charges will remain as they have been for the last few years.

KANSAS CITY POULTRY SHOW.

Promoters of the Kansas City Poultry show, which will be given December 6, 7, and 8, expect 1,500 entries in poultry, and more than 500 in pigeons and pet stock. Exhibits of Angora cats and pheasants are promised. There will be several exhibits of incubators timed to hatch during the show. The cooping will be uniform and all varieties of fowls and pigeons will be marked with cards so that visitors may tell at a glance what they are looking at. The latter will be a new departure in Kansas City shows.

A convention of breeders from the country tributary to Kansas City will be held during the show and it promises to be well attended.

FANCY PRICES FOR BEEF.

There was great excitement at Pittsburgh, Pa., Nov. 18, when the prize-winners at the Fat Stock Show were auctioned off, and record-breaking prices prevailed. The load of sweepstakes Angus steers, fed by Charles Escher, of Botna, Iowa, sold to the Pittsburgh Provision Company at \$21.50 per 100 pounds. The second prize-winning load of Angus, exhibited by J. & D. Funk, Bloomington, Ill., sold to Burk Bros., Philadelphia, at \$11.75 per 100 pounds, and the third prize Angus load, exhibited by A. A. Armstrong, Carmargo, Mo., at \$8.50. The first prize load of Herefords, exhibited by Turner McBaine, sold to Dengler & Ulman, Philadelphia, at \$9.50; the second prize load exhibited by James Walker, Cottville, Ill., to Webber, of New York, at \$8.50; and the third prize load, exhibited by J. A. Pennel, of Kansas, to Charlan, of Philadelphia, at \$8.50. D. H. Gable, Westfield, Ill., had the first prize load

of Shorthorns, which sold to Buxbaum, of New York, at \$8.50, and the second prize Shorthorns, exhibited by W. I. Wood, Piqua, Ill., sold at \$8.00.

Escher's best individual Angus steer sold to Dengler at 25 cents a pound; Armstrong's best steer to Webber at 20 cents a pound. The prize-winner individual steer exhibited by A. B. Bassell, Lost Creek, W. Va., sold to J. W. Harrison at \$2 per pound, netting over \$4,000. Barney Hunter sold a load of Angus yearlings at \$7.50 and a load of Herefords at \$8.

STUDIES OF BREAD AND BREAD-MAKING.

Economical living like profitable stock-raising depends largely upon the digestibility of food stuffs. The feeder long ago learned that though a feed might have, according to the chemist, a very large percentage of the ingredients required for the tissues of his animals yet that feed might be comparatively of little value on account of its indigestibility. On this account extensive experiments were prosecuted to determine the digestibility of the several nutrients in a large number of feeding stuffs. The results attained enabled the studious feeder to compute "balanced rations" for his animals—i. e., rations containing in the proper proportions the several digestible nutrients required. Feeders have found this knowledge especially useful this season when the long used feeds are in some cases unobtainable.

Strangely enough the chemist has given comparatively little exact information as to the digestibility of food-stuffs by human beings. Doubtless the difficulty of this kind of experimentation with human subjects has caused some hesitation in taking up the work.

The Minnesota Experiment Station, which has achieved great honor for its timely work in other lines—especially in breeding wheat—has come to the front with experimental studies of the food and bread-making qualities of different milling processes of wheat.

The bulletin describing the experiments is published by the United States Department of Agriculture. Following is the summary:

According to the chemical analysis of graham, entire-wheat, and standard patent flours milled from the same lot of hard Scotch Fife springwheat, the graham flour contained the highest and the patent flour the lowest percentage of total protein. But according to the results of digestion experiments with these flours the proportions of digestible or available protein and available energy in the patent flour were larger than in either the entire wheat or the graham flour. The lower digestibility of the protein of the latter is due to the fact that in both these flours a considerable portion of this constituent is contained in the coarser particles (bran) and so resists the action of the digestive juices and escapes digestion. Thus while there actually may be more protein in a given amount of graham or entire-wheat flour than in the same weight of patent flour from the same wheat, the body obtains less of the protein and energy from the coarse flour than it does from the fine, because, although the including of the bran and germ increases the percentage of protein, it decreases its digestibility. By digestibility is meant the difference between the amounts of the several nutrients consumed and the amount excreted in the feces.

The digestibility of first and second patent flours was not appreciably different from that of standard patent flour. The degree of digestibility of all of these flours is high, due largely to their mechanical condition—that is, to the fact that they are finely ground.

The results of 3 digestion experiments with large, 3 with medium, and 3 with small rations of bread and milk indicate that the quantity of the ration affected somewhat its digestibility. The small ration was more digestible than the large ration, but the differences were slight, and varied with the individual and with either the labor at which he was employed or with some other conditions at present undetermined. In the medium ration part of the nutrients were more digestible and part were less digestible than in the large ration.

In 2 digestion experiments with large and 2 with small rations of oatmeal and milk the increase in the digestibility of the small ration was greater than in the experiments with bread and milk.

The digestibility of the bread in the large and the small rations of bread and milk was greater than that of oatmeal in large and small rations. It is to be noted that the flour from which the bread was made was in much finer state of division than was the oatmeal.

The results are in accord with those observed in the comparison of graham, entire wheat, and patent flours. Apparently the fineness of division of the particles in these foods had an influence upon their digestibility.

An increase in the proportion of starch in flour apparently caused a slight decrease in the digestibility of the protein. In 3 digestion experiments with bread made from flour in which the proportion of wheat starch had been increased 20 per cent the protein was found to be slightly less digestible than that in bread from normal flour.

The results of all the digestion experiments with bread from different grades of flour, with large, medium, and small rations of bread and of oatmeal, and with bread of high starch content, indicate that digestion coefficients are not constant, but vary to a limited extent with the individual peculiarities of the subject and the work at which he is employed, with the character and amount of food consumed, and with the proportions in which the nutrients are combined in them, as well as with some other conditions as yet not understood.

When wheat starch was added to flour with a high percentage of gluten containing 37.2 per cent gluten and 62.8 per cent gliadin the size of the loaf was not reduced, even though the amount of starch added equaled 20 per cent of the weight of the normal flour; that is to say, a given amount of the mixture of flour and wheat starch made as large a loaf as the same weight of normal flour. But the physical qualities of the bread were materially altered by the addition of the starch. As would be expected, analysis showed that there was less moisture in the flour diluted with starch, and the bread made from it was not so moist as that made from normal flour. When the proportion of starch in flour was diminished by the addition of moist gluten to normal flour the size of the loaf was not increased. The experiments upon the effect of increasing and diminishing the proportion of wheat starch in flour showed that it was the gluten content rather than the starch content of flour, which affected its bread-making qualities, and that, within the limits tested in these experiments, the size of the loaf is determined by the properties or character of the gluten, especially the ratio of gliadin to glutenin, rather than by the percentage amount of gluten in the flour.

The effect of the temperature of the flour used for bread-making was most noticeable in the rate of expansion of the dough and the physical quality of the bread. The best bread was obtained when the temperature of the flour was about 70° F.

The prolonged heating of flour affects its bread making qualities. Flour heated four hours at 50° C. (122° F.) produced a normal bread; flour heated four hours at 70° C. (158° F.) produced a nearly normal loaf, since it had lost but little of its color, lightness, and power of expansion; while flour heated four hours at 100° C. (212° F.) produced a smaller loaf and one of darker color than that from normal flour.

By blending hard and soft wheat flours the undesirable properties of the gluten of each were counteracted. When flour containing a high percentage of glutenin was mixed in equal proportions with flour containing a high percentage of gliadin the loaf produced was larger and of better quality than that from either of the flours alone. The bread from the blended flour, however, was not equal in quality to that produced from wheat containing a normal, well-balanced gluten.

Briefly stated, the more important deductions from the results of these investigations are that the bread making qualities of patent flour milled from a high grade of wheat were not improved by the increase of the proportion of either starch or gluten, and that the nutritive value of flour in so far as the quantities of digestible or available protein, fats, carbohydrates, and energy are concerned, was not increased by milling the wheat so as to retain a large proportion of the bran and germ as in the entire-wheat and graham flours. The digestibility of the several mineral constituents as calcium and potassium phosphates in the different flours was not studied.

A GOOD RECORD.

Fifteen years ago last Saturday the first creamery station was started in Dickinson County, one of the first in Kansas. The Belle Springs Company, then a pioneer, starting among the River Brethren settlers of south Dickinson, is still the leading butter-maker of that section. The first year's product

was 147,000 pounds of butter. Last year Dickinson County made 1,306,000 pounds, and the farmers received \$375,000 cash for the milk furnished to the various creamery and cheese stations. There are now 33 such stations in the county, managed by various companies. The price paid for October milk was 22½ cents a pound for butter-fat, which is well above the usual price for several years.

The creameries report little effect from the drouth of last summer. More cows are milked now than a year ago, but with the scarcity of feed probably less milk per cow is received. The farmers have been well provided with rye and wheat pasture and the supply of alfalfa and other milk-making foods is large. The stock cattle are being sold off or shipped to other parts of the West, in order that the milch cows may be cared for. One of the prime factors in the prosperity of the county has been the creamery system. The monthly payment of \$30,000 in cash has given many farmers the money with which to pay off their mortgages and has had a decided influence on the business of the merchants. The present year is the most prosperous in the history of the industry and the farmers are more than ever satisfied with the benefits.

CORN HONEY.

Glucose honey, under the attractive guise of "pure clover honey," is invading the Chicago markets to such an extent that the efforts of the State pure food inspectors are largely directed toward investigations of this imposition. One entire carload of "honey" consigned from California was recently barred from the markets, except as a plainly labeled adulteration.

The analysis of the "honey" composing the consignment showed that it contained from 50 to 60 per cent of glucose, and as "pure honey" the stuff was condemned. The consignee had the choice of selling it back as a glucose mixture or of sending it back and he chose the latter course, at the same time cancelling other orders which would have brought other large quantities of the glucose honey to Chicago.

Unlike many of the adulterations which flood the market, the glucose honey is not regarded as an injurious mixture, and the imposition upon the purchaser is one which does not injure his health. The fact is that corn honey tastes about as well and is as nutritious as that gathered by the bees. But the Chicagoan does not like to be swindled into using a cheap article like glucose under the impression that he is subsisting upon the nectar or flowers.

MISSOURI INDUSTRIAL ASSOCIATIONS.

The meeting of the State Industrial Associations under the auspices of the Missouri State Board of Agriculture, will be held in Chillicothe, Mo., December 10 to 15. This meeting will be participated in by the State Poultry, Swine Breeders', Improved Stock Breeders', Sheep Breeders', State Grange, Improved Road and Horse Breeders' Associations and representatives from the State Horticultural Society and State Dairy Association. The State poultry exhibit will be held at the same time.

The Western Passenger Association has granted an open one and one-third fare from all points in Missouri, good going December 9 to 13, and returning up to December 16.

Coburn on Kansas Crops.

The official bulletin by the Kansas Board of Agriculture, giving the year's yield of winter and spring wheat, and corn, and their home values was issued November 23, and contains the first figures emanating from the board to the season's products.

Summarized the showing is as follows:

	Acres.	Product.	Value.
		Bushels.	
Winter wheat,	5,248,547	90,045,514	\$50,479,579
Spring wheat,	67,935	287,581	130,925
Corn,	6,722,973	42,605,672	21,731,215

According to the records of the State Board of Agriculture, the volume of this year's winter wheat exceeds that of 1900 by 13,450,071 bushels, of 17.56 per cent, and its home value is greater by \$8,855,483, or 21.27 per cent. Likewise the yield, the greatest in the history of Kansas, averaged 61.34 bushels for each inhabitant, worth \$34.39.

For each of the past ten years ending with 1900, Kansas has raised of wheat an average of 46,272,000 bushels annually; the 1901 production is 94.6 per cent greater than this. This year's yield is more by 11,915,183 bushels, or 15.2 per cent, than the United States Department of Agriculture has ever reported raised by any State in any year, barring Kansas yield in 1900, which, according to the same authority, had for

the preceding year the distinction of being the bulkiest, but only until Kansas had another season, when she of all the States surpassed her own record and produced a still greater crop.

Outside of the general increase in well-nigh every neighborhood, the story of this year's achievements if told in detail would be largely repeating the history of former years.

The 4 counties of Sumner, Barton, Rice, and McPherson this year produced more wheat than the entire last year's product of either Illinois or Missouri.

In her brief history Kansas has raised six wheat crops (winter and spring) of over 50,000,000 bushels each, aggregating 412,291,429 bushels, worth on the farms where grown \$243,064,600.

The acreage of winter wheat as found by assessors in a house to house canvass was the largest by 137,674 acres ever reported, (the nearest approach being 5,110,873 acres in 1893), making an increase for the present year of over 23 per cent, or 989,843 acres.

The present sowing is reported as throughout the State in the most promising condition ever known at the time of year, and its advanced and rank growth is affording abundant succulent pasturing for millions of live stock.

The raising of spring wheat is so overshadowed by that of the winter varieties as to make it an inconspicuous and diminishing item in Kansas agriculture.

Detailed reports indicate that owing to the unusual shortage of corn, about 17 per cent, or 15,288,332 bushels of this year's wheat will be used in one form or another as feed for farm animals.

The quantity of wheat in farmers' hands March 1 was 7,996,555 bushels as against 4,824,828 bushels last year.

The old corn on hand March 1 was 35,121,339 bushels as against 48,252,667 bushels at that time last year.

The following table shows the yield and value of winter wheat, and yield of corn, for the State, by counties, for 1901:

Table with 4 columns: Counties, Bushels, Value, Corn. Bushels. Lists 17 counties and their respective wheat and corn yields and values.

Table with 3 columns: County, 1900, 1901. Lists 17 counties and their wheat yields for 1900 and 1901.

Farm Facts and Fancies. COW-PEA HAY.

Ten years ago I began growing cow-peas as a fertilizing crop. Professor Massey, of North Carolina, had so persistently called attention to the value of this legume in building up the soil of the South that I was led to give the plant a trial north of the Ohio river, and in these ten years the peas have furnished fertility for many bushels of potatoes.

A PALATABLE FOOD.

The taste for pea vine hay, like that for olives, tobacco, clams, and whisky, appears to be an acquired one. So far as my observation goes, an animal does not relish the vines or seed, green or cured, the first time it tastes them.

IMPROVING THE SOIL.

The primary idea in growing clover or peas is soil improvement. On good land, where such a cash crop as potatoes is to follow, I prefer to grow an

Advertisement for Eureka Harness Oil. Includes an illustration of a horse and harness, and text describing the oil's benefits for leather.

occasional crop of peas and turn the vines under, regardless of the feeding value. Then I know all the fertility goes to the soil, and it is well distributed, and the vines improve the physical condition of the soil, and the potatoes appreciate such treatment.

MAKING THE HAY.

Some farmers are able to make bright clover hay by mowing the clover as soon as all outside moisture is gone, packing into close, deep mows that exclude the air.

MUSCLE-MAKING FOOD.

It is the protein in oats, bran, gluten-meal, and millstuf that counts for most in feeding, and it counts for most when paying the feed bills.

RELATIVE VALUE.

I am not claiming that the southern pea is the best feeding crop of the North. It is far from it, if one have fertile corn land in the corn belt.

On potato land I shall continue to plow peas under because the practice pays, and on thinner wheat land I shall

make some of this hay while preparing the land for wheat.

I wish that our station would continue its experiments with this plant, getting the average of several years' results in respect to yield of hay and its quality and the attending effect upon the succeeding crop of wheat.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

Most crops exhaust the soil in proportion to their value.

Small farms well tilled are what make a nation wealthy.

The secret of success in stock-raising is superiority in quality.

A change of rough feed as well as of grain is essential.

As far as possible convert the hay, grain, and straw into meat, butter and cheese.

One of the best ways of getting rid of cutworms is to plow deep, late in the fall.

Excess of food weakens a farm animal and makes it unable to work.

Good food, care, and training are the first requisites in producing a first class horse.

Fattening stock may be fed quite often but should at no time be fed more than they will eat up clean.

In nearly all cases the more rapidly animals are finished the greater the animals are finished and fattened the greater the profit.

Better results will be secured if all the young stock are fed separate from the old animals.

Hogs must have a warm, dry shelter now, if they are to be fed to the best advantage.

The farm teams accustomed to hard work should not be driven rapidly on the roads.

As far as possible the horses on the farm should have daily exercise in order to keep their muscles hard and their wind good.

An animal impoverished in flesh can not grow or mature and must be maintained at a loss of feed.

Winter is a good time to clean up the farm, clear out the fence rows, and make the farm neater and cleaner.

Many improvements can be planned and partially executed during the winter, if advantage is taken of the opportunities.

Feed and management have much to do with the health as well as thriftiness of stock.

Young and growing animals require feed which will make bone and muscle rather than fat.

Bedding liberally with some dry material will add materially to the comfort of the animals during the winter.

The aim in keeping stock should be to secure the greatest growth in the shortest time possible.

The health and vigor of all animals is much more easily retained by good care than regained when once lost by improper treatment.

While the orchard on the farm should not be large, it should be filled with a good selection of the best varieties kept in the best condition possible.

It is a mistake to keep breeding animals excessively fat. Excessive fatness is only profitable in animals intended for the butcher. All others should be kept in a good thrifty condition.

A heifer calf intended for the dairy should be trained from birth with this end in view and be made tractable and gentle by sufficient handling.

Evolution.

A girl named plain 'Mary' at her birth dropped the 'r' when she grew up and became 'Miss May.'

When writing advertisers please mention KANSAS FARMER.

Horticulture.

Plum Culture.

[Prof. F. A. Waugh, whom old readers of the KANSAS FARMER remember as a Kansan transplanted to Vermont and occupying the chair of horticulture in the State university, favors this office with advance proofs of a bulletin soon to appear on "plum culture." While prepared with especial reference to the needs of Vermont fruit growers this bulletin contains much that will be found valuable in Kansas. We therefore produce it in full.—EDITOR KANSAS FARMER.]

Apple growing is of capital importance among the fruit industries of Vermont, but the plum stands second of all the orchard fruits. This statement is true whether we regard the plum as a market crop or merely as an addition to the home comforts. Pears, which have been grown to some extent, rank below the plum, both because they are harder to grow and because they do not yield so much, either of profit or of domestic food supply.

The plum, however, is not cultivated so extensively as it ought to be. In fact, there are many farms where no plums whatever are grown, and there are very few fruit growing establishments which send plums to the market in reasonable quantities. Indeed, the city and village markets of Vermont are continually under-supplied, or are not supplied at all, with this delicious fruit.

Every part of the State is adapted to plum growing in some degree, and plums of many varieties may be successfully grown on almost every farm from Derby Line to Brattleboro. The principal reason why they are not more commonly planted is undoubtedly that very few people know what varieties to select, or how to plant and care for them.

The horticultural department of the Vermont experiment station, for several reasons, has devoted a large share of its attention to the study of plums. This study and experimentation has covered pretty much the whole range of plum knowledge, from the description of varieties to the methods of pruning and culture. This gives us an opportunity to speak from more than a usual breadth of investigation in giving the general, practical directions which follow.

SUITABLE SOILS.

The old notion used to be that plums preferred a heavy clay soil. This is still true for certain classes of plums, particularly the Domesticas and Damsons. But other plums thrive in other soils, so that by choosing the varieties best adapted to particular situations plums may be grown almost anywhere. Even light, sandy soils are suitable to the Japanese varieties and some of the hybrids. Taking all kinds of plums together, however, the best soil is that which would be suitable for apples; and the general rule regarding apples is that they will thrive on any soil well suited to potatoes. A loose, deep, gravelly soil, with an open subsoil is the best for all orchard trees in this climate. This is what should be chosen where it is available. Where it can not be had, almost any soil will do, providing only that it is well drained. It must not hold water either in summer or winter. If it is inclined to do so it must be thoroughly drained, preferably by closed stone or tile underdrains before the trees are planted.

TO GET THE TREES.

Trees should be secured from a reliable nurseryman, not from the fruit tree agent. Farmers who are not ac-

There are two sorts of lamp chimneys: mine and the rest of them.

MACBETH.

My name on every one.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

MACBETH, Pittsburgh.

quainted with reliable tree dealers should write to the experiment station where the addresses of trustworthy men can be secured.

The best plum trees for planting are either 1 or 2 years old. Strong 1-year-old trees are entirely satisfactory, but, in general, it is probably best to order 2-year-old trees, especially of Domesticas and Damsons.

The trees may be set either in fall or spring. In general, the latter is to be recommended, although when soil is in good condition, when the trees are strong and sound, and supposing the planter knows how to put them out, fall planting is to be preferred. Either one will answer providing the work is well done.

The distance apart at which the trees ought to stand will depend very greatly on circumstances. Some varieties require much more room than others and some men prune much more closely than others. One who is going to make an extensive planting of plum trees should study this question closely; but, as a rule, for planting in Vermont, 15 feet apart may be regarded as a suitable distance for all varieties except Burbank, which should have 20 feet or more.

PRUNING AND TRAINING.

The method adopted by the writer of pruning and training young plum trees is briefly as follows: The young trees as they come from the nursery have the loose and broken roots cut off. The top is pruned to a straight whip by the removal of all branches, and this whip is cut back to a height of 2 or 3 feet, depending on the variety and the strength of the young tree—chiefly on the former. At this point where the whip is cut back the head of the tree is to be formed. During the first summer a number of branches will be sent out from all sides of this straight stock. These are carefully watched and their number regulated by pinching off all those which are not desired. From 4 to 6 of these side branches are preserved, the object being to have them as well distributed around the trunk as possible, so as to give the tree a proper balance. On a thrifty tree these side branches will make a growth of 2 to 4 feet each the first year. The best plan is to cut off the tips of these branches early in September, or late in August, so as to stop growth and harden them up. Care must be taken in doing this, as well as at other times, to see that suckers from the bottom of the tree or water sprouts from any point along the trunk are kept entirely rubbed off.

At the opening of the second spring the tree consists of a short trunk with 4 to 6 diverging side branches. These are cut back to a length of 6 to 18 inches, depending chiefly on the vigor of the tree. The weaker the tree the more closely it is shortened in. On these 4 to 6 branches the head is then formed. From 1 to 3 new branches—preferably 2—are allowed to grow on each primary branch, and these are treated during the second summer just as the primary branches were treated during the first summer, that is, the undesirable shoots are rubbed off, and those properly located are encouraged. Again the whole growth is stopped late in August or early in September so that it may harden up.

A tree carefully handled in this way will usually be in bearing condition at the end of the second year, and should give a moderate crop the third year, though this depends largely on the variety. Thereafter the system of pruning is somewhat different and depends more on the personal taste of the individual fruit grower. Some men prefer to cut back their plum trees severely every year. Others prefer to let them grow more in their own way, removing only as much wood as is necessary to keep the top fairly open. It must be said that our knowledge of the best methods of handling bearing plum trees is very scant and altogether inadequate to the demands of modern fruit growing. This station is carrying on a system of experiments along this line, and hopes to have something more definite to say at a future time.

CULTIVATION OF THE GROUND.

The cultivation of a plum orchard should be practically the same as that given to an apple orchard. The best experience in Vermont, as well as that everywhere else in America, agrees that this should mean plowing the soil every spring between the trees, cultivating it frequently on the surface until the middle of summer, and then sowing some cover crop or allowing the weeds to grow as they please. Mulching the trees is a sort of substitute for this, but a poor one. Plum trees will not thrive so well in grass as apple trees do, which is condemnation enough for this way of growing. One often hears it recom-

mended that plums should be grown in the chicken yard. The reason for this is that the chickens are supposed to gather the curculios, and that the hen manure is supposed to be especially suitable to the plums. Neither of these points is so well established as to make it much of an argument. The writer strongly recommends the cultivation outlined at the beginning of this paragraph. Fertilizers may be applied as needed, which will be approximately every other year. A moderate amount of barnyard manure is the best fertilizer. Wood ashes may be applied on soils which are deficient in lime, and commercial fertilizers never do any damage when reasonably used.

POLLINATION OF THE FLOWERS.

Experiments made by this station show beyond question that the majority of plums do not bear well, and most of them set no fruit at all unless 2 or 3 varieties are mixed together in the orchard. The reason for this is that the blossoms of most varieties do not pollinate (or fertilize) themselves. They must be pollinated from the blossoms of some other kind of plum. Almost any other kind of plum which blossoms at the same time will answer for the pollination of any given variety. In Vermont there is no very great difficulty about securing varieties which blossom simultaneously, since the blossoming season is of such short duration. The experiment station in its reports and bulletins has dealt exhaustively with this subject, so that any one desiring more specific information may readily secure it from this source.

DISEASES AND INSECT ENEMIES.

The plum suffers more or less from two important diseases, and one serious insect pest. None of these is peculiarly virulent in Vermont, and all of them may be readily overcome by proper treatment. The disease which most farmers seem to dread in their plum trees is black-knot. It is very common in various parts of this State to see entire trees and often small orchards wholly ruined by black-knot. Nevertheless, the disease offers no serious difficulty in a well managed orchard. The best remedy and the best preventive is the removal of all the knots with a pruning knife as soon as they are seen. Whenever they are cut out they should be immediately burned, because the spores of the fungus which causes the disease are readily distributed by the wind. It is commonly recommended to apply kerosene to the knots or to the wounds made when knots are cut away with a pruning knife. This application of kerosene does no harm, and in some instances probably does good. In all such cases, however, a heavy application of Bordeaux mixture or of copper sulphate solution would be as good or better.

Undoubtedly the worst disease which the careful plum grower has to meet is the brown rot or ripe rot of the fruit. This comes on just as the fruit is ripening, the plums turn brown and mushy, and are covered with a coating of brownish, granular spores. If the fruit is not picked it dries up and blackens, and often hangs to the tree all winter. This disease works very rapidly, especially if the weather is warm and wet at ripening time, and plums affected by it continue to rot badly after they are picked and shipped to market. This disease can be checked to some extent by picking off the affected fruits as fast as the brown spots begin to show and burning all this refuse immediately. Leaves and young twigs which are affected should be burned as well as fruit, and one dried up fruit which are left on the tree after picking time should also be removed and burned. The best treatment, however, is to be given with spray pump. The trees should be heavily sprayed with a solution of copper sulphate before the leaves put out in the spring, just as the buds are beginning to swell. This is probably the most important treatment of the year, and should be very thoroughly rendered. The trees



Physicians are calling attention to the fact that influenza or grip has come to stay. In the larger cities there has been a marked increase in diseases affecting the organs of respiration, which increase is attributed to the prevalence of influenza. Persons who are recovering from grip or influenza are in a weak condition and peculiarly liable to pulmonary disease.

Dr. Pierce's Golden Medical Discovery cures coughs, bronchitis, lung "trouble" and other diseases of the organs of respiration. It is the best tonic medicine for those whose strength and vitality have been exhausted by an attack of grip.

It purifies the blood, cleansing it of the poisonous accumulations which breed and feed disease. It gives increased activity to the blood-making glands, and so increases the supply of pure blood, rich with the red corpuscles of health.

"A word for your 'Golden Medical Discovery,'" writes Mrs. E. A. Bender, of Keene, Coshocton Co., Ohio. "We have been using it as a family medicine for more than four years. As a cough remedy and blood-purifier there is nothing better, and after having the grip Dr. Pierce's Golden Medical Discovery is just the right medicine for a complete bracing up."

Accept no substitute for "Golden Medical Discovery." There is nothing "just as good" for diseases of the stomach, blood, and lungs.

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should be sprayed again with a weak solution of Bordeaux mixture just after the blossoms fall.* A third spraying will sometimes be advisable if a grower is particularly apprehensive of damage from the rot. Those who have had experience with this disease know very well that they can easily afford the extra trouble involved rather than see half or three-fourths of the crop fade away before their eyes just as it is ready to be gathered.

As to the curculio, there has already been mentioned the custom of dealing with this enemy through the help of the chickens. The plum trees are planted in the poultry yard, and the chickens and turkeys get a certain proportion of the curculios. This method does not give immunity, however, and one must not place too much reliance on it. Spraying with Paris green in water when the young plums are a little larger than buckshot will help somewhat, but is not a sure cure. One of the best precautions is to grow plums enough for the curculios and for the horticulturist both. When plums are abundant there is always a fair proportion free from cur-

*The Japanese plums are particularly sensitive to strong solutions of Bordeaux mixture. In treating varieties of this group great care should be taken that good lime is used and that the solution is carefully made up. It should be diluted to half the strength commonly used for spraying apple trees.

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cullo attack. The best active fight against this insect may be made by jarring the trees early every morning during its egg-laying season and catching the curculios in inverted umbrellas, in blankets or sheets as they fall from the trees. Where plums are grown in any quantity some special apparatus for this jarring may be provided. Such machines are commercially manufactured and can be bought at a reasonable price.

PICKING AND MARKETING.

Plums which are to be used at home can be picked whenever needed. Those which are used for jelly should be picked as soon as they begin to color, and long before they are mature. Those which are picked for canning should be taken in the early stages of maturity, while those which are destined for dessert or table use should be allowed to become dead ripe before they are removed from the trees.

Plums for shipment to market must be picked about as soon as they are well colored, some varieties even earlier. They must be taken from the trees before they show any tendency to soften. Many varieties, particularly those of the Japanese group, will bear early picking and will ripen well in fruit packages in which they are shipped to market. The varieties which crack badly or become soft in ripening are not suitable for market, especially when long shipments are to be made.

There is no standard fruit package in use in Vermont for selling plums. Strawberry baskets, grape baskets, or common market baskets of any sort whatever are called into requisition, depending only on the convenience of the plum grower and the grocer. Any one, however, who is handling plums with a view to making the most of them in the same market year after year should adopt a neat and suitable standard package. The common 8-pound Climax grape basket is well suited to the sale of plums in local markets. It is strong, neat, convenient, and cheap. For shipment to distant markets, the best package is undoubtedly the 6-basket carrier, or Georgia peach carrier. This package consists of a light slat crate holding 6 small shallow baskets. Each of these baskets carries a good full half-pack, so that the entire package amounts to a strong 3 pecks. This package ships readily to any distance, and delivers the fruit in perfect condition. With suitable varieties it would be a simple matter to ship plums from Vermont to Boston or New York, or even to Chicago or New Orleans without the slightest difficulty. The writer is of the opinion that Vermont shippers who would send plums of good quality to the city markets year after year would find a reasonable profit in it. The best prices for plums are usually realized late in the season, since this fruit is used chiefly for canning, and since all housewives prefer to do the canning as late in the year as possible, after the hot weather has passed. Most of the plums from more Southern States ripen during dog days, which is just the time when no cook wants to stand over the kitchen stove. In fact, the Vermont plum crop comes just at the proper season of the year for the best city market demand.

SUGGESTIONS ABOUT VARIETIES.

The selection of varieties is important in the planting of any orchard; but more so in plum growing than in any

other line of fruit culture. There are several widely different classes of plums from which we may select. The principal ones are as follows:

Domestica.—This is the old fashioned European plum found in most of the old gardens in Vermont and known to nearly every one. To this group belong such well-known varieties as Green Gage, Lombard, Bradshaw, Yellow Egg, and the good old fashioned blue plums.

Damson.—There are various kinds of Damsons, all of which are hardy, and all of which thrive in this State. Many persons care for them for home use, and they usually bring good prices in the market, although they are really a very inferior fruit.

Japanese.—The Japanese plums are entirely different from the kinds commonly grown in this country. They have been introduced to the United States in comparatively recent years, and are still not very well known in Vermont. They have been thoroughly tested, however, throughout the Champlain valley and in most parts of the Connecticut valley, and have been found to be hardy there. In general they have about the hardness of the Baldwin apple, and can be grown anywhere that that variety is successful. They are thrifty, sturdy growers, and early and prolific bearers. The writer is strongly inclined to advise that they be given first choice in making up the Vermont plum orchard, either for home growing or for market purposes. The varieties best adapted to this section are Abundance, Burbank, Red June, Chabot, and Kerr. Satsuma, which has been extensively tested, has succeeded in a few places, but has failed miserably in most localities.

Americana.—The Americana plum and the closely related members of the Nigra and Miner groups are harder than any other known fruit trees in America. Trees of these varieties can be grown in any latitude where the sugar maple will stand a winter, and perhaps even north of that. They are, therefore, adapted to the very coldest portions of this State, and in localities where the Baldwin apple can not be depended on, plums of this class are to be preferred. So far as our experience goes, the varieties which may be recommended are Stoddard, Hawkeye, Smith, De Soto, American Eagle, Cheney, and Surprise. There are many other good varieties in these groups, but a list of them can not be given here.

Other natives.—There are several other species of plums native to North America, all of which are more or less cultivated in orchards and gardens, and all of which have some pomological value. None of them, however, are adapted to conditions in Vermont.

Hybrids.—A large number of hybrid plums have been introduced in recent years, combining the qualities of various groups named above. Some of these are very promising, but none of them can be recommended for general planting in this State until they have been further tested.

RECOMMENDED LISTS.

For market purposes in the Champlain valley and in the lower Connecticut valley, the following varieties are recommended: Burbank, Abundance, Red June, Lombard, Bradshaw, Chabot.

For home use in the same districts there may be added to this list any varieties which are specially fancied by the man who plants the trees. Green Gage, Pond, Field, and Kerr are especially called to attention.

For the colder portions of the State, varieties of the Americana, Nigra, and Miner groups only should be planted, the names of which are given above.

Sugar as an Article of Diet.

Good news for the children comes across the water from England. Heretofore it has been generally understood that people who ate much sugar were simply laying in stocks of future woes and reducing their days upon earth. When little Johnny asks for sugar on his piece of bread he is told that he can't have it because it will ruin his teeth and leave him with a stomach nowhere near as good as new. The girls have been warned that if they eat candy they can not expect to have red cheeks, and the general idea has been that the taste for sweets is dangerous in the extreme. The British Medical Journal informs us, however, that sugar is about as beneficial a thing as one can eat. Speaking of sugar as a food, this authority says:

"In certain circumstances it can be converted into fat, and thus stored in the human body, produces heat and energy, and one of its special advantages is that it takes up very little space. Little muscular deterioration, it seems from experiment, occurs under a sugar diet, but when the muscles are fatigued

Prickly Ash Bitters
CURES SALLOW COMPLEXION.

and worn out, nothing so quickly brings them into serviceable condition again as the use of sugar. The German army surgeon, in the course of investigation, found that an extra ration of less than 4 ounces of sugar daily increased the weight of the men to whom it was issued and that they were able to do better work than their comrades. In instances of fatigue a lump of sugar proved wonderfully efficacious; and moreover, contrary to the general supposition, sugar quenches thirst. The experiments in behalf of sugar have been so satisfactory that the sugar ration of the German soldiers will be raised 2 ounces a day. In Holland young men training for athletic contests are required to eat a considerable quantity of sugar."

To this testimony the Baltimore News adds:

"A few weeks ago a vessel containing a cargo of sugar arrived at a port in this country. Aboard were some stowaways, who, not being able to obtain any other food, had for weeks lived wholly upon the sugar. Were they lean, emaciated, and ill, badly in need of solid food, and upon the verge of starvation? Not at all. They were in excellent health and spirits, and a good deal fatter than when they went aboard. The sugar, as a steady diet, had been a little monotonous, but it was in no respect unwholesome."—Chicago Record-Herald.

Prickly Ash Bitters can be depended on to cure the kidneys, correct the urine, strengthen the stomach and relieve backache.

It has been said that the dwarf can see farther than the giant, when mounted on the giant's shoulders. And by reading we may mount the shoulders of intellectual giants and see vastly farther thereby.—Ex.

Honey for Kansas, Missouri, and Oklahoma.

Two cans, 120 pounds net, amber \$7.80, whitest (more from alfalfa bloom) \$9.00, comb honey in one pound sections, 10 to 13 cents. Also small cans, all sizes. See price list. Nothing but genuine bees' honey. Reference, KANSAS FARMER Co. Address, Arkansas Valley Apiaries, Oliver Foster, Proprietor, Las Animas, Col.

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Brain Markets.

Conducted by James Butler, secretary of the Farmers' Co-operative Grain and Live Stock Association.

"The human race is divided into two classes,—those who go ahead and do something, and those who sit still and say, why wasn't it done the other way."—Oliver W. Holmes.

Markets to 2 p. m. November 26.

Markets were firm to-day. Receipts in the Northwest were 1,163 cars of wheat while Kansas City had only 40 cars.

Markets closed strong as follows: Chicago.—No. 2, red wheat, 75½ cents; No. 2, Kansas hard wheat, 73 cents; No. 2, corn, 60 cents; No. 2, oats, 44½ cents.

Kansas City.—No. 2 red wheat, 73½ cents; No. 2 hard wheat, 69¾-70 cents; No. 3 hard wheat, 68¾-69¼ cents; No. 2 corn, 66½-67 cents; No. 2 oats, 46-47 cents.

Market Letter.

BY F. W. FRASIER OF THE FARMERS' CO-OPERATIVE GRAIN AND LIVE STOCK ASSOCIATION.

November 26, 1901.

The week just passed has been a quiet one in grain circles, although the coarse grains closed very firm and notwithstanding the attempt of big speculators to break the wheat market their effort was futile. The first piece of news intended to break prices on last Monday was the enormous increase in the American visible supply, almost 4,000,000 bushels; the next day the Bradstreet agency reported the world's visible supply having increased 10,000,000 bushels, and yet with all these bearish influences, wheat hardly broke one cent per bushel, which decline was almost recovered by the end of the week. It seems there are plenty of men who have sufficient confidence in wheat to support the price of same whenever there is a decline.

Exports are increasing a little lately; they were 5,518,000 bushels last week as compared with 3,827,000 the same week a year ago, but the primary receipts too, are much heavier than a year ago. It seems there is absolutely no let-up to the avalanche of wheat forced upon the market by the Northwestern farmers; the receipts of Duluth and Minneapolis alone averaging over 1,000,000 bushels per day. But one of our greatest competitors in furnishing wheat to Europe has been practically "knocked out." I refer to Argentine. Exports from Argentine to Europe were only 80,000 bushels last week, while a year ago they were nearly ten times as large. This would go to show that the Argentine crop, as has been reported, is practically a failure, and that America controls the situation. Under these circumstances it seems to us the Northwestern farmers are standing in their own light in making these tremendous deliveries. The reports of the Cincinnati Price Current and Modern Miller (two reliable journals) that wheat was needing rain in most of the southwestern territory, were neutralized by the State reports from Kansas that that State had raised 90,000,000 bushels of wheat.

We repeat, that we believe wheat will do better later on. As to corn there is so little of it that prices have made big gains lately, there seems to be a big demand from feeders and much corn from Iowa and Nebraska is finding customers in Kansas at present prices, and it is hard to guess how much more consumers will pay for corn rather than to do without it.

Missouri State Horticultural Society.

The forty-fourth annual meeting of this society will be held December 3, 4, and 5, 1901, at the Odd Fellows' Auditorium, St. Joseph, Mo.

One hundred dollars will be given in awards for fruits and flowers.

It is stated that railroads will give a rate of one and one-third fares on the certificate plan.

PROGRAM.

TUESDAY, DEC. 3-8 P. M.

Music.
Invocation—Rev. C. M. Chilton.
Music.
Address of welcome—Mayor John Combe.
Response—"The Possibilities of Fruit Growing in Missouri"—Pres. N. F. Murray.
Music.
"Summer and Fall Bulbs"—Mrs. T. Lee Adams, Kansas City, Mo.
"The Kitchen Garden"—R. A. Brown, St. Joseph.
"The Model Orchard and How to Produce It"—W. T. Flournoy, Marionville, Mo.

WEDNESDAY, DEC. 4-9 A. M.

Music.
Invocation—Rev. W. W. Bolton.
Appointment of Committees.
"What Can Be Accomplished on Five Acres"—C. W. Halliburton, Moberly, Mo.
"Success and Failure"—Wm. P. Keith, Mayview, Mo.

Discussion.
"Renewing Old Orchards"—J. J. Bartram, Maryville, Mo.
"Some Varieties of Apples, Good, Bad, and Indifferent"—G. P. Turner, Meadville, Mo.
"Profitable Varieties for North Missouri"—J. A. Durkes, Weston, Mo.

Discussion.
"Apples for South Missouri"—Hon. T. B. Woodside, Salem, Mo.
"Methods and Varieties Now and Thirty Years Ago"—W. G. Gano, Parkville, Mo.
"Good Missouri Fruit Lands"—E. S. Butt, Mayview, Mo.

WEDNESDAY, DEC. 4-2 P. M.

"Drouth of '97, Freeze of '99, and Drouth of '01"—J. C. Evans, Harlem, Mo.
"Fighting the Drouth"—D. A. Robnett, Columbia, Mo., and K. B. Wilkerson, Mexico, Mo.

Discussion.
"Cover Crops for the Land"—Prof. H. J. Waters, Agricultural College, Columbia.
"Spraying"—W. D. Maxwell, St. Joseph, Mo., and F. H. Speakman, Neosho, Mo.
"Leaf-roller—Sting in the Apple"—Dr. J. M. Stedman, Agricultural College, Columbia, Mo.
"Cold Storage"—Wm. J. Murray, Armour Co., Kansas City, Mo.
"An Investigation of Root Knot"—R. J. Bagby, New Haven, Mo.
"Distribution"—G. V. Fowler, Waterloo, Iowa.

WEDNESDAY, DEC. 4-8 P. M.

"Floriculture"—Geo. P. Doran, St. Joseph, Mo.
Music.
Flag Drill.
"Peaches in North Missouri"—A. W. Bloomfield, St. Joseph, Mo.
Recitation.
"City Forestry"—L. A. Goodman, Kansas City, Mo.

THURSDAY, DEC. 5-9 A. M.

Invocation—Rev. S. B. Campbell.
Reports of Local Societies.
Crop Records from Counties.
St. Louis Exposition.
Reports of Committees.
Report of Treasurer.
Report of Secretary.
Election of Officers.
Invitations for Future Meetings.
Reports of Experimental Work: "Bitter Rot"—J. T. Stinson, Mt. Grove Station.
"Root Rot"—H. von Schrenk, U. S. Dept. Forestry, St. Louis, Mo.
"Station and School of Horticulture"—T. C. Johnson, Acting Professor of Horticulture, Columbia, Mo.
"Legislation Against Insect Pests"—Prof. J. M. Stedman.
Questions.

THURSDAY, DEC. 5-2 P. M.

"Peaches in South Missouri"—G. W. Hopkins, Springfield, Mo.
"Peach, Diseases and Their Treatment"—Wm. B. Hoag, Columbia, Mo.
"Pear Culture"—J. J. Blakely, Platt City, Mo.
"Successful Plum Growing"—E. L. Mason, Trenton, Mo.
"Grapes for Profit"—J. W. Fleeman, St. Joseph, Mo.
"Strawberry Planting, Raising and Handling the Crop"—F. H. Speakman, Neosho, Mo.
"Irrigating the Garden and Fruit Patch"—Ernest Mueller, St. Joseph, Mo.

THURSDAY, DEC. 6-8 P. M.

Music.
"Pear and Plum Varieties"—W. L. Howard, Asst. Horticulturist, Columbia, Mo.
Music.
"The Necessity for Practical Science in the Elementary School"—J. R. Kirk, President Kirksville Normal.
Recitation.
"Canna Culture"—R. G. Rau, Supt. Parks, St. Joseph, Mo.
Music.
"Ornamentation of Home Grounds"—Miss Carrie Ruth Jackson, Columbia.
Report of Committee on Final Resolutions.

Shattering an Ideal.

They had just been introduced, and, as she looked into his thoughtful blue eyes, the young girl felt that she had at last met a man of high ideals.

"Are you interested in the elevation of the masses, Mr. McSmudge?" she asked, after she had worked up to the subject by easy conversational stages. "Intensely, Miss Gushington," he answered. "I have dedicated my life to this great work. I am just now interesting myself in circulating a pamphlet on this subject which I shall be pleased to send you."

"How lovely," she murmured. She knew that she had at last found a kindred soul.

But this world is full of bitter disappointments, and it was a hard jolt to Ethel Gushington's finer sensibilities when a few days later she received with the compliments of John Wesley McSmudge, a catalogue of passenger elevators for which he was agent.—W. G. Jackson, in the Salt Lake Herald.

Monkeys Smarter Than Dogs.

Prof. E. L. Thorndike, of Columbia university, has been making experiments on monkeys, and the results, says Popular Science, "are in a degree rather than kind in favor of the monkey as compared with the dogs and cats, on which he formerly experimented." He that they do not profit by tuition, and announces that "the general result is that they did not gain and use ideas of how to open doors, but learned only by a process of selection from their own impulses. Professor Thorndike's careful experiments confirm the truth to which the public is and always will be impervious, namely, that animals (and man to a large extent) are creatures of impulse and association, which sim-

KIDNEY DISEASE

Its Insidious Progress and Sudden Termination.

Not long ago a man who had made a success in business bought a country place and retired from active commercial life. By all outward appearances he was a healthy man. He entered upon the life of his country home with great zest, engaging himself in the culture and care of flowers and enjoying the pleasures of outdoor life to the full. One day they found him unconscious on the lawn. The family believed he must have been the victim of tramps. The doctor came but could not rouse him from his stupor. When the autopsy was made it showed that death was the result of kidney disease long neglected.

This is a true story. The facts are given as the newspapers told them. Only the names are suppressed. It is



a story that in one way or another is being repeated every day, the victim being men and women who suffer from "kidney trouble" and neglect it.

SLOW POISONING.

It is the office of kidneys to filter the blood and remove from it those foreign matters which if retained in the blood corrupt and poison it. The principles so eliminated by the kidneys are constantly being produced in the tissues of the body. The kidneys are therefore ceaselessly active and care for an enormous quantity of blood. When by reason of disease the activity of the kidneys is impaired, or when they are overtaxed by being required to eliminate from the blood an undue quantity of corrupting substances, thrown into the blood as a result of disease of the stomach and other organs of digestion and nutrition; then it is that the poisonous deposits first begin to collect in the blood, and breed deadly consequences. The accumulation of the poison is slow, and the physical changes which accompany the poisoning of the system are slow also, and this makes the great danger of the disease. Many times the victim of kidney disease does not awaken to danger before the entire system is poisoned, and the struggle for life is desperate and doubtful.

ACT AT ONCE.

Prompt action can not be too strongly urged upon those who have even the slightest symptoms of "kidney trouble." The timely use of Dr. Pierce's Golden Medical Discovery will save both suffering and expense.

"For a long time I was suffering and was hardly able to get about," writes Mr. Andrew J. Jennings, of Thomas, Tucker Co., W. Va., Box 194. "Was bothered with kidney trouble and my whole system was out of order; had no appetite. A friend of mine told me to try Dr. Pierce's Golden Medical Discovery. I did so and the first bottle restored my appetite. I took six bottles of 'Golden Medical Discovery' and some of the 'Pleasant Pellets' and feel like a new person. Think there is no better medicine and I heartily recommend these medicines to every one whose

suffering is of the nature that mine was."

The symptoms of kidney disease are many and so variable that it is almost impossible to describe them all. In general the indications of kidney disease are pain in the back and loins, change in the urinary excretion, a depressed feeling with lassitude or weakness; irregular heart beat; hot and dry skin, deranged digestion, variable appetite, urinary incontinence, puffiness about the eyes, swelling of the ankles or in different parts of the body. These symptoms will not be present in any one case, probably, but any one of them is a reason for a prompt attempt to cure its cause.

DON'T TAKE CHANCES.

The symptoms of kidney disease are so variable and so liable to be mistaken that it is no uncommon thing for the inexperienced practitioner to treat the sufferer for the wrong disease. Such was the case probably with Mrs. Hayter, whose letter is given below. "Several different doctors treated her, but none did her any good," until she consulted Dr. Pierce.

"I had been sick for more than a year with kidney trouble," writes Mrs. Lucy Hayter, of Jacksboro, Jack County, Texas. "Several different doctors treated me, but none did me any good. One doctor said I never could be cured, that I had Bright's disease. I suffered nearly death at times; had spells the doctor called spasms. Was bed-fast most of the time for six months. My mother begged me to try Dr. Pierce's Golden Medical Discovery. With but little hope I wrote to Dr. Pierce and he said he could cure me. I began to take his Golden Medical Discovery, and although I had given up to die I began to improve from the start, and by the time I had taken twenty-two bottles I was entirely cured. I thank God for the 'Golden Medical Discovery.' I weigh more than ever before in my life and I am entirely well."

Dr. Pierce invites any person who suffers from disease in chronic form to consult him by letter, free. All correspondence is held as strictly private and sacredly confidential. Address Dr. R. V. Pierce, Buffalo, N. Y. A great many people, who, like Mrs. Hayter, have written to Dr. Pierce "with but little hope," have like her been perfectly and permanently cured by his treatment.

FREE ANALYSIS.

An analysis of the urine will be made free of charge. This often determines the nature of the disease when accompanied with a full statement of symptoms. Do not neglect this opportunity to obtain a specialist's opinion on your condition absolutely without fee or charge, together with free urinary analysis. If you are sick consult Dr. Pierce, by letter, without delay.

It is to be remembered that Doctor Pierce's Golden Medical Discovery cures diseases of the stomach and other organs of digestion and nutrition, cleanses the blood of waste substances, and so removes one of the causes which conduce to the over-burdening and disease of the kidneys.

Don't be fooled into trading a substance for a shadow. Any substitute offered as "just as good" as "Golden Medical Discovery" is a shadow of that medicine. There are cures behind every claim made for the "Discovery" which no "just as good" medicine can show.

ENTIRELY FREE.

The best Medical Book free. Dr. Pierce's Common Sense Medical Adviser, containing more than a thousand large pages and over 700 illustrations, is sent free on receipt of stamps to pay expense of mailing only. Send 31 one-cent stamps for the cloth-bound volume, or only 21 stamps for the book in paper covers. Address Dr. R. V. Pierce, Buffalo, N. Y.

ulate reason and can not be distinguished from it by those who have not mastered psychology, in its comparative aspects, as set forth in the writings of some authorities that are not accessible to the public."

A Thrifty Bride.

Gotham—My wife is resourceful, I tell you.

Church—So I heard.

Gotham—Why, the next day after we were married she cooked up a most de-

licious dish, and what do you suppose it was made of?"

Church—Couldn't guess.

Gotham—Rice.—Yonkers Statesman.

The Department of Agriculture is again getting ready to deluge the partisans of narrow-minded congressmen with common, cheap and largely worthless garden and flower seeds! What a pity it is that such a grand machine must be devoted to such base uses.—Farm, Stock and Home.

The Poultry Yard.

The Farmers' Poultry.

The writer has been "cruising about" in the State of Ohio for some three weeks, and in that time has visited at least 50 farmers in different sections of the State. Much of the poultry that he has seen hasn't been of a kind to grow enthusiastic over, or, indeed, to feel encouraged over; and in the great majority of cases observed the housing and care are just about on a par with stocks of fowls. Ohio is a great State, and the intimate acquaintance with so many of its farms and their owners has been a genuine pleasure; but the poultry? True, there have been a few examples of better things. In 2 or 3 farm-yards we found really good Barred or White Plymouth Rocks, in two cases good White or Buff Wyandottes, and one old gentleman who was tending his bees near the road, and with whom we stopped to chat a moment, was very desirous we should go with him to the rear of the buildings to see his White Leghorns—and he had some good ones, one fine yearling cock being as handsome a bird as one would see in a day's journey. One farmer with whom we talked, wanted to introduce us to his sons, one of whom was especially interested in the poultry work, and when we praised his Plymouth Rocks and told him they were fit to advertise and sell eggs for hatching from, he said he had been "working towards that goal" and intended to visit 2 or 3 shows this winter to learn some of the points about really good birds, and then he would be better prepared to estimate the qualities of his own. This is a commendable position, which we heartily endorsed, but when he also told us that he was thinking of buying stock of another variety, so as to have two kinds to advertise, we advised strongly against such a step. "Concentrate all of your effort on one good variety, rather than scatter your fire upon 2 or 3 different targets."

ONE VARIETY WELL HANDLED

will pay better than the same time and energy divided among 2 or 3 varieties. Then, too, one variety is all a man can master in one lifetime; give the time and energy to mastering that one is the best of advice.

Quite near this farm we saw a new poultry house, that was just completed, and had been built just in the rear of a high corn crib, in such a situation that the crib would cut off practically all of the winter sunshine. What a pity! The winter sunshine is particularly helpful if one wants eggs—and who does not? And here these good people had deliberately cut it off from the poultry house. Fifteen feet further east would have made 6 or 8 more steps in going to or from the house, but would have set the poultry house east of the corn crib and right out in the full sunshine.

Another farmer with whom we talked said: "Well, we've tried

THREE OR FOUR KINDS OF FULL BLOOD CHICKENS,

and I don't see as they're any better than the old farm hens. First we got some White Bramey eggs (he meant Light Brahmas, there are no White Brahmas), and the next year Ma wanted to try Plymouth Rocks, and we sent and got some eggs o' them, and this spring I sent off to another man an' got some Brown Leghorn eggs, but I don't see that any of 'em lays any better'n them we had, and the plagey Leghorns are everywhere and into everything!" We told our friend that we thought his mistake had been in "scattering his fire." If he'd settled upon a good variety, say the Barred Plymouth Rocks, in the first place, then, instead of buying eggs of another and entirely different variety had bought Plymouth Rocks again, and this year bought still another lot of Plymouth Rock eggs, he would have had, by this time, a really good flock of Rocks to breed from; he would have "had something" to show for his investment of money and for the time employed.

A GREAT MISTAKE.

The great mistake that many farmers make is in letting old and young, males and females, all run together. The young can't possibly have a good chance to grow to vigorous maturity under such adverse conditions; it is no wonder the farmers get few eggs (or none at all) in winter. The old birds are certain to be more or less (usually "more") lousey, and the young catch the infection; pullets that are wanted to be winter layers should be kept apart from the old stock and "fed for growth," fed a ration that will promote the building up of a strong, vigorous body. Then,

too, where old and young all run together how can the old be selected out for selling off to market or killing for the table? The old birds ought, most of them at least, to be sold off or eaten before winter comes, so the youngsters can have the room and be given a good chance to prove themselves.

CARE ESSENTIAL TO PROFIT.

Another great mistake the farmer makes is in taking no care at all of his poultry. They live where they choose and on what they can find, roosting on carts, plow handles, etc., under the shed or about the buildings, and picking up a precarious living about the farm and garden. At harvest time, when grain is being threshed, etc., they really thrive, and when insects, worms, etc., are abundant in summer, they can hunt a respectable living; but fowls kept on that "go as you please" plan can not do themselves justice, they can not be profitable egg producers. Contrast the wild, half-starved fowls on some farms, the kind that lay a few eggs in spring, when the reproductive instinct is most potent, with the well-bred and well-cared for Barred Plymouth Rocks that we saw at H. F. Cox's three weeks ago—Plymouth Rocks that have made a record of 198 eggs apiece in a year. Mr. Cox's birds pay him \$3 a year apiece profit; what do the average, neglected farm birds pay? Do they pay anything?

BETTER STOCK SHOULD LEAD TO BETTER CARE.

One of the strongest arguments in favor of the farmer getting good stock is that it will probably lead him to take better care of it, and the better care is quite as essential as the better stock. We said "probably" because—unfortunately—it does not always do so. Take the case told of above, of the farmer who had bought eggs of 3 different varieties in three different years. He had turned the product of those good eggs right in with the old "scrub" stock, and mistreated them in the same indifferent way. Is it any wonder that he couldn't see that pure-breds were any better than scrubs? Wouldn't it have been a wonder if they had been any better? We believe in better poultry and more of it, and we want to see our readers interested to have better poultry and take better care of it, then they will get a profit from it and will realize that poultry is really worth while. If our farmer friends who occasionally eat a tough, all-muscles fowl that has run wild over the farm for two or three years could sit down to a tender, juicy, "toothsome" chicken that had been well fed from the start, they would realize that there is as much difference between them as there is between the meat of the wild "range" steer and that of a stall-fed ox; the one is tough, lean muscle, the other is juicy and tender—almost melts in the mouth. Which kind are you eating, or selling to market? Which kind are our readers producing? Good poultry, well cared for, pays and pays handsomely; the common kind pays very little if any profit while alive, and when on the table is mighty poor eating. Let us all do our part to hasten the day of the better, the really profitable kind!—A. F. Hunter, in Practical Farmer.

Publishers' Paragraphs.

The farmer sat in his easy chair, if not, he should consult the advertisement of Geo. W. Moffit, the big furniture man, of Topeka, Kans., who is offering a splendid rocking chair for \$2.95 that is simply a great bargain for the money. If you want to share in this special sale, either call or send your check and get one.

George T. Stockham, manager of the Midland Hotel, Kansas City, has leased the Criterion Hotel, Broadway and Forty-first Street, New York City, for a term of years and is now in possession. It goes without saying that the popular headquarters for western men who go East will be the Criterion at New York, the distinction the Midland now enjoys at Kansas City.

Good goods and good methods make business hum. In a recent letter, the International Stock Food Company, of Minneapolis, Minn., says: "Owing to the immense increase of our business we have been compelled to again increase our factory help. At this time we are constantly using 30 typewriters, and it requires 74 people to attend to our office work alone. Our office is acknowledged to be the largest of any in the entire Northwest, for any line of business, and we believe it is not exceeded by a very large number in this country. We hope to increase it next year."

The Christmas number of the *Delineator* is about the first of the special Christmas issues. It is a beauty. The cover is a most artistic production, showing a beautifully gowned woman, standing gracefully in a brilliantly lighted salon. Two charming love stories, one by Cyrus Townsend Brady, plenty of advice regarding Christmas Gifts, timely pointers on Cookery, Winter-time Care of Plants all the fashions of the day interpreted into simple language, can be found in the Christmas number of the *Delineator*. It is a splendid magazine, satisfactory inside and out. There is no magazine for women at pres-

The Farmers' Co-operative Grain and ...Live Stock Association...

Will handle your grain, hay, and feed on commission. If you appreciate honest work, good treatment, and prompt returns, consign your grain to us. We want the consignment of all co-operation associations, independent dealers, scoop shovel men, and farmers. Correspondence solicited. Address all communications to

JAMES BUTLER, Secretary, Room 14, Office Block, Topeka, Kansas

ent published that is more practical in all its pages. As a Xmas gift itself, it bears its own recommendation.

No one will ask for better holiday reading than that which the Christmas number of McClure's Magazine will furnish. First and foremost, of course, is to be mentioned John LaFarge's article on "Michael Angelo," the first of a series in which during the following year the great artist and critic of our own day will discuss in the pages of McClure's the greatest artist of the past. But at this cheerful time of the year fiction is especially seasonable, and it needs but a glance at the title-page of the number to show that it provides this not only in a right Christmas-like abundance, but also in range of style and variety of subject to satisfy every taste and stimulate every interest. There are, in fact, no less than seven separate short stories, most of them by writers already well known to readers of McClure's, and all of them certain to stick in the memory and provoke a desire for more from the same source.

The average man is not perhaps willing to get something for nothing but any man is willing to get good value for his money. Some places are good for this business and some are less so. One of the good places for securing big value for little money is at the factory of the great Heller Chemical Company, of Chicago, whose advertisement appears in another column. Just think of it! A mail order drug and chemical house and the only one in the world. Veterinary remedies, family remedies, flavoring extracts, drugs, medicines, paints, oils, trusses, instruments, etc., and all at rates that will pay you. This company publishes a book which costs it \$2 and which tells all about these things and their prices—15,000 of them—which, in order to get acquainted with you and your wants, it will send you for 10 cents to pay postage, and then if you should order any one or more of these 15,000 articles the company will take out the 10 cents from the bill. Anybody would give 10 cents for such a book as that. Write the company about it at 232 Randolph St., Chicago. It will pay.

There is no lack of the Christmas spirit in the December number of the *Ladies' Home Journal*. Among the stories that go to fill this largest number of the magazine ever issued are "The Baby Behind the Curtain," by Elizabeth McCracken; Christmas Eve on Lonesome," by John Fox, Jr., the Kentucky author; "How the First Letter Was Written," by Rudyard Kipling, and the first part of an amusing story of Western ways, called "The Russells in Chicago." "The People Who Help Santa Claus" are told about; the Rev. David M. Steele relates some pathetic stories of the New York poor, and Elliott Flower delightfully describes "The Linfields' Christmas Dinner." The second room of the "Bradley House," the library, is shown in detail. Mr. Bok's editorial is headed "Personal," and that it is. There is a charming Christmas play for children, and a double page of college girls' pictures, which shows groups of students from almost every well-known girls' school in the country. This is the first installment of the *Journal's* great "picture story" of "What a Girl Does at College." The regular departments are most ably presented by their respective editors, and the holiday cover is the work of Thomas Mitchell Peirce. By the Curtis Publishing Company, Philadelphia. One dollar a year; ten cents a copy.

Thought and action are the great moving forces of the world. On the farm, winter is the best time for thought and the other seasons for action.

Introduction Offer.

Write at Once if You Want an ANN ARBOR QUICK LIGHTING GASOLINE LAMP *...FOR CHRISTMAS... SUPERIOR MFG. CO., ANN ARBOR, MICH Advertising Department.



Two Rings, Free!

We will give these two SOLID GOLD laid Rings, one set with large Garnet and three Pearls, one with Ruby and two Brilliants, Free to anyone that will sell 12 of our Gold Plate Enameled Brooches set with different colored stones at 10 cents each, and sends us the \$1.20. No money required until brooches are sold. We take back all not sold. Address HOWARD MFG. CO., 6 W ST., PROVIDENCE, R. I.

POULTRY BREEDERS' DIRECTORY.

FOR SALE—White Holland turkeys; toms \$1.50, hens \$1. H. M. Harrington, Clearwater, Kans.

200 EGG BANTAM 30 Days Trial. \$15. SELF-REGULATING INCUBATORS IN ONE Hatch every good egg. 50 for \$5.00. No. 54 Cat. \$9.50. BUCKEYE INCUBATOR CO., SPRINGFIELD, OHIO.

BELGIAN HARES...

Belgian hare fry beats chicken, and a good breeding pair of hares will keep you supplied all the year round. I can supply you in the finest breeding stock at \$8.50 per pair; \$5 per trio, until further notice. A. H. DUFF, Larned, Kansas.

VICTOR INCUBATORS
The simplest, most durable, cheapest first-class hatcher. Money back if not as represented. Circular free; catalogue 6c. We pay the freight. GEO. H. STAHL, Quincy, Ill.

200-Egg Incubator for \$12.80
Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day. GEO. H. STAHL, Quincy, Ill.

The Sure Hatch
is the incubator for the poultry raiser, whether farmer or fancier. Anyone can run them, because they run themselves. Anyone can own them, because the price is right. Machine and results guaranteed; you take no risk. Our Common Sense Brooder is the best at any price, and we sell it very low. Handsome catalogue containing hundreds of views and full of honest poultry information, mailed free. When writing address nearest office. Sure Hatch Incubator Co., Clay Center, Neb. or Columbus, O.

You Can Hatch Chickens by the Thousand IN THE "ONLY INCUBATOR" Which has no defects and has advantages over all other machines. You can raise the chicks in THE ONLY BROODER, which will not freeze, smother, or overheat the chicks. Write for Catalogue. Sold on 30 days trial. THE ONLY INCUBATOR CO., Box M, Lincoln, Neb.

IT IS A FACT
that poultry pays a larger profit for the money invested than any other business; that anybody may make a success of it without long training or previous experience; that the Reliable Incubators and Brooders will give the best results in all cases. Our 20th Century Poultry Book tells just why, and a hundred other things you should know. We mail the book for 10 cents. Write to-day. We have 115 yards of thoroughbred poultry. RELIABLE INCUBATOR & BROODER CO., Box 8-62 Quincy, Ill.

INCUBATORS and Brooders—the best that can be made—self-regulating—thousands in use—satisfaction guaranteed or no pay—we pay the freight. Catalog free. BURR INCUBATOR CO., Box F 12, Omaha, Neb.

STANDARD POULTRY.
Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Buff Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, Brown Leghorns, and Belgian Hares. All Our Breeding Pens of this season at Bottom Prices, also Spring Chicks. Prices now less than half of winter prices. Fine Exhibition and Breeding Stock of Rare Quality. Write Me Your Wants. Circular Free. A. H. DUFF, Larned, Kansas.

You should take advantage of our "Two for One" offer. It is the best offer we ever made.

IT TAKES FIVE CATALOGUES printed in five different languages to tell the people of the many points of superiority **SUCCESSFUL Incubators & Brooders** of our One 200 egg machine will hatch more chicks than 20 steady old hens each time it is filled with eggs. They will be stronger, more healthy chicks, too. These machines will do for you just what they have done for thousands of others. Write for 156 page Catalog enclosing 6c to pay postage. We ship machines and handle correspondence for the East from our new house in Buffalo. Write nearest office. **DES MOINES INCUBATOR COMPANY,** Box 83, Des Moines, Iowa, or Box 83, Buffalo, N. Y.

In the Dairy.

Conducted by D. H. Otis, Professor of Dairy Husbandry, Kansas Experiment Station, Manhattan, Kans. to whom all correspondence with this department should be addressed.

Crab-grass Hay.

F. E. UHL.

The growth of crab-grass has been more luxuriant than usual the past season. Some farmers have cut a good hay crop from this native grass which will be valuable for supplementing the scarcity of roughages during the winter; others have utilized it as pasture. Those are fortunate indeed who can make use of this grass, which is usually considered a nuisance, in this year of high-priced feeds. In fact this volunteer growth may be pastured well into the winter. There is no need of cattle starving as long as they can get it. In the South, crab-grass hay is one of the most common of roughages. A crop of melons is first harvested, after which crab-grass is allowed to grow and later cut for hay. It is sometimes difficult to get the hay well cured, since it must be cut late in the season. It should be well stacked or stored under shelter as it moulds easily.

We usually think of this grass as of little value; but the cow thinks differently, especially when she can not get alfalfa. If cut before ripe, well cured, and stored, it makes a very appetizing and valuable feed when compared with our more common hays. Its nutritive and approximate feeding value may be readily seen from a study of the following table, giving the total pounds of

ing offered to those competent to take advanced work along these lines.

During the balance of the year apprentices will be admitted to the number of 20. As these drop out during the course, the oldest applicant in point of registration will be admitted. This term in apprenticeship work will constitute the first term's work of the student. To complete his work, he will be expected to enroll in the short course during the winter term. In this way it is expected that most of the students in the winter term's work will have had either the apprentice work or actual creamery work before entering. More of his time can then be devoted to the text-book, which will constitute a heavy part of this term.

The apprentice will have only the creamery practice work supplemented by four hours reading per week in the dairy library and two hours lectures per week on general creamery practice.

We expect the students to learn by doing and then take up the reasons why, or the text-book part of their work, after they have become familiar enough with creamery ways to understand the meaning of the texts.

Special features of the school this winter will be a week of dairy stock judging under the instruction of Mr. T. A. Borman, editor of the Dairy Age, the meeting of the State Dairy Association at the college during the week of stock judging, and a special school for advanced butter-makers the ten days previous to the dairy convention.

Brown Elsie.

We present our readers this week with a cut of the Jersey cow, Brown

of milk contains essentially the same amount of nutrient material as three-fourths of a pound of steak. The milk has the further advantage in that it is practically wholly digestible, while the steak is rendered less digestible by the process of cooking. Upon the basis of steak being worth from 12 to 16 cents per pound, milk would be worth from 9 to 12 cents per quart. Its ordinary retail price is often as low as 4 1/2 cents per quart and seldom exceeds 6 cents in this State. The practical tests, too, coincide with the laboratory tests to the effect that where large quantities of milk are used, the cost of living is reduced by the lessened use of more expensive foods. It will be a long time, however, before the woman who orders the kitchen supplies will see the economy of ordering 2 quarts of milk at 5 cents instead of 1 1/2 pounds of steak at 16 cents, yet the saving would be 14 cents.

Advanced Butter-making.

E. H. WEBSTER.

The Kansas Dairy School will have something for the experienced butter-makers this winter. Perhaps you have been making butter for years and have in all probability won a fair degree of success. Yet are you satisfied that you know all there is about your profession? Perhaps there are a few things about making starters you would be glad to learn, or the question of pasteurization may be a puzzling one to you. No doubt you have wished for better success in controlling the flavor of your cream and have wondered why it was that there was not the uniformity you desired. It may be that the question of testing cream has been a vexing one and you have wished for more light on that subject. The question of over-run has been a stumper to some, both because you got too much and too little. And then how many of you have sufficient knowledge of scoring butter to give yourselves a fair chance to know exactly what you are doing.

Come to the ten days special course offered just before the State Dairy Convention and brush up on these points. Learn the latest things in all these lines.

SAVE \$10.- PER COW

EVERY YEAR OF USE.

DE LAVAL CREAM SEPARATORS

Prices \$50. - to \$800.-

"Alpha" and "Baby" styles. Send for Catalogue.

THE DE LAVAL SEPARATOR CO.
RANDOLPH & CANAL STS., 74 CORTLANDT STREET,
CHICAGO. NEW YORK.

Learn from each other in contact and communication with each other. Then the ten days course capped off by the dairy convention will help you to make better butter and make you better satisfied with your calling.

Marks of a Good Dairy Cow.

H. E. RICHTER.

Good cows allow themselves to be easily milked. The udder is formed principally by the glands which secrete the milk. These, 4 in number, 2 on each side, are designated by the name of quarters. The marks which indicate that these glands are constricted so as to produce much milk, are a very large development of the hind quarters, a wide and strong lumbar region, a long rump, haunches, and hind legs wide apart, a large space for the udder, and

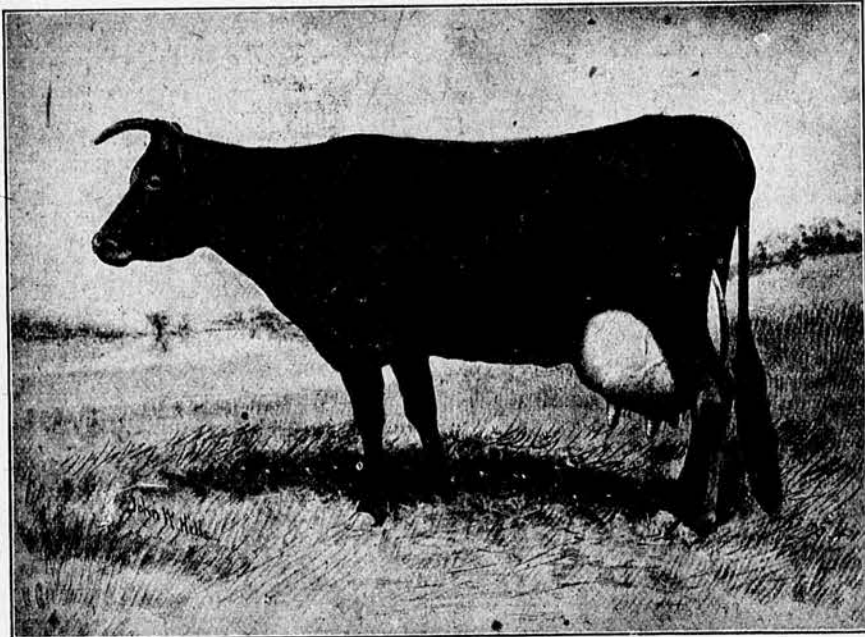
To make cows pay, use Sharples Cream Separators. Book "Business Dairying" and Catalogue 237 free. West Chester, Pa.



Notice to Dairymen

If you are thinking of buying a Cream Separator, write us or catalogue and information. We manufacture the best machine on the market.

DAVIS CREAM SEPARATOR CO.
88-90-92 W. Jackson St., CHICAGO, ILL.



BROWN ELSIE 96595.

Record, 21 lbs. 12 oz. butter in seven days. Grandam of college bull.

dry matter and average digestible nutrients in 100 pounds of feed.

	Dry matter.	Pro-tein.	Carbohy-drates.	Fat.
Crab-grass hay..	82.4	5.7	39.7	1.4
Prairie hay	87.5	3.5	41.8	1.4
Timothy	86.8	2.8	43.4	1.4
Millet	92.3	4.5	51.7	1.3
Oat hay	91.1	4.3	46.4	1.5
Oat straw	90.8	1.2	38.6	1.8
Corn fodder	57.8	2.5	34.6	1.7
Red clover	84.7	6.8	35.8	1.2
Alfalfa	91.6	11.0	39.6	1.2

Judging from the above table crab-grass hay is double the value of timothy hay and corn fodder, and more valuable than any other in the list except red clover and alfalfa hay, for the production of milk. All except oat straw and corn fodder, however, are superior feed for fattening stock.

Kansas Dairy School.

ED H. WEBSTER.

Beginning with the first of November, the dairy school will be in continuous operation throughout the year. It is the plan to continue the regular winter course of twelve weeks as was done last year. This term will be devoted to a complete course in both theory and practice, more attention being given to butter-makers with considerable practical experience than has been done heretofore, special courses in starters, pasteurization, and cream ripening be-

Elsie 96595, which has a record of 21 pounds 12 ounces butter in seven days. This cow has 2 tested daughters, Diploma's Elsie, with a record of 22 pounds 6 ounces butter in seven days, and Elsie's Brown Bessie, with a record of 16 pounds 2 ounces of butter in seven days. Combination 3d 17576, the sire of 10 tested daughters. The dam is Brown Flora 2d 96504 with a record of 20 pounds 5 ounces in seven days, and the dam of 3 tested daughters.

Brown Elsie is the grandam of Brown Elsie's Grandson 60412, the young Jersey bull owned by the Kansas State Agricultural College. He was purchased from H. C. Taylor, Orfordville, Wis., who has kindly loaned us the cut of Brown Elsie.

Economy of Milk for Human Food.

A. W. BITTING, M. D.

Of all the food materials in general use none are more wholesome than milk. It is palatable, easily digested, and highly nutritious. This is partially recognized by physicians in that they prescribe it freely as the best article of diet for the weak and sick patients suffering from almost all forms of disease. While milk can not be made an exclusive food for the adult as for the child, its real value is little appreciated by those who have good health. Its use is largely that of a condiment for seasoning tea and coffee, for berries or fruit, or as an adjunct to the cooking. Very few use it as a staple article of food as they do bread or meat. In cities it is generally regarded as being too expensive to be used freely. When a family of 4 or 5 have a milk bill for more than a quart a day they consider that they are somewhat extravagant. The facts in the case are that a quart

UNCLE SAM'S SEPARATOR

HAS GROWN TO SUCH LARGE PROPORTIONS THAT IT IS

AN ELEPHANT TO THE DE LAVAL PEOPLE



The U. S. Separator is such a bugbear to them that they expect an elephant in everything connected with it, so it is not surprising to find them using an elephant to run a U. S. Separator with; neither is it surprising to see tears in the eyes of the elephant. It is enough to make an elephant weep to have to do work that a dog he could play ball with could do easily. That a dog can run a U. S. Separator will be seen by reading the following letter:

84-lb. Dog Runs No. 7 U. S. Separator Without Trouble.

MINOT, ME., Sept. 10, 1901.
I see your competitors, the De Laval Co., are passing out circulars at fairs, showing an elephant running a dog-power, and printing the statement that it requires much power to run one of the U. S. Separators.

Now I have run one of your No. 7 new capacity machines for more than a year, and operated the same by dog-power. My dog weighs only 84 lbs., and commenced to run the separator when he was only four months old. I have no trouble in maintaining the required speed, and am greatly pleased with the separator and power.

A. K. P. QUIMBY.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

Dairy and Farm Short Courses.

Kansas State Agricultural College, January 7 to March 28, 1902

SPECIAL FEATURE: THE JUDGING SCHOOL.

Poultry, February 17 to 22; Instructor, C. H. Rhodes.
Beef Cattle, February 24 to March 1; Instructor, John Gosling.
Dairy Cattle, March 3 to 8; Instructor, T. A. Borman.
(State Dairy Association Meets at Manhattan, March 4 to 7.)
Swine, March 10 to 15; Instructor, Geo. W. Berry.
Horses, March 17 to 22; Instructor, J. W. Robison.

Every Farmer and Farmer's Boy Invited.

For full particulars, address..... Pres. E. R. NICHOLS, Manhattan, Kans.

EMPIRE
THE LEADING
CREAM SEPARATOR
CATALOGUE FREE
15 BUTTER EXTRACTOR CO. BLOOMFIELD N. J.
WESTERN OFFICE FISHER BLDG CHICAGO

milk glands well developed. The teats should be set far apart from each other, and if the veins which surround the udder are large, winding, and varicose they show that the glands receive much blood, and consequently that their functions are active and that milk is abundant.

The regularity of feeding has a great deal to do in obtaining the best results. The cow that is fed regularly will always give the best satisfaction in the milk pail. If you are not regular in feeding your cows they will not be regular in giving milk. A cow regularly fed does not worry over her feeding as she expects her feed at a certain time, while the other cow gets her food sometimes at one time and sometimes another, consequently she will not rest easy and does not give good results from her feed.—Roscoe White.

Farmers' institutes.

The following dates and assignments from the agricultural college have been arranged for farmers' institutes:

- November 30, Rose Hill, Professors Otis and Walters.
- December 2, Mulvane; Professors Otis and Walters.
- December 3, Peck; Professors Otis and Walters.
- December 4, Viola; Professors Otis and Walters.
- December 5, Conway Springs; Professors Otis and Walters.
- December 5 and 6, Hackney; Professors Cottrell and Mayo.
- December 5 and 6, Burrton, Mrs. Calvin and Professor Dickens.
- December 6, Belmont, Professors Otis and Walters.
- December 7, Turon; Professors Otis and Walters.
- December 9, Hazelton; Professors Otis and Willard.
- December 10, Attica; Professors Otis and Willard.
- December 11, Harper, Professors Otis and Willard.
- December 12, Anthony; Professors Otis and Willard.
- December 13, Argonia; Professors Otis and Willard.
- December 14, Milan; Professors Otis and Willard.

"Rightness expresses of actions what straightness does of lines; and there can no more be two kinds of right actions than two kinds of straight lines."—Herbert Spencer.

STICKNEY JUNIOR

A Perfect 3-Horse Power Gasoline Engine for Farmers at only \$110.00

Lowest price, simplest and best engine. A child can run it. Will do all the work of the farm, shop and home. Send for free catalog. CHARLES A. STICKNEY CO., St. Paul, Minn.

Genuine C. C. Co.'s **PATENT EDGE CORRUGATED ROOFING**

makes a perfectly tight joint with one corrugated side lap. Don't throw away money on the other kind. 4 in. end lap with this equals 8 in. with others. Let us tell you how to save 10% to 15% in material. Free Catalog and price list sent you if you write. Kansas City Roofing & Corrugating Co., 218-220 W. 2nd St., Kansas City, Mo.



SKUNK KILL THEM and send their skins to us. Also ship all other kinds of raw **FURS.** Highest market price paid. Farmers will get 50 cents to \$2.00 more by shipping to us their... **Cattle and Horse Hides** than they can by selling same to the local butcher. Prompt **CASH RETURNS** at highest market price guaranteed. Write for price list and shipping tags. **ANDERSCH BROS., Dept. 10, 412-415-419 Main St., Minneapolis, Minn.**

FOX AND WOLF HOUNDS

Of the best English strains in America; 33 years' experience in breeding these fine dogs for my own sport; I now offer them for sale. Send stamp for circular. **T. B. HUDSPETH, Sibley, - Jackson County, - Missouri.**

HELLO!!

Have you ordered your telephone? Don't put it off until farm work makes you forget it. An accident, a sickness, a sudden turn in the market may make your forgetfulness very costly. We make quick shipment and there is no trouble in installing it. A bright boy can do it.

The Farmer's Telephone Costs You \$11

It's yours. You own it for life without making any further payments. Not controlled by any trust. No rent to pay. Wire and poles at lowest prices.

AGENTS WANTED—To solicit farmers in neighborhoods not already taken. Thousands in use. Sell wherever known. Best thing for the farmer ever invented. Write for special terms to agents, booklets, etc.

Send us your name and that of your nearest neighbor and the shortest distance from your house to his and we will send you full particulars and facts on Telephone construction worth while knowing.

KELLOGG SWITCHBOARD & SUPPLY CO., 252 S. Green St. CHICAGO.

PASTEUR VACCINE COMPANY,

Chicago, New York, Kansas City, Omaha, Ft. Worth, San Francisco.

TRADE-MARK



"BLACKLEGINE"



Single Blackleg Vaccine } Powder Form.
Double Blackleg Vaccine }
Blackleg Vaccinating Outfit

Single Blacklegine } Vaccine ready for use.
Double Blacklegine } Each dose separate.
Blacklegine Outfit (Needle with handle), 50c.

Dip Disinfectant
Feeding Compound
Scour Cure (Alexander)
Virus for Destroying Rats

ALL WELL-KNOWN, SUCCESSFUL REMEDIES. WRITE FOR PARTICULARS AND PROOFS OF SUCCESS. FREE SAMPLE OF DIP AND DISINFECTANT SENT UPON REQUEST. BEWARE OF DANGEROUS IMITATIONS OF OUR VACCINES.

A Sure Preventive of Blackleg

Is Parke, Davis & Company's Blackleg Vaccine Improved. Ready for Immediate Use. No Expensive Outfit Needed.

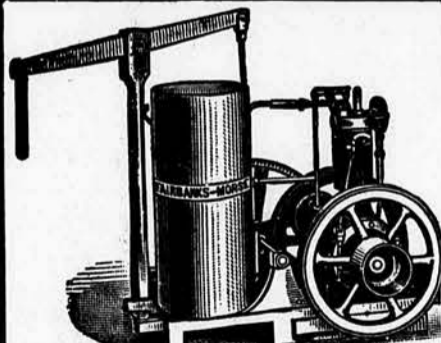
All you have to do is to put the Vaccine in your syringe, add boiled water according to directions, and inject into your cattle. It will positively PROTECT your cattle from the dread disease, Blackleg, the same as vaccination prevents Smallpox in the human family. Specify Parke, Davis & Co.'s Blackleg Vaccine Improved, and get the kind that is sure to be reliable. EVERY LOT IS TESTED ON CATTLE BEFORE IT LEAVES OUR LABORATORIES. Write for Literature and Full Information, Free on Request. FOR SALE BY ALL DRUGGISTS.

PARKE, DAVIS & COMPANY, Detroit, Michigan.

Branches: New York City, Kansas City, Baltimore, New Orleans, Chicago, Walkerville, Ont., Montreal, Que., and London, England.

Fifteen Men Wanted

who together can pump more water, grind more feed, shell more corn or saw more wood than this little



GASOLINE ENGINE

If you want to know more about this, address the manufacturers

FAIRBANKS, MORSE & CO., Station AA. Kansas City, Mo.

LIGHTNING GAS ENGINE AND SCALES




KANSAS CITY HAY PRESS CO. 129 Mill St. KANSAS CITY MO.

WHEN WRITING ADVERTISERS MENTION KANSAS FARMER.

Save Money

—that is, save the profit which you will have to pay the dealer when you buy fence from him. The **ADVANCE FENCE** is sold direct from our factory at wholesale prices. It's so good you will order the second and third time. Special prices, etc. free. **ADVANCE FENCE CO 1806 St., Peoria, Ill.**

PAGE



On Rough Ground

use PAGE Fence. It fits any surface perfectly. **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

BULL-STRONG!

...PIG-TIGHT...

An Illinois farmer said that after harvest he had fully 200 bushels of loose oats on the ground that he could not secure any benefit from, because the fence around the field would not turn hogs. Figure the loss for yourself. He also said, all this would have been saved if he had used the Kitzelman Woven Wire Colled Spring Fence, and the wire would have gone a long way towards paying cost of the fence. With the Duplex Machine any farmer can make it himself at the actual cost of the wire. Catalogue free for the asking. **KITZELMAN BROS., Box 28, Muncie, Ind.**

GRIND YOUR WHEAT


OUR MILLS for 1901 are made for that, and are **Improved Corn Grinders** beside. You will find a surprise in prices in our circular of ungeared and double and triple geared mills. Ask for our Windmill Catalogue, too, when you write. Add., **Currie Windmill Co., Topeka, Kans**



KIRKWOOD FOR 1900

STEEL WIND MILLS, STEEL TOWERS, PUMPS, and CYLINDERS, TANKS, and FITTINGS OF ALL KINDS

—Address— **Kirkwood Wind Engine Co. Arkansas City, Kans.**



DO NOT BUY WELL DRILLING

MACHINERY until you see our new Catalogue No. 41. We will furnish it to you FREE. Write to our address, either Harvey, Ill., Chicago, Ill., or Dallas, Texas.

F. C. AUSTIN MFG. CO., Factories at Harvey, Ill.


DRILLING MACHINERY

FOR WATER, GAS and MINERAL PROSPECTING. Steam or Horse Power. We are the oldest and largest manufacturers of Drilling Machinery in this country. Our machines are faster, stronger and easier to operate than any other machine on the market. They are no experiment. Thousands are in successful operation. Special attention given repair work. Send for Free Illustrated catalogue to **The Kelly, Tancypill & Woodruff Co., Waterloo, Iowa.** Ask for Catalog No. 33. 3 to 3 Chestnut St.



RIPPLEY'S No. 4

fits the fellow that wants an extra good feed mill at an extra low price. Guaranteed to grind all grains single or mixed, and to be fast, large capacity, strong, durable and easy to operate. Ask for circulars and price list. **RIPPLEY HARDWARE CO., Box 25 Grafton, Ill.**



ROSS ENSILAGE CUTTERS

EXCEL ALL OTHER MAKES.

We can prove it, if given a chance. Send for Cat. No. 4 9 Mills all about it. **THE E. W. ROSS CO., SPRINGFIELD, O.**



DO YOU need a feed mill? Why not buy the one which will do everything any other mill will do, and at the same time supply power for other purposes.

BUCKEYE Feed Mills and Power Combined meet all these conditions. Grinds corn and cob, other grains, especially wheat, etc. Shell, cut feed, saw wood, pump water, etc. Ask your dealer for them. Write us today for free catalogue W. **STAVAR CARRIAGE CO., 78th and Wallace Sts., Chicago.**



\$7.00 DAILY AVERAGE

selling easy Pump Governors. They make the hardest working pump work easy. Windmills turn in the lightest wind. Fits all pumps. Exclusive territory. No talk—merit sells it. **Pump Governor Co. 23 L. S. Canal St. Chicago, Ill.**

TRIAL TREATMENT FREE. We will forfeit \$50 for any case of Internal, External or Itching Piles the Germ Pile Cure fails to cure. Instant and permanent relief. Write at once. **Germ Medical Co., Dept. A, 49, 8d st., Cincinnati, O.**

MARKET REPORTS.

Kansas City, Nov. 25.—Cattle—Receipts, 5,585; calves, 683. The market was steady to 10 cents higher. Representative sales: SHIPPING AND DRESSED BEEF STEERS.

Table with columns: No., Ave. Price, No., Ave. Price. Lists prices for various grades of beef steers and western steers.

Table with columns: No., Ave. Price, No., Ave. Price. Lists prices for Texas and Indian steers and Texas and Indian cows.

Table with columns: No., Ave. Price, No., Ave. Price. Lists prices for Western cows and Native heifers.

Table with columns: No., Ave. Price, No., Ave. Price. Lists prices for Native cows and Native feeders.

Table with columns: No., Ave. Price, No., Ave. Price. Lists prices for Native stockers and stock cows and heifers.

Chicago Live Stock. Chicago, Nov. 25.—Cattle—Receipts, 15,620. Good to prime steers, \$6.25@7.00; stockers and feeders, \$2.00@4.00.

St. Louis Live Stock. St. Louis, Nov. 25.—Cattle—Receipts, 2,800. Beef steers, \$4.50@7.00; stockers and feeders, \$2.45@3.70; Texas fed steers, \$4.00@5.25.

Omaha Live Stock. Omaha, Nov. 25.—Cattle—Receipts, 4,200. Native beef steers, \$3.75@6.75; western steers, \$3.50@5.35; Texas steers, \$3.50@4.40.

Kansas City Grain. Kansas City, Nov. 25.—Wheat—Sales by sample on track: Hard—No. 2, 69 1/2 @ 70c; No. 3, 68 1/2 @ 69c.

Chicago Cash Grain. Chicago, Nov. 25.—Wheat—No. 2 red, 74 1/2 @ 75 1/2c; No. 3, 71 1/2 @ 73 1/2c; No. 2 hard winter, 72 1/2 @ 73c.

St. Louis Cash Grain. St. Louis, Nov. 25.—Wheat—No. 2 red cash, elevator, 74 1/2 @ 74 5/8c; track, 76 1/2 @ 77c; No. 2 hard, 72 1/2c.

Kansas City Produce. Kansas City, Nov. 25.—Eggs—Fresh. 20 per doz. Butter—Creamery, extra fancy, separator, 22c.

FARMS AND RANCHES.

FARM WANTED—A customer wants a good stock farm, of from 200 to 400 acres in Chase, Marion, Lyon, or Morris County.

160 ACRES of land for sale cheap, in the mineral and fruit belt of Missouri. No incumbrance, title perfect.

SHEEP.

COTSWOLD SHEEP—I have two registered, and 12 high-grade Cotswold rams, lambs, and yearlings for sale.

MISCELLANEOUS.

WANTED—To correspond with parties having home made wine on hand. J. B. Cosgrove, Topeka, Kans.

WANTED—Two cars of good alfalfa hay. Give price on cars at your station. L. K. Hascelton, Dorchester, Green County, Mo.

WANTED—If you wish to buy or sell corn, oats, hay, cane seed, kafir-corn, corn chop, or anything in the feed line, correspond with us.

FOR SALE—A fine litter of Scotch Collie Shepherd pups from good workers. Satisfaction guaranteed.

HIGHEST PRICE paid for cane seed, alfalfa, millet, kafir-corn, and pop corn. Please send samples.

OYSTER SHELLS—Eighty cents per 100. Poultry and stock feeds, and feed. Topeka Seed House, 806 Kansas Avenue, Topeka, Kans.

WANTED—Alfalfa hay. Send price and amount for sale. E. B. Davis, Columbus, Kans.

CHOICE ALFALFA SEED, price \$4.50 f. o. b. J. E. Good, Canada, Kansas.

ALFALFA SEED—None better than I have. Buy direct from a grower. Quantities to suit. Write for samples and prices.

WANTED—Alfalfa, millet, cane seed, kafir-corn, milo maize, and pop corn. If any to offer please correspond with us.

WOOL WANTED—We have just completed our New Woolen Mill in North Topeka and want at once 200,000 pounds of wool for which we will pay the market price.

BALMOLINE—Nature's Wonderful Healing Salve. Man or Beast. Druggists, 25 and 50 cents. Trial size 4 cents from B. H. De Huy, Ph. D., Abilene, Kans.

ALFALFA SEED—Crop of 1901, pure and fresh. Write for prices. McBeth & Kinnison, Garden City, Kas.

FOR SALE—Feed mills and scales. We have 2 No. 1 Blue Valley mills, one 600-pound platform scale, one family scale, and 15 Clover Leaf horse scales.

PATENTS.

UNITED STATES PATENTS AND FOREIGN P. M. COMSTOCK & CO. OFFICE 529 KANSAS AVE., TOPEKA, KANSAS.

J. A. ROSEN, attorney and counselor in patent, trademark, and copyright causes. Patents procured and trademarks registered.

AGENTS.

WE WILL GIVE the exclusive agency of our specialty to one canvassing agent in every town; up-to-date article and big profits.

Agents Either sex earning \$4 to \$10 a day selling our 25-cent household necessity. Show what it will do and it sells itself. Domestic Supply Co. Sample Free.

EMPLOYMENT.

EMPLOYMENT—People desiring employment of any kind are invited to correspond with the undersigned; employment guaranteed; state kind of work desired.

SWINE.

TEN FANCY BOAR PIGS—By M. B. P. out of prize-winning dams, for sale at one-half price, to make room for fall pigs.

PEDIGREED POLAND-CHINAS—\$5 each; registered Shorthorns cheap. M. C. Hemenway, Hope, Kans.

The Stray List.

For Week Ending November 14.

Stafford County—J. B. Kay, Clerk. HEIFER—Taken up by Louis Telpman, in Hayes tp., (P. O. Hudson), October 15, 1901, one red and white spotted heifer; 2 years old; valued at \$14.

For Week Ending November 21.

Marion County—Ira S. Sterling, Clerk. STEER—Taken up by Wm. Meyer, in Lost Springs tp., one red Hereford steer, 3 years old, left ear off, white face; valued at \$40.

For Week Ending November 28.

Ford County—S. P. Reynolds, Clerk. HORSE—Taken up by Lillard Sanders, of Dodge tp., November 21, 1901, one dark bay horse, 7 years old, small star in forehead, white spot on nose, left hind foot white; valued at \$25.

Pure-bred Galloways

Young Breeding Stock for Sale Several Bulls Ready for Immediate Service. Large herd. Can supply demand now. Also pure-bred Cotswold Sheep. Write for prices.

W. G. McCANDLESS & SON, Cottonwood Falls, Kans.

Aberdeen-Angus

THE RUTGER FARM HERD—OFFERS—Thirty registered bulls, 8 to 30 months old, low down, blocky fellows of choicest breeding and individuality.

CHAS. E. SUTTON, RUSSELL, KANS.

Ladies Our monthly regulator never fails. Box FREE. DR. F. MAY, Bloomington, Ill.

BED-WETTING CURED. Sample free. DR. F. E. MAY, Bloomington, Ill.

THE BILL BROOK HERD OF REGISTERED SHORTHORNS

HAVE ON HAND FOR READY SALE FIFTY YOUNG BULLS, from 6 to 20 months old; also a few good heifers.

H. O. TUDOR, Holton, Kansas.

50 SHORTHORN BULLS FOR SALE.

...IDLEWILD HERD OF... Shorthorn Cattle.

Owned by W. P. HARNED, Vermont, Mo. 200 HEAD. NO BETTER BREEDING FEW BETTER CATTLE

Complex advertisement for Shorthorn Cattle, featuring a circular image of a cow and text describing the quality of the herd and breeding.

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.

CATTLE.

WANTED—Your best cash price and full description (with registered numbers) on 5-year-old Hereford bulls. Give exact location of farm, county, railroad, and your distance and direction from town.

FOR SALE—One dark red, registered Shorthorn bull; a sure breeder. Brookover Bros., Eureka, Kans.

FOR SALE—Hereford cattle—wholesale and retail, 175 in herd; and Cotswold sheep—5 rams and 25 ewes.

FOR SALE—Red Shorthorn bulls, all ages, grades, and registered. Can furnish what you want.

REGISTERED SHORTHORN BULL CALVES—Seven months old for sale; also some registered Poland-China boars and gilts.

FOR SALE—3 pure Crutskhank-Shorthorn bulls. H. W. McAfee, Topeka, Kans.

FOR SALE—Five registered Shorthorn bull calves, 10 cows and heifers; on account settling estate.

SHORTHORN CATTLE SALE—I will offer at public sale, 1 1/2 miles south of Marysville, at 2 o'clock p. m., on Tuesday, October 15, 17 registered Shorthorns, 19 high grade Shorthorns, and 3 thoroughbred Jerseys.

HORSES AND MULES.

160-ACRE IMPROVED FARM—Sixty acres in growing wheat; for sale on easy terms. Address F. D. Nichols & Son, Norfolk, Kans.

FOR SALE—The Percheron stallion, Brilliant Junor 24588; 7 years old, weight 1,850 pounds, color black.

FOR SALE—One Percheron stallion, 2 years old; also one Mammoth Black Jack, 4 years old, 15 1/2 hands high, good sire.

FOR SALE—Saddle and harness stallion, has five saddle gait, trots in harness, chestnut, very stylish, 4 years old, weight 1,100 pounds, 16 hands high, will geld if desired, a beauty.

FOR SALE—At a bargain—young draft stallions. A. I. Hakes, Eskridge, Kans.

PROSPECT FARM—CLYDEDALE STALLIONS, SHORTHORN CATTLE AND POLAND CHINA HOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kansas.

FARMS AND RANCHES.

FOR SALE—380 acres in Johnson County, Missouri, three miles from station, five miles from good town, all good land, all cultivated, tame grass, 40-acre timber, plenty of water, five large rooms in one-story house—nearly new, large barn, new wind mill.

FOR SALE—Thirty-five acres of land, three miles north of Soldier Creek on Central Avenue, \$1,600. In cultivation. No buildings. Address 1105 Harrison Street, Topeka, Kans.

FREE A book of statistics, information, and 200 E. Kansas farm descriptions. Write G. E. Winders Realty Co., Ottawa, Kans.

FOR SALE OR TRADE—For a good farm, a first class livery barn, all stocked in good shape; and a fine residence in Carbondale, Kans. on main line of Santa Fe R. R., doing a good business. Address W. Q. Hyatt, Carbondale, Kans.

FOR SALE OR TRADE—160-acre improved farm, in central Kansas. A bargain. For full particulars, address Jno. Fox Jr. New Cambria Kans.

FARM LOANS—Low rate, best terms, 5 to 10 years with privilege to pay in full or in partial payments before due. Loans can be closed at once. Call on or write The Kansas Mutual Life Insurance Co., 701 Jackson Street, Topeka, Kans.

FOR EXCHANGE—A good ranch containing 650 acres—slope and upland. Only one mile from Eskridge, Kansas. Land lies in a strip one-half mile wide, ridge, Kansas. Land lies in a strip one-half mile wide, ridge, Kansas.

DR. COE'S SANITARIUM
Established 15 Years



Located at Twenty-sixth and Wyandotte Streets.
A pleasant Remedial Home. Organized with a full staff of Physicians and Surgeons for the treatment of all Chronic and Surgical Diseases, and equipped to treat, room and board patients. A quiet home for women during confinement.
Trusses, Braces, and Appliances for Deformities manufactured.
Trained Attendants. Best Invalid's Home in the West. Diseases of Women a Specialty.
Write for circular on deformities—club feet, curvature of the spine—nasal, throat, lung, kidney, bladder, and nervous diseases, stricture, piles, fistula, tumors, cancers, paralysis, epilepsy, all eye, skin, and blood diseases.
All the Most Difficult Surgical Operations Performed With Skill and Success.
New restorative treatment for loss of Vital Power, Rupture, Varicocele, Hydrocele, Hare Lip, etc. Persons unable to visit us may be treated at home by mail. One personal interview preferred. Consultation at office or by letter free and confidential. Thirty years' experience in Sanitarium work. My book, to either sex, containing much valuable information, sent free. Address,
DR. C. M. COE, Propr.,
Office, 915 Walnut St., Kansas City, Mo.

PILES

Fistula, Fissures, all Rectal Troubles quickly and permanently cured without pain or interruption of business. Mr. Edward Somers, Castleton, Ill., suffered with bleeding, swelling, and protruding piles for many years, doctors had given his case up as incurable; he was completely cured by our treatment in three weeks.
Thousands of pile sufferers who have given up in despair of ever being cured, have written us letters full of gratitude after using our remedies a short time. You can have a trial sample mailed FREE by writing us full particulars of your case. Address
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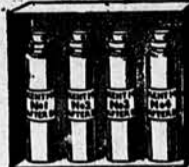
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PUBLIC SALE**
OF
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Cattle.**

TUESDAY, DECEMBER 10, AND....
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KANSAS CITY STOCK YARDS SALE PAVILION

We shall offer 90 head of American and Imported Hereford females, well advanced in calf, with calf at foot, and 25 head of American and Imported bulls.
The entire lot was selected under an arrangement between the late Kirk B. Armour and James A. Funkhouser to make it form their greatest public offering.
We shall leave nothing undone to that end and pledge ourselves to present a grand lot of cattle.
Write for Catalogue.

CHARLES W. ARMOUR, JAMES A. FUNKHOUSER,
For Estate of Plattsburg, Mo.
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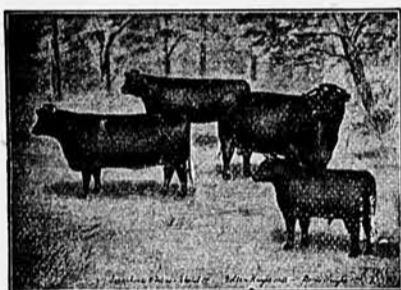
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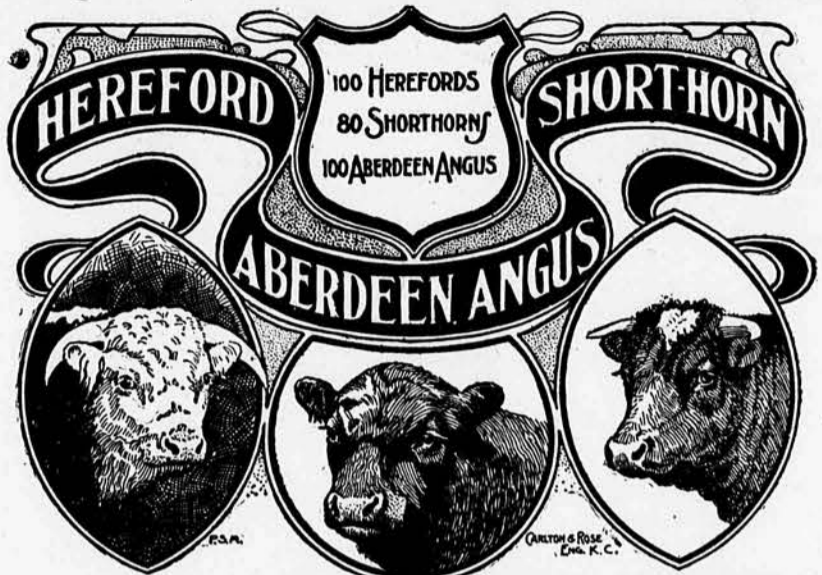
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Pigs by Anderson's Perfect, Harris' Black U. S. (the champion sweepstakes boar at the Iowa State Fair of 1900). Kemp's Perfection (the highest priced pig by Chief Perfection 2d sold last year) for sale from the very best of sows. Stock of all ages for sale.

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Sunny Slope Herefords

...200 HEAD FOR SALE...

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HEAD OF THE HERD.

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