

KANSAS FARMER

ESTABLISHED IN 1863.
VOL. XXXIV. NO. 45.

TOPEKA, KANSAS, THURSDAY, NOVEMBER 5, 1896.

SIXTEEN TO TWENTY
PAGES—\$1.00 A YEAR.

TABLE OF CONTENTS.

PAGE 706—AGRICULTURAL MATTERS.—Prosperity Must Begin With the Farmer.
PAGE 707—THE STOCK INTEREST.—Hog Cholera. Gov. Glick Sells Eleven Young Short-horn Bulls.
PAGE 708—IRRIGATION.—The Pump Problem.
PAGE 709—IRRIGATION (continued).—Wheat Under Irrigation... Gossip About Stock.
PAGE 710—THE HOME CIRCLE.—The Awakening (poem). To Help Ex-Convicts. Flowers for Food. Takes Place of Ice Cream. Winter Furbelows. Delicious Corn Pudding. Treatment of the Bodice. Silk Culture by Women.
PAGE 711—THE YOUNG FOLKS.—The Cardinal (poem). Youngest Life-Saver. A Remarkable Boy. Tropical Trees That Whistle. Paper Boomerangs. A Bright Iowa Boy.
PAGE 712—EDITORIAL.—Food and Clothing in the Future. It is After Election Now. Keeping Fall and Winter Apples.
PAGE 713—EDITORIAL.—Kaffir Corn and Alfalfa. Selection of Seed Corn. How to Stretch Wire Netting. Corn Fodder. Winter Quarters for Hogs.
PAGE 714—HORTICULTURE.—Plant-Breeding.
PAGE 715—IN THE DAIRY.—Ripening Cream Properly. Stay by the Cows. High Scoring Butter and Cheese. Dairy Notes. Dairy Education Pays.
PAGE 716—THE APIARY.—A Colony of Bees. November Notes. Publishers' Paragraphs.
PAGE 717—THE VETERINARIAN... Market Reports.
PAGE 718—THE POULTRY YARD.—The Poultry Standard. Lime for the Poultry Yard. House for Poultry. Sure Indications of Disease.

BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 per year or \$8 for six months; each additional line \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

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

CATTLE.

T. H. PUGH, Maple Grove, Jasper Co., Mo., breeder of HEREFORD CATTLE. Stock for sale.

VALLEY GROVE HERD OF SHORT-HORNS.—For sale, choice young bulls and heifers at reasonable prices. Call on or address Thos. P. Babst, Dover, Kas.

FAIRVIEW STOCK FARM.—Registered Short-horn cattle. 7th Earl of Valley Grove 111907 at head of herd. Young stock for sale. E. H. Littlefield, Newkirk, Oklahoma.

ENGLISH RED POLLED CATTLE AND COTSWOLD WILD SHEEP. Young stock for sale, pure-bloods and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Buccaneer 106658 at head of herd. Registered bulls, heifers and cows at bed-rock prices. Address D. P. Norton, Council Grove, Kas.

SWINE.

Holstein-Friesians. M. H. ALBERTY, Cherokee, Duroc-Jersey swine. Kansas.

TEN POLAND-CHINA BOARS—\$10 to \$20 apiece. J. H. Taylor, Pearl, Kas.

PRINCETON HERD OF POLAND-CHINA SWINE contains the most noted strains and popular pedigrees in the U. S. Choice animals for sale. Address H. Davison & Son, Princeton, Franklin Co., Kas.

K. N. FRIESEN, ALTA, KAS.—Proprietor of the Garden Valley Herd of Thoroughbred Poland-China swine. Selected from best strains. Stock for sale at all times. Write me. Mention FARMER.

V. B. HOWEY, Box 103, Topeka, Kas., breeder and shipper of the Thoroughbred Poland-China and English Berkshire swine and Silver-Laced Wyandotte chickens.

CENTRAL KANSAS HERD OF THOROUGHbred Poland-China hogs. C. S. Snodgrass, Galt, Rice county, Kansas, breeds the best. Stock for sale now. Come or write.

OHIO IMPROVED CHESTER SWINE—Pure-bred and registered. One hundred spring pigs at hard times prices. Also a few boars ready for service. H. S. DAY, Dwight, Morris Co., Kas.

POLAND-CHINAS FOR SALE.—Twenty-five top spring pigs, gilts and boars. A few rams of each of the following breeds: Cotswold, Shropshire and American Merinos. Also Scotch Collie pups. Address H. H. Hague & Son, Walton, Kas.

D. TROTT, ABILENE, KAS., headquarters for POLAND-CHINAS and the famous Duroc-Jerseys. Mated to produce the best in all particulars. Choice breeders cheap. Write.

SWINE.

W. M. PLUMMER & CO., Osage City, Kas., breeders of Poland-Chinas of the best families. Also fine poultry. Pigs for the season's trade sired by five different boars.

FOR SALE—Duroc-Jersey pigs; also Poland-China. Bronze turkeys, Toulouse geese, Pekin ducks, Barred Plymouth Rock and Brown Leghorn chickens. Ready to ship out. J. M. Young, Colfax, Kas.

ASHLAND STOCK FARM—Will sell for the next thirty days, thoroughbred Poland-China boars and B. P. Rock cockerels at greatly reduced prices. No boom prices here. Give me a trial and I will surprise you with prices for quality of stock. Yours for business, M. C. Vansell, Muscotah, Atchison Co., Kas.

WILLIS E. GRESHAM'S QUALITY HERD POLAND-CHINAS, Hutchinson, Kas., the great winners at World's Fair of seven prizes. Only herd west of Ohio taking three prizes on four pigs under 6 months. The greatest boars living to-day head this herd—Darkness Quality 14301, Seldom 14251, King U. S. Some peerless, well-marked herd heads are now ready, from such noted dams as Darkness F. 7322 U. S. Darkness F. 3d 23508, Bessie Wilkes 36837 and U. S. Whiteface 38711 S. Come and see them at Kansas State Fair, or write your wants. Willis E. Gresham, Box 14, Hutchinson, Kas.

POULTRY.

Barred Plymouth Rocks.

All the leading strains. Thirty young cockerels and twenty-five pullets for sale. A 98-point bird at head of the harem. Eggs \$2 per setting of thirteen. S. McCullough, Ottawa, Franklin Co., Kas.

1896 Hatch Ready to Ship.

I will continue to sell birds at from 50 cents to \$1 each until my flock is disposed of. Partridge Cochins, S. S. Hamburgs, Brown and White Leghorns, Barred and White P. Rocks, Light Brahmas, and cockerels of Buff Leghorn and Buff P. Rocks. Single birds \$1 each. My fowls have unlimited range and are hardy, well-matured and strictly first-class thoroughbred birds. A. H. DUFF, Larned, Kas.



Round Top Farm
PRAIRIE STATE INCUBATORS.
Plymouth Rocks, Light Brahmas, Langshans, Indian Games, Buff Leghorns, Bantams. Eggs \$2 per fifteen; \$3.50 per thirty. Forty-page catalogue, 10 cents, treats on artificial hatching, diseases, etc.
Fred B. Glover, Parkville, Mo.

LICE KILLER. Don't pay 50 and 75 cents per gallon for lice killer. I will send you a recipe for 50 cents to make it at a cost of about 25 cents per gallon. For killing lice by painting roosts, boxes, etc., it has no superior. The best disinfectant and disease preventive out.
A. H. DUFF, Larned, Kas.

SWINE.

BERKSHIRES. H. B. COWLES, Topeka, Kas.

BOURBON COUNTY HERD BERKSHIRES. J. S. Magers, Proprietor, Arcadia, Kas. Correspondence invited. Satisfaction guaranteed.

E. LISTON, Virgil City, Cedar Co., Mo., wants to sell Berkshires at lower than gold basis prices. Try me for best quality and low prices. Mention KANSAS FARMER.

BERKSHIRES. We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders.

WM. B. SUTTON & SON, Russell, Kansas.

T. A. HUBBARD, Rome, Kansas, Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES. Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

BLUE MOUND HERD BERKSHIRE SWINE. Herd boars Barkis 30040, Victor Hugo 41799. One hundred head. Young sows, boars and gilts for sale. Allen Thomas, Blue Mound, Linn Co., Kas.

SELECT HERD OF BERKSHIRES. For ten years winners at leading fairs in competition with the best herds in the world. Visitors say: "Your hogs have such fine heads, good backs and hams, strong bone, and are so large and smooth." If you want a boar or pair of pigs, write. I ship from Topeka. G. W. Berry, Berryton, Shawnee Co., Kas.

SWINE.

Franklin County Herd Poland-Chinas.

Twenty boars ready for service, also twenty sows for ready sale at prices to suit the times. Inspection and correspondence invited.
E. T. Warner, Owner, Princeton, Kas.

J. T. LAWTON (successor to John Kemp), NORTH TOPEKA, KAS., breeder of Improved Chester White swine. Young stock for sale. Also Light Brahma fowls.

BELMONT STOCK FARM

Geo. Topping, Cedar Point, Kansas. Breeder of English Berkshire and Poland-China swine, S. C. Brown Leghorns, B. Plymouth Rocks, Mammoth Bronze turkeys and Imperial Pekin ducks. Write for prices. Farm six miles south of Cedar Point, Chase county, Kansas.

PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

Westphalia, Anderson Co., Kas. Breeder of high-class pedigreed Poland-China swine. Herd headed by Guy Wilkes 3d 12181 C. Guy Wilkes is now for sale, also fifty choice April pigs. Write.
E. A. BRICKER.

Standard Herd of Poland-Chinas.

L. NATION, Proprietor, Hutchinson, Kansas. The breeding herd consists of the best strains of blood, properly mated to secure individual excellence. Stock for sale. Visitors welcome. Correspondence invited.

Kansas City Herd Poland-Chinas

The future villa of Hadley Jr. 18314 O., the greatest boar of his age. I have pigs for sale now by Hadley out of Tecumseh Mortgage Lifter 32649 S. Order quick and orders will be booked as received. Farm nine miles south of Kansas City, on Ft. Scott & Memphis R. R. Postoffice Lenexa, Kas.
W. P. GOODE, Proprietor, Lenexa, Kas.

TOWER HILL HERD Registered Poland-Chinas.

175 head, 30 brood sows. Herd boars are Black Top 10550 S.; U. S. Butler 13388 S.; George Free Trade 21053 A., and a grandson of J. H. Sanders 27219 O. Young boars ready for service and bred gilts for sale.
B. R. Adamson, Fort Scott, Kas.

Farmington Herd Poland-Chinas

Twenty-five spring boars sired by Little Mc. 14992 S., he by Mc. Wilkes 9242 S.; Trinidad 30037 A., and Chief Kalliska by Chief Tecumseh 2d 9115 S. All stock guaranteed as represented.
D. A. Kramer, Washington, Kas.

J. R. KILLOUGH & SONS, POLAND-CHINA SWINE.

Richmond, Franklin Co., Kansas. Herd headed by Upright Wilkes 13246 S. and J. H. Sanders Jr. 13739 S. 25 brood sows, 100 spring pigs; 10 young boars, 6 Sanders and 4 Wilkes, ready for service. Orders for youngsters being booked. Write or come.

ROYAL HERD POLAND-CHINAS and B. P. ROCK CHICKENS.

Cunningham's Choice 13731 S., second premium State fair, 1895; his grand sire Victor M. First premium State fair, 1895, on Plymouth Rocks. Fifteen eggs for \$2. Ward A. Bailey, 1470 E. 15th St., Wichita, Kas.

Clover Leaf Herd Poland-Chinas.

We Have the Best. Nothing Else. J. H. Sanders Jr. 14953 S. 35089 O. heads our herd. Three of his get sold for \$865; entire get at sale averaged over \$200; get during his term of service exclusive of public sale brought over \$2,700. Thirty-eight pigs getting ready to go out. Among our 14 brood sows are Black Queen U. S. Corwin 29801 S., Silver Bar U. S. 30884 S., Black Queen Hadley 1st 36574 S., Annie Black Top 38831 S. and Ruby Rustler 4th 36355 S. Write, or better, visit the herd.
G. HORNADAY & CO., Fort Scott, Kas.

LAWN RIDGE HERD Poland-Chinas.

130 head, all ages. 100 spring pigs, sired by Young Competition 15082 S., Kansas Chip 15083 S. and a grandson of J. H. Sanders. Write or come.
J. E. Hoagland, Whiting, Jackson Co., Kas.

WYNDALE FARM HERD. Registered Berkshires and B. P. Rock Chickens.

Only the best stock for sale. Eggs in season. Correspondence solicited.
M. S. KOHL, Furley, Sedgwick Co., Kansas.

CATTLE.

IDLEWILD HERD SCOTCH SHORT-HORN CATTLE

A choice lot of young bulls and heifers for sale. Also pedigreed Poland-China swine.
Geo. A. Watkins, Whiting, Jackson Co., Kas.

SHANNON HILL STOCK FARM

G. W. GLICK, ATCHISON, KAS. Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Win-some Duke 11th 115131 and Grand Duke of North Oaks 11th 115735 at head of the herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

SWINE.

Thoroughbred Duroc-Jersey Hogs

Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. STONEBRAKER, Panaola, Ill.

Duroc-Jersey March Boars

Large size, heavy bone, good colors, highly bred, all registered, ready for service, shipped for inspection. You see them before you pay for them. Describe what you want and don't fail to get description and prices. J. D. STEVENSON, New Hampton, Harrison Co., Mo.

DIETRICH & SPAULDING,

Proprietors Highland Herd Poland-Chinas, Richmond, Kas. Herd headed by Breckenridge. Fifty spring pigs for sale at prices to suit the times. A few fall boars that are large and growthy, with good finish. Also a few fall sows that are bred to Claud Sanders and Darkness U. S. Spring gilts can be bred to the above named boars or Silver Chief by Ideal Black U. S., dam Sunshine by Chief Tecumseh 2d. Write or come.

NEW MULE AND HORSE MARKET.

23d and Grand Ave., Kansas City, Mo.

We announce our entire removal to Twenty-third and Grand, where we will be found in future, ready to buy or sell mules and horses.

SPARKS BROS.

We will remove our entire horse and mule business to Twenty-third and Grand Ave., about October 10. Highest cash price paid for horses and mules. All car lines transfer to Westport line, which passes our door.

COTTINGHAM BROS.

Other Stables of equal or greater capacity ready soon.

CORN CRIBS!

'KING CORN'

To hold 500 bushels. Larger sizes are unsafe. Made from hard-wood slats 3/4x2 inches, one and a half inches apart. Heavy annealed wire cables. Not made out of iron.

Specialty constructed crib, warranted to stand strain, provided with gate.

LOW PRICES.

ROCK ISLAND IMPLEMENT CO., KANSAS CITY, MO.

ROCK ISLAND IMPLEMENT CO., KANSAS CITY, MO.

Agricultural Matters.

PROSPERITY MUST BEGIN WITH THE FARMER.

[Through the courtesy of Mr. C. Wood Davis we lay before our readers the following caustic reply to a letter of a prominent Michigan man. We regret the political sabre-cuts in the letter, but since they are given with some degree of impartiality, and the letter is, at the request of Mr. Davis, withheld from publication until after election, it is hoped these thrusts will be taken good-naturedly. Statistics presented by Mr. Davis are always to be relied upon. The laborious investigation represented in this letter is an invaluable contribution from a most efficient and conscientious statistician.—EDITOR.]

PROTONE, KAS., October 15, 1896.
Mr. George H. Hale, Detroit, Mich.:

MY OLD FRIEND:—I agree with you that there can be no general prosperity unless the farmer is first prosperous; but I do not expect the farmer to secure prosperity by or as the result of legislation, nor do I believe his recent lack of it is in any considerable degree the result either of legislation or the lack of it. In fact, I doubt if legislation, or the lack of it, has had much to do with existing conditions, or their effects upon any considerable element in the community. These objectionable conditions result directly from the operation of natural forces which man has not yet learned to direct—probably never will—and of which he can modify the effects only in slight degree, if at all.

As you well know, I was one of the earliest Republicans of Michigan, and have never voted for but Republicans for national offices. I have been even a more pronounced protectionist than Republican. Still, I have no conceivable use for those now seeking high position at the hands of Republicans, and although neither a "silverite," nor yet a "goldite," am likely, if I vote at all, which is very doubtful, to vote in such a way as to show my estimate of the influences, the class and the sectionalism that now dominate the party with which I have always acted.

I care naught about the currency, as investigations, pursued these many years, convince me that the kind and quantity of money in use has little effect in price-making; nor do I believe that the adoption of any particular monetary standard will either restore the lacking prosperity or increase the business depression, as such depression results from natural causes—causes wholly beyond such puerile remedies as changes in the tariff or in the mere machinery of exchange, which is all money seems to me to be—simply counters, and as much so as notches on a stick, and exerting neither more nor less power over prices.

Our troubles are inherent in the very nature of things, and partake, I think, very largely of our so much lauded "progress." As I look at it, some of the minor causes may be found in the water which destroys confidence in the value of all corporate issues (they are not securities, but the opposite) and increase the rates paid for transportation; the trusts, which, while maintaining prices for certain products far above the cost of production plus a reasonable profit, have destroyed so many local industries that gave life to small manufacturing towns, and in the gambling spirit that is fostered and fed by the stock and produce exchanges. These are evils that result directly from vicious legislation or the lack of remedial; still, they are, it seems to me, but minor or auxiliary causes. For the cause of most of our industrial woes I am convinced we must look neither to the currency nor to tariff changes, but to that great disturbing factor, that destructive factor, which our statesmen (?) denominate "progress." Having progressed faster than other peoples, we suffer earlier and more. We have progressed and suffer more because we have invented and employ more labor-saving (employment-destroying) devices; and this "progress" is so nearly complete that we are yearly turning a vast army of men into the streets by these labor-savers. Once idle, these social units can't buy of the products of other units who retain employment; hence demand for fabrics does not, and cannot, keep pace with either the power to produce

or with the increase of population, as it obviously must if we are to remain as prosperous as formerly.

When we direct our attention to the farm—not after the manner of statesmen (?) that we may construct a partisan argument, but to see just what are the facts—it is found that an almost uninterrupted succession of favorable seasons over world-wide areas has obtained since and including 1882. So exceptionally favorable has been this period; so great the production of the great soil staples that of fourteen world crops of wheat no less than ten have been far above the average in acre yield, and only four below the average. Those below the average were only slightly so as compared with the excess of those above the average—and by an average is meant the average acre yield of the twenty-five world harvests from 1871 to 1895 inclusive, which has been 12.7 bushels of wheat an acre. For instance, the deficit of the four smaller crops aggregated 258,000,000 bushels, being an average of 65,000,000 bushels. On the other hand, the ten over-average crops show an excess of 1,259,000,000 bushels, or an average of 126,000,000 bushels. When we come to look after the rye crops of the fourteen years ending with 1895 we find only three of them giving outturns below the average of 11.9 bushels an acre (world average from twenty-five harvests) and eleven giving over-average outturns.

Coming to the last four world crops of wheat, we find the aggregate product 663,000,000 bushels greater than it would have been had yields since 1891 been no greater than the world average of the last twenty-five harvests. Thus the world's supply of wheat, available for bread, was increased by an average of 166,000,000 bushels per annum from 1892 to 1895, inclusive, and the rye supply in even greater relative measure. And all this because of exceptional climatic conditions and not because of additions to the bread-grain-bearing area, as there have been no additions since 1884.

Confining the view to the last three crops (1893, 1894 and 1895), it is found that the three wheat crops of the world gave an aggregate of 565,000,000 bushels in excess of three average harvests, or a yearly average excess of 188,000,000 bushels, while the rye crops of these three years exceeded average acre yields so much as to give harvests that, for the three years, averaged 175,000,000 bushels above average crops. That is, the combined over-average product of wheat and rye from the harvests of 1893, 1894 and 1895 has aggregated 1,090,000,000 bushels. Is it any wonder that prices have been low for the products of the soil? And yet, but for this addition of 363,300,000 bushels yearly to the supply of the bread-making grains the world would now be starving, and prices something fabulous. The same favorable climatic conditions have added immensely, in this fourteen-year period, to the production of oats, barley and such minor bread-making grains as spelt, maslin and buckwheat; and especially during the last four years, as they have to the outturn of potatoes, which, over continental Europe, have, since 1891, been a fifth greater per acre than ever known previously. During all these years, and because of this atmospheric agency, the world has had a great plethora of both food and fiber. Neither the tariff, nor yet the currency, has had aught to do with such plethora, or with resulting prices; and neither McKinley, Wilson, nor Gorman, nor Bryan, Teller, nor all combined, have caused the least of the farmer's woes, and neither one nor the other, nor all, can alleviate his ills.

With the changes of this year in world-wide climatological conditions affecting vegetation, the farmer's condition has changed and is changing for the better daily. Cotton has gone up 50 per cent. because of the certainty of a short crop, and not because silver or gold or protection or free trade are at issue with a lot of political hucksters who pretend to be patriots. The world's wheat harvest is, because of less favorable meteorological conditions, nearly 300,000,000 bushels less than that of 1895; quite 400,000,000 be-

low that of 1894, and fully 300,000,000 bushels below the yearly average from 1893 to 1895, inclusive, and is quite 350,000,000 bushels below world requirements. It don't follow, however, that this year's supplies will be 350,000,000 bushels less than requirements, as there may be from 100,000,000 to 200,000,000 bushels of available old wheat, thus reducing the world's actual deficit to 250,000,000 or, possibly, 200,000,000 bushels; but such deficit will be quite sufficient to wipe out the last of the reserves, and leave the world hereafter to depend on each year's harvest. As the consuming element has so increased that the largest crop ever grown would now be insufficient, it is clear that reserves cannot hereafter accumulate. This insures high prices in the future.

There are people, especially in Europe, who begin to see these things, if even in a nebulous manner, despite all theories about prices, and despite the statement made by the mendacious Republican campaign committee that wheat can be grown in India at a cost of 13 cents a bushel when the land tax alone averages more than 25 cents, and the silverites' equally mendacious statement that as rises in the price of an ounce of silver, so rises and falls the price of a bushel of wheat. The price of wheat has advanced as much as 33 per cent. in as many days and is likely to continue to rise, whether Bryan or McKinley wins. So far as food products are concerned, scarcity or abundance of wheat and rye determines prices, and let such scarcity as now exists continue and prices for all food products will rise correspondingly, as land now in other crops must be diverted to the growth of the bread-making grains. Thus, after a very few years prices for all staple products of the farm must rise greatly.

This is not mere guess-work, founded upon baseless theory, but proceeds from the ascertained fact that given populations require given quantities of each of the food staples, and that when acre yields for the world as a whole shall be not above an average the supply will be defective in the measure of the net product—product exclusive of the quantity required to reseed the area employed—from 50,000,000 acres of wheat and rye, and proportionate acreages under all the staple food crops but oats and maize. Crops are never above an average in acre yield except for limited periods, the last fourteen years affording the longest era of over-average production of which we have any record, although at the end of the last century and the beginning of this there was a period extending over twenty years when at least three-fourths the crops were much below the average, and prices rose to such an extent that wheat sold for an average of \$2.60 a bushel in England for such twenty-year period.

The existing deficit in the world's bread-bearing lands would have developed and prices risen greatly years since but for the exceptionally favorable climatic conditions which have prevailed over world-wide areas in ten out of the last fourteen years. This state of affairs, this enormous, this startling shortage in the world's power to produce bread arises from the fact that when the United States ceased, in 1884, to add to the world's wheat fields, such fields ceased to expand in any degree proportionate to the increase of the world's bread-eating populations. There has been some increase in eastern Europe and South America, but it has been largely offset by reductions in the United States and in western Europe. The result is that in the last twelve years less than 4,000,000 acres have been the net addition to the world's wheat-bearing lands, and such increase has been small in the extreme as compared with the increase of the bread-eating peoples.

Wheat acres have increased about 1 1/2 per cent. since 1884, and the consumers of wheat 18 per cent., or twelve times as fast as the power to produce wheat bread. But this is not all. In the meantime the world's rye fields have shrunk nearly 4,000,000 acres, and the areas under spelt, maslin and buckwheat—grains grown as exclusively for bread as are wheat and rye—have shrunk about 5,000,000 acres since

The Only One To Stand the Test.

Rev. William Copp, whose father was a physician for over fifty years, in New Jersey, and who himself spent many years preparing for the practice of medicine, but subsequently entered the ministry of the M. E. Church, writes: "I am glad



to testify that I have had analyzed all the sarsaparilla preparations known in the trade, but

AYER'S

is the only one of them that I could recommend as a blood-purifier. I have given away hundreds of bottles of it, as I consider it the safest as well as the best to be had."—WM. COPP, Pastor M. E. Church, Jackson, Minn.

AYER'S

THE ONLY WORLD'S FAIR
Sarsaparilla

When in doubt, ask for Ayer's Pills

1884, so that, as a matter of fact, the world's power to produce bread is about 2 per cent. less than in 1884, and, relatively to population, is quite 20 per cent. less than twelve years ago. And yet the world's statesmen are quarreling about such comparative trifles as tariffs, the kind of metal that shall be used as counters, and the possibility of reciprocity in farm and fabricated products, while great masses of the bread-eating populations stand upon the brink of a precipice from which they are likely soon to fall into a state where six must subsist on the food that has heretofore sufficed for no more than five. That is, the bread-eating populations have increased by 20 per cent. since an acre was added to the bread-bearing acres of the world. Of acres of barley the world has 20 per cent. less, relatively to population, than twenty-five years ago, and there are quite 10 per cent. less acres, relatively, under potatoes, despite Pingree's patches.

Of all the staple primary food products, maize alone has, in its acre increase, kept pace with population. Twenty-five years ago Europe, the Americas and Australasia had 63,000,000 acres under maize. In 1895 the same regions planted 115,000,000 acres of that grain, or an increase of 82 per cent., as against an increase of 36 per cent. in the bread-eating populations of European lineage. Since 1884, however, there has been but little increase of the maize fields; an increase much less rapid than has been the increase of consumers of maize in primary and secondary form. But since 1884 the maize fields have been supplemented by an invasion of the markets for maize by cottonseed and its derived products—spurious lard, butter and filled cheese—that have displaced the product of at least 8,000,000 acres of corn. With maize fields increasing more than twice as fast as the consumers of maize, and a cottonseed addition equal to 12 per cent. of the maize area of 1884, is it any wonder that Indian corn, and its secondary products—beef and pork—are cheap? How could it be otherwise, whether the standard be white or yellow, or whether McKinley or Wilson fathered the tariff, or whether reciprocity had or had not been dreamed of? Price is but a measure of the ratio existing between the thing to be consumed and those who desire, coupled with the ability, to consume it.

It is clear that the world must have much broader wheat fields if all who so desire can eat wheat, and the rye fields must also expand in like proportion, or the demand for wheat increase proportionately as the unit supply of rye, among the bread-eating populations,

shall diminish; and, therefore, to simply keep up with the unending and progressively increasing procession of new population units, more than 4,000,000 acres must be added yearly to the world's wheat and rye fields; and to make good the existing deficit there must in excess of such annual increase of acres be other 50,000,000 added acres employed in growing these grains or else a chronic state of scarcity be the world's condition.

Where are so many acres of average productive power to be found? A small part of them may be, ultimately, brought into production in South America, but the remainder, if found at all, or rather made bread-bearing within a reasonable period, must come by diverting to wheat and rye areas now employed in growing maize and oats to feed animals. Obviously, the bicycle and electric motor have not come an hour too soon if they are to reduce, in any measure, the pressure upon the world's grain fields.

When we shall have taken from five to fifteen million acres from our maize and oat fields—as we probably shall—to supply the bread which Europe will be ready to pay high prices for, then prices for all soil products will rise correspondingly and greatly.

Investigations, to which I have devoted many years, show these to be the conditions relative to the world's requirements and power to produce the primary food staples; and I am able to say that in all recorded time the world has produced but one crop of the bread-making grains that equaled present world requirements for such grains; and that an average acre yield from all the lands now employed in growing wheat and rye would, in its aggregate, be deficient in the measure of 500,000,000 bushels, or the net product from 50,000,000 average acres, or more than one-sixth the bread requirements of the populations of European lineage.

Requirements of the bread-eating races increase annually in the measure of the equivalent of the net product from more than 4,000,000 acres; and yet, during the last twelve years not an acre has been added to the combined area under wheat and rye. The requirements not only increase in this measure, but the increase is a constantly progressive one. That is, additions to the populations of European lineage twenty-five years ago were 4,300,000 units yearly; now they are 6,400,000; next year will be 6,500,000 and the year after 6,600,000. And whereas an addition of somewhat less than 3,000,000 acres in 1871 sufficed to furnish the year's added population with bread, it now requires nearly 4,400,000 acres to meet this year's added requirements.

Where is the world—and for how long a period—to yearly find new acres sufficient to feed annual additions to the bread-eating populations that are greater than the aggregate population of New England and New Jersey? Remember that such acres must be of average productive power. These new people must have meat as well as bread, and must have milk and butter and cream and cheese and potatoes, as well as hay and cabbage, and some of them will ask for tobacco and whisky.

The facts herein have been brought out by years of patient labor amid official foreign agricultural and trade reports. Yet they are facts of which those who assume to direct the affairs of nations have not the remotest conception, and statesmen (?) like the "Canton Major" go on, in blissful ignorance, propounding untenable theories and offering their quack remedies; and those who have been thoroughly inoculated with partisan virus hang upon his words as they would upon those of a divine healer.

Up to the very day of his nomination this Presidential candidate of your party and mine was referring us to his speeches and votes in Congress for his views on the money question. These show him to have been an unqualified and full-fledged advocate of the free coinage of silver up to the hour when Tom Platt, Chauncey Depew, Henry Cabot Lodge, Draper, et al., told him the nomination was only to be had by stepping quickly upon their golden

platform. Since then all who will not subscribe to that platform are, in the words of our Presidential candidate, but dishonest repudiators. Although always a Republican, and never a silverite, I have no conceivable use for a man who is converted in the last hour of the last day on which such conversion would secure the coveted mess of pottage.

Always a protectionist, I have never been able to discover where or how either the McKinley or Morrill tariff benefited a single American farmer except the wool-growers, and possibly a few Eastern ones who sold eggs and hay, and the maple sugar of Vermont, and the seed-leaf tobacco of Connecticut and Massachusetts. These measures were never intended to help the farmer, but were constructed carefully with the sole object of aiding the manufacturer, and they doubtless effected this, while giving incidental aid to a few wage-workers. On the other hand, and more especially the McKinley act, have been the fecund mothers of trusts and combines that have robbed the farmer and all but the beneficiaries. The nail trust is a shining example of the operations of the vaunted tariffs.

Western farmers have many just causes of grievance against Eastern statesmen (?) and especially against the majority of those who constructed the St. Louis platform, and a particular grievance against this "Canton Major," who was knowingly, wilfully and most actively instrumental in defeating the farmers' efforts to secure incidental protection, yet costless to others, through honest markets for their products. William McKinley, Tom Reed, and Joe Cannon, of Illinois, virtually constituted the Committee on Rules of the House of Representatives in the Fifty-first Congress, and when the Chairman of the Committee on Agriculture applied to this Rules committee, governing procedure in the House, to assign him three days in which the House should consider three important bills affecting the agricultural interests, they assigned him one and dictated which of the three bills should be considered. The House then had no special or urgent business before it, being in a waiting mood while the Senate was considering the McKinley tariff, and Blaine proposing his reciprocity humbug. By this means this man McKinley, who now has such over-abundant solicitude for the farmer, slaughtered the Butterworth "anti-option" bill; denied the Western farmer an honest market; bound him hand and foot and delivered him over to the tender mercies of the gamblers upon the produce exchange. When I went to Washington, as I did during several sessions, to push this "anti-option" measure in Congress, I found those who are now the leaders of the golden hosts, with rare and honorable exceptions, opposed to this righteous measure. Tom Reed and four Eastern men who then, or have since, occupied seats in the Senate, told me—Reed with brutal frankness, because he was angered at my persistence, and the others in a more or less guarded manner—that they could not support the measure because it was likely to somewhat advance the price of food and fibre, and that this was clearly not in the interest of their people.

Bourke Cochran, in his Madison Garden speech, voiced this Eastern idea when he said that the farmers were, even then, getting too much for their products, and he hoped to see prices for such products fall still more. I found this feeling very prevalent among Eastern public men, especially in the cotton manufacturing States, and most of them opposed to an "anti-option" bill, as they believed such a measure would tend to advance prices for both food and cotton. If sectionalism is to be found anywhere it is in my native New England; and narrowness, too. Those people have, for at least a generation, made pack-animals of Western farmers by getting them to vote high protection for their manufacturers, while denying them the poor relief of an honest market. I told these men, Tom Reed, Henry Cabot Lodge, Orville H. Platt, Frank Hiscock, and others of that stripe, that unless the

claims of Western farmers were given more consideration than they seemed disposed to, that the time was not far distant when Western Republicans, on the farm, would revolt. I believe that time has come, as the Western farmer is loudly remonstrating against the acts of those who were supposed to represent his interests at St. Louis, where these confirmed place-hunters delivered the Republican organization bodily to a little coterie of Eastern bankers and manufacturers to juggle with as the street fakir does with his ball and thimble.

I certainly shall not vote for the tool of this coterie set up at St. Louis by the place-hunters at the dictation of the Eastern jugglers, and it is possible I may vote for Bryan. Not because I endorse his views upon either the currency or the tariff, but as a sort of remonstrance against this treason of Western politicians and the dictation of the Eastern crew who assume to possess all the brains, intelligence and honesty in the nation. Moreover, I have much admiration for one as able and consistent as Bryan, even if I believe him mistaken in part. At all events he is the first man running for the Presidency in this generation who has had the wit to see and the courage to say that the farmer is as much a business man as the banker or manufacturer, and entitled to as much consideration at the hands of the lawmakers of the nation. I agree with neither Bryan nor McKinley—either in the views the latter now pretends to hold or those he formerly advocated—on the money question, but Bryan is wholly consistent and sticks to his belief, while the other surrenders his at dictation.

Is "free coinage" any more of a menace to prosperity now than when McKinley voted for the Bland bill? Is it any more dishonest than when he made speeches and wrote letters advocating it? If he was mistaken then, how do we know he is not quite as much so now? Has he ever openly confessed his error? Is he not one of those convinced—by a nomination—against his will? If President, would he veto a free coinage bill if passed by Congress? Would he not rather sign it, if by so doing he could secure a second nomination?

Were it possible to secure a protective measure devoid of the gross inequalities of the McKinley bill I should hesitate long and seriously before voting for a free trader for any national position; but revenue being a necessity protection is inevitable, and I believe the Wilson-Gorman act preferable, from the real protectionist's standpoint, to that of McKinley. But then, protection is "not in it." The Senate will say: "No free coinage, no protection;" and the Senators are in a position to see their decree enforced. Moreover, there seems to be but slight probability of the complexion of the Senate being changed in the next four years.

(To be continued.)

Gov. Glick Sells Eleven Young Short-horn Bulls.

The demand for the best-bred Short-horns is manifest in the recent sale from Gov. Glick's Shannon Hill herd, of eleven young bulls, varying from 7 to 18 months old, to the Metador Land & Cattle Co., of Texas and Dakota. These bulls averaged nearly 100 pounds each per month of their ages and their breeding and individual merits were such as to commend them to Murdo MacKenzie, manager of the Metador Company, as the best to be had in the country. The prices ranged from \$80 to \$120 per head. The Metador Company keeps constantly about 5,000 bulls in its herds and is desirous of securing all that Gov. Glick can produce. These eleven youngsters, with eleven others purchased for the Company by Gov. Glick, went to Texas in a palace car on the Santa Fe, October 28. They will prove well worth the money and will doubtless be followed by others from the same source. It pays to breed the best.

Nearly all women have good hair, though many are gray and few are bald. Hall's Hair Renewer restores the natural color and thickens the growth of the hair.

Cures

Prove the merit of Hood's Sarsaparilla—positive, perfect, permanent Cures.
Cures of Scrofula in severest forms, Salt Rheum, with intense itching and burning, scald head, boils, pimples, etc.
Cures of Dyspepsia, Rheumatism, Catarrh, by toning and making rich, red blood.
Cures of Nervousness and That Tired Feeling, by feeding nerves, muscles and tissues on pure blood. For book of cures by

Hood's Sarsaparilla

Send address to C. I. Hood & Co., Lowell, Mass.

Hood's Pills are the best after-dinner pills, aid digestion. 25c.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

NOVEMBER 10—J. M. Kirkpatrick, swine, Ottawa, Kas.
NOVEMBER 12—J. H. Taylor, Poland-Chinas, Pearl, Kas.
NOVEMBER 13—Chas. A. Cannon, Poland-Chinas, Harrisonville, Cass Co., Mo.
NOVEMBER 19—B. R. Adamson, Fort Scott, Kas., J. M. Turley, Stotesbury, Mo., and G. Hornaday & Co., Fort Scott, Kas., combination sale of Poland-Chinas.

HOG CHOLERA.

There is at present no disease which causes a greater annual loss among domestic animals than hog cholera, and so far no efficient means have been employed to prevent its spread. This may be partially accounted for by the fact that there is so little known concerning the nature of the disease.

To cause this disease it is necessary for the swine to come in contact with the germ, in view of which every swine-raiser should keep his hogs in the best possible health, that they may be more capable of resisting the germ when taken into their systems.

Hog cholera is caused by a germ which multiplies very rapidly. The grounds used by hogs affected with this disease become infected with these germs and a very small portion of this ground may be carried from one herd to another on men's boots, by birds, and in various other ways, thus spreading the disease to a whole community.

Another very common way of transmitting the disease is by shipping stock hogs in cars that have been used to ship cholera hogs to market. They also come in contact with these germs in stock pens. Very few hogs are shipped from one State to another without contracting the disease. Two years ago when the drought prevailed in Nebraska and hogs were shipped in large numbers from that State into this and also Illinois, I had an excellent opportunity of observing some of these cases in both States, and in nearly every case of shipment the disease was contracted, and since that time it seems to have spread in both States. These hogs were sold out in small lots and thus distributed throughout the country, and, in my opinion, is partially the cause of the prevalence of the disease since then.

Hog cholera and swine plague are the only diseases that kill hogs in large numbers in the United States, with the exception of anthrax. This disease, however, does not confine itself to hogs, but affects all warm-blooded animals. But there is no danger of confounding this disease with the two above mentioned. Hog cholera attacks young hogs more severely than well matured ones, and the old ones more often recover than the young ones; and when they do, they are not subject to another attack.

Symptoms.—As we have only limited space and nearly every farmer knows hog cholera when he sees it, it is not necessary to enter into a minute description of the symptoms.

The first we notice is a cough, which will show more readily when the hog is driven from its bed. They have an inclination to go off by themselves and are very sluggish; refuse food and

drink large quantities of water. The skin turns a line of purplish hue under the abdomen where it is thin. They will hide in the litter and be hard to start up, and when they are, will be down again as soon as possible. After a time they show signs of weakness, which varies according to the severity of the disease. In the early stages of the disease we find them constipated, but later a diarrhea sets in which is very offensive and lasts to the end.

The symptoms of cholera and swine plague are very similar and it is impossible to tell one from the other without holding a *post-mortem*. You will find the lungs affected in swine plague, and the bowels in cholera. It is often necessary to resort to a microscopical examination to distinguish between them.

But it is not a difficult matter for the farmer or breeder to diagnose the case so as to determine that it is one of these diseases, and as preventive treatment would be the same in either case, there would be no material difference to him which it was. A *post-mortem* in a case of hog cholera which has lingered several days, will show the intestines to have a darker color than usual, are easily torn, and in many instances the large intestines will show prominent ulcers.

Preventive treatment.—This disease is far more easily prevented than cured. The losses can be greatly reduced by proper hygienic measures, careful sanitary regulations and judicious feeding, always endeavoring to have the hog in the best possible condition and with such vitality as will resist the disease.

There is but little time for and but little value in treatment after the disease is once established in your herd. Frequently the first indication you have of the disease is the dead hogs found in your pen.

The disease, as I have already stated, is caused by a germ that is full of vigor and vitality and succumbs only to the most heroic treatment. Where there is a case in mild form, where the hog is in such condition that he is almost immune to the disease or in a measure able to resist its ravages, then we may render some aid. May, by toning up the system, assist nature in entirely overcoming the trouble and recovering from the damage done.

It is probable, however, that you may direct your attention with more profit to the protection of the animals not yet infected. Remove all hogs that appear healthy from the diseased ones and place them in pens that have not been infected and at least one hundred feet away from the sick hogs. Should any of these supposed healthy animals become sick, make another change, again removing the well animals to a fresh lot, and continue this treatment until you have not had a case among what you suppose to be your healthy hogs for at least twenty-one days, after which time, should no more germs be introduced, you may consider your herd safe.

Do not allow them, however, to return to or run on the originally infected ground. Spare no effort to keep them at all times in perfect health and strong growing conditions. Look carefully after the environments and see that they are not permitted to run to old and decaying straw stacks, to sleep on manure piles, to be fed in lots that have long been a bed of filth and are loaded with the germs of the disease.

Give them a variety of food, a run to a good clover or blue grass pasture, and an abundance of pure water. It is a mistaken idea that a filthy pond of stagnant water is good enough for a hog. No domestic animal is more in need of clean and pure water.

When your stock hogs are placed on feed let it be done gradually, especially where green corn is used. A few ears each day at first, and a slight increase until he is on full feed, gives better results for the food consumed, and avoids a condition pregnant with disease.

Salt your hogs regularly. Do not allow them to run over too much territory when the disease is prevalent in your vicinity, as you would thereby increase the opportunity to come in contact with the disease germs. All dead hogs should be burned or buried, and by no means should they be hauled over the public highway or through

lots that are or may be occupied by healthy hogs.

Select strong and vigorous animals for breeding purposes and avoid intense in-breeding, as it has a tendency to weaken the constitution and render the animal more susceptible to disease.

A thorough investigation of these diseases, that we may ascertain what contributes to their development and how the spread of the contagion may be checked, should be made at the earliest possible date.

Laws should be enacted for the enforcement of quarantine and sanitary regulations and the State Board of Agriculture charged with a rigid enforcement. Until some vigorous action is taken, until we know what to do and how to do it and have the means for prompt and efficient work, we can scarcely expect to hold this disease in check.—*Dr. Jesse Roberts, Deputy State Veterinarian, Kirksville, Mo., in Rural World.*

Irrigation.

THE PUMP PROBLEM.

By Prof. O. P. Hood, read before Kansas State Irrigation Association, at Great Bend, 1896.

In any device using power the necessary and the unnecessary losses should be matters of careful study. If the losses due to friction are properly located in any machine, one is able to more surely select a good machine or improve an old one. Besides locating friction losses, it is frequently of importance to know the actual amounts of these in the aggregate, and also at each step in the operation. There are some devices where even large losses are of secondary importance. The losses of heat in the modern threshing engine are so large that if a marine engine were to be so wasteful the whole carrying capacity of the steamer would hardly hold sufficient coal to carry her across the big pond. In a threshing engine the refinements necessary for a very economical device would be impracticable on account of lack of simplicity.

In the running of a small steam pump for boiler feed purposes, economy of steam is entirely secondary to reliability, while in pumps for large water systems we find the greatest refinements for the economical use of steam. In the "pump problem," as presented by windmill irrigation, the question can be asked, "are the power losses in the average pump of sufficient importance to be carefully considered?" This will depend, first, on what the aggregate losses are, and, second, on the amount of power at our command. If but 10 or 15 per cent. of the power is usually lost, it may fairly be assumed that a large part of this is unavoidable and the room for improvement would be very small. But if the losses are usually from 40 to 60 per cent., it may be possible to greatly increase the output by increasing the efficiency of a pump but a few per cent. If a pump is being run with a friction loss of 60 per cent., its efficiency will be but 40 per cent. If replaced by a pump of 60 per cent. efficiency, the output of the pump will have increased 50 per cent. If the power at command is large and cheap, or the requirements small, it may not be of great importance if 50 per cent. of the power is not returned in water lifted. In using a windmill and pump for watering stock it is seldom that the mill is asked to pump all it can, and a large friction loss is not important. This has been so true that one large company who were experimenting to produce a new windmill came to the conclusion that a very efficient and powerful mill was entirely secondary in importance to its cheapness of construction and commercial exploitation. With mills for irrigation this is certainly not true, and a powerful mill is now a prime requisite. One has to study the windmill problem but a short time to find that at best the mill gives an average small power, a power such that fractions of a horsepower are of importance. The windmill has, however, that chief element of success, "keeping everlastingly at it." But its power is certainly not such that

the irrigator can waste any large portion of it, if such waste is avoidable. At certain most critical seasons of the year a large mill must give its power from winds of low velocity. In four successive years 83 per cent. of the possible power of a mill in July was from winds below fifteen miles per hour, and in August for the same period over 45 per cent. was from these low velocity winds. In these critical months, when the total power of a mill is less than half of its average for the year, it is very desirable that the power be used in the most efficient manner.

When one hunts for definite information expressed in figures as to just how much and what the losses are in the class of reciprocating pumps used for irrigation or similar work, one finds little having a bearing on the question. After considerable hunting, the opinion of one engineer was found to be that the efficiency of these pumps seldom rose above 58 per cent. That is, but 58 per cent. of the power given to a pump was returned in water lifted. The 42 per cent. of waste was distributed in friction of the water in the pipes, resistance encountered in passing restricted valve openings, eddy currents set up, resistance of entry of water into each new volume of different capacity from that left, excessive movements of valves, piston friction, etc. It was not known what facts led to this figure of 58 per cent. Small steam pumps have been very carefully tested by eminent engineers and give an efficiency of about 50 per cent. for the water end of the pump. This practice is not entirely unlike our irrigation pumps. In the small steam pump we have a reciprocating plunger rather than a piston, and opportunity for ample valve area, which would indicate an efficiency beyond what could be expected from a piston and piston-carried valve. These figures of 50 per cent. loss include the resistance of the steam piston, and with the unlike arrangement of valves makes the data not directly applicable to our problem. One other table gives the efficiency of reciprocating pumps at from 30 per cent. for a ten-foot lift to 90 per cent. for 160-foot lift, but with no indication of the particular style of pump.

Some valuable measurements have been made showing how much water certain combinations of windmills and pumps could deliver. Valuable for another purpose, they do not help in our pump problem. The great variations in these figures show that the secret of windmill practice is in a very careful loading of the mill. No other motive power do I know which is so sensitive to an ill-proportioned load.

In some cases the substitution of a new form of pump has increased the output of the mill a number of times its former rate. This cannot be all credited to the efficiency of the pump, but may be largely due to the fact that the new load is better proportioned to the ability of the mill. Such measurements, then, of water pumped by A.'s mill with B.'s pump, at such and such a depth, will not prove B.'s pump an efficient one or otherwise. If compared with C.'s mill and D.'s pump, at some other depth, no definite conclusions as to the relative value of any of the elements is warranted, for it may be largely due to fortunate loading rather than inherent merit in either factor. I believe I am safe in saying that just what the fortunate loading for any mill is, is not known except in a very general way. If it is known by a few it is not public property, and it should be. The favorable load depends upon the design and weight of the mill, on its regulating method and largely on the distribution of the wind velocity in the various months, also on its proposed use. If loaded to take advantage of the winds of March, April and May, it will give but very little in July and August, but its total pumping effect will be greater than if loaded the year round at a suitable load for July and August. It seems desirable to make such tests of the elements of this problem, separately, as shall enable one to combine them with some degree of certainty as to the result. We should be able to so select the type and power of mill and so favorably load it with a pump of known resistance that we can



There is no good reason why the demon of disease should carry so many women down into the depths of misery and weakness. The peculiar ailments which women suffer are completely overcome by Dr. Pierce's Favorite Prescription. It is the one remedy which reaches the internal source of these troubles and cures them thoroughly and permanently. It is the only medicine of the kind invented by a regularly graduated physician of long and wide experience—a specialist—who has devoted a life time to the understanding and cure of these special diseases. The "Favorite Prescription" is designed for this one purpose, and no other medicine has ever accomplished it so perfectly. No mere nurse's prescription or advice will be relied upon by a sensible woman afflicted with these delicate complaints.

Every woman would understand her physical organization better and be better able to keep in health and condition by reading Dr. Pierce's thousand-page illustrated book, "The Common Sense Medical Adviser." Several chapters are devoted to woman's special physiology with valuable suggestions for home-treatment without the aid of a physician. A paper-bound copy will be sent free on receipt of 21 one-cent stamps to pay the cost of mailing only. Address, World's Dispensary Medical Association, Buffalo, N. Y. If a handsome, cloth-bound, beautifully stamped copy is preferred, send 10 stamps extra (31 in all), to cover the additional expense.

Constipation if neglected will lead the most robust to the doctor's office. The blood gets loaded down with impurities which it deposits in every organ and tissue in the body. Serious illness is the inevitable result. Dr. Pierce's Pleasant Pellets cure constipation. They are prompt and pleasant in their action. They never gripe. They cure permanently and completely, and are not mere temporary palliatives like so many so-called remedies. Druggists sell them. If you accept something "just as good," you will regret it.

claim we are doing not only very well but the very best the circumstances warrant. Having proved a mill in the field to fulfill the important requirements of stability, good workmanship and reliable regulation, if it is known to be capable of giving a definite power at each wind velocity, and we also know what resistance that type of pump will give which is most suitable for the situation, we may so combine these elements as to get the maximum amount of water pumped at any season of the year.

These facts should be so expressed in figures that it will be available to all. The figures should not represent the result of any combination of elements, because they could not be made useful in any other combination. For this purpose the State Board of Irrigation have proposed to investigate each of these elements separately. The pump problem has first been selected as being within present means. At the Kansas State Agricultural college has been arranged a pump-testing plant. A ten horse-power engine has been set apart to furnish power. From a shaft driven by the engine, a machine is belted which runs a crank, driving a vertically reciprocating cross-head. This crank is adjustable, giving any stroke, from zero to twenty-four inches. The cross-head is arranged to take a pump rod in the usual manner. The machine driving the cross-head is so devised that all power furnished by the belt is transmitted through a piston pressing on oil carried in a cylinder. The pressure on this oil is greater or less, according as the pull on the belt is greater or less. This oil pressure is transmitted to a device similar to the well-known steam engine indicator, where a pencil is moved across a paper. A card is given a motion similar to the belt and the pencil traces automatically a diagram which represents the power transmitted by the belt. In this way the power given to the pump mechanism can be accurately measured. In the pump rod another device of new design is placed which gives the stresses in pounds in the pump rod at each part of the stroke. This also shows the power taken by the pump, and the diagrams make possible comparisons of the effect of different valve arrangements as to the shock given to the pump rod, etc. The two diagrams

from the two different devices check each other in amount and assure us of a reasonable degree of accuracy. The pump is arranged as any pump would be in an open well with any possible lift up to forty feet and unlimited water. By pumping against a constant air pressure it is possible to test pumps up to 100 feet lift in a manner closely simulating the conditions found in deeper wells. It is proposed to test for mechanical efficiency such pumps as are obtained up to a lift of 100 feet and at all practicable speeds. The water lifted is carefully measured and the total useful work of pounds of water lifted through the measured height, divided by the power furnished to the pump rod, is taken as the mechanical efficiency of the device.

It is hoped this work will furnish reliable data for all of the styles of reciprocating pumps now offered to you for purchase, and will help us to more correct and certain proportioning of our windmill plants.

Wheat Under Irrigation.

By Hon. C. B. Hoffman, read before Kansas Irrigation Association, at Great Bend, 1896.

GENTLEMEN:—Complying with your request to say or write something on raising wheat by irrigation, I beg leave to submit a few brief remarks.

The past crop season was, in the immediate vicinity of Enterprise, an excessively dry one, especially from the time that wheat went into the ground in the fall of 1895, all during the fall, winter and spring, until the latter part of May, when rains set in. Hence the benefits of irrigation were clearly brought out in the results as stated below.

On September 15, I prepared land, previously in potatoes, and which had been thoroughly irrigated all during the summer, raising a large potato crop, for wheat, by plowing and harrowing. However, I did not sow the wheat until October 17, on account of the presence of a great many grasshoppers. The soil then was very mellow and the subsoil quite wet. The top was somewhat dry. The wheat came up promptly and early, and the light surface rains which we had kept it green until the latter part of December. I sowed some imported wheat that had arrived late, on December 20, and still another batch about the middle of February. In the spring my wheat began to grow rapidly and vigorously, and when, during the latter part of April and first of May, a severe drought, with accompanying high winds and dust storms, destroyed a large portion of the crop in this county, my wheat had thoroughly covered the ground and was sufficiently vigorous to withstand damage.

The final results were thirty-nine bushels per acre on a piece of Indian Valley wheat sown in October; thirty-five bushels per acre on a piece of Russian (Crimean Winter) wheat, sown in October; about ten bushels per acre on that sown in December, and practically nothing on that sown in February. It is worthy of remark that the failure of the wheat sown in February was directly due to its wonderfully rank growth and the fact that during the hot weather and winds the blossom of the wheat was destroyed. A piece sown in October at the same time that mine was, on an adjoining section on the same kind of soil, but without irrigation, yielded but five bushels per acre of an inferior quality of wheat, as against thirty-five and thirty-nine bushels on my fields. Please note that there was no direct irrigation in my wheat, but that it was all done prior to the sowing of the wheat; by getting the subsoil thoroughly moistened through irrigation of the potato crop.

The conclusion is that land flooded before sowing in the fall will get enough moisture to make a good wheat crop; and as this kind of irrigation can be done at comparatively small cost, I am inclined to think that where location is favorable and water can be obtained readily, it would pay to irrigate for wheat.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

Gossip About Stock.

The Missouri Swine Breeders' Association has decided to hold a combination breeders' sale during their annual meeting in December.

A combination sale of Poland-China swine was held at Sedalia, Mo., on October 31, by S. W. Coleman and D. J. Williams, Sedalia, and Thos. Wiley & Son, Smithton. Sixty-seven animals were catalogued but only forty-eight pigs were sold, making an average of \$11.

H. C. Sydnor, Corder, Mo., held a very successful sale of Poland-China swine last week, and while there were no sensational prices on certain offerings, yet the price for each pig sold was unusually good, and the general result of the sale was that twelve Berkshire pigs averaged \$15 and sixty-nine Poland-Chinas averaged \$30.20.

A combination sale of Berkshire swine will be held on December 9, 1896, at Sedalia, Mo. The offering will consist of fifty "toppy" Berkshires, of both sexes, from the herds of the following well-known Missouri breeders: N. H. Gentry, Sedalia; June King, Marshall; Harrison McMahan, La Mine; W. N. Briskey, Independence, and Jas. Houk, Hartwell. Further particulars will be given in these columns later.

The sensational Poland-China sale held last week was that of F. M. Lall, Marshall, Mo., who sold at public auction eighty Poland-China hogs at a general average of \$53.57. A litter of five pigs sired by Chief Tecumseh 2d brought \$2,025, and were dispersed as follows: Boar pig No. 1, \$550, J. A. Hull, Norton, Mo.; boar No. 2, \$495, H. C. Sydnor, Corder, Mo.; boar No. 3, \$500, Chaffee Bros., Burr, Neb.; sow pig No. 4, \$280, H. O. Minnis, Sharpsburg, Ill.; sow pig No. 5, \$200, to E. E. Axline, Oak Grove, Mo.

Samuel McCullough, Ottawa, Kas., breeder of Berkshire swine and fancy poultry, is one of the most successful breeders in Kansas, and the KANSAS FARMER has been his main salesman for ten years or more, and his card seldom misses an issue of the paper. To a FARMER representative, last week, he said: "The FARMER has always paid me well every year and secured for me a large number of permanent customers." Mr. McCullough has sold out pretty well excepting a few yearling boars. He also expects a large trade with poultry during the winter.

The FARMER has received the catalogue of the second annual sale of Tauy Creek herd of Poland-Chinas, owned by J. N. Kirkpatrick, Ottawa, Kas. The auction will be held at the farm, on Tuesday, November 10, 1896, and will consist of forty head, quite strong in Corwin blood, intermingled with Gold Drop, Free Trade, Perfection, Tecumseh, Wanamaker and Wilkes strains. The offering is quite attractive and includes his two-year-old herd boar, J. N.'s Victor 14095, also several choice brood sows and a large number of richly-bred pigs from spring litters. Breeders and swine raisers generally expected to be present.

Franklin county, Kansas, enjoys the distinction of being the leading county of the State for pure-bred swine, having more representative breeders than any other county. A new advertiser in the FARMER is E. T. Warner, proprietor of the Franklin County herd of Poland-Chinas, located at Princeton. This is a very strong herd of grandly-bred animals which are in perfect health. For ready sale, Mr. Warner has twenty young boars ready for service, also twenty young sows. They are sired by such noted boars as Riley Medium 12086, who was first in class in a ring of seven head at the big Ottawa fair this year. Some of the best pigs are by Telegram 14283, he by Wanamaker, and Tecumseh Short Stop 14740, out of Lady Alliton 2d by Short Stop. The boar pigs are large and smooth, heavy boned and well on their feet. They can be purchased at prices in accordance with existing conditions.

The public sale of Poland-Chinas of the Franklin county breeders were not so successful as they expected, and they realized their mistake of having the sales during the height of political excitement on the eve of an election; however, they were not seriously hurt from a money point of view yet their pride was somewhat shattered by the knowledge that they could have about doubled the prices realized at private sale. The one comforting thing from a breeder's standpoint is that several new men are now identified with improved stock and will be good buyers hereafter. H. Davison & Son, Princeton, Kas., had sixty Poland-China swine catalogued for sale, but when thirty-six pigs had been sold the sale stopped. Eight boars brought \$118, average \$14.75, and twenty-eight sows \$314, an average of \$11.29, a general average of \$12. The following is a list of the bargain buyers: M. J. Bropley, Wellsville; E. F. Walker, Garnett; C. P. Conger, Nick Johnson, W. J. Ford, Dietrich & Spaulding, Fred Garst, Dr. G. Henderson, Jas. Langan, Wm. Lewis, and P. McAulliff, of Princeton; J.

A. Logan, Williamsburgh; C. O. Hoag, Blue Mound; N. C. Morgan, Richmond; J. T. King, Chas. Watkins, J. N. Kirkpatrick, Jno. M. Goodrich, Ottawa; H. A. Officer, Hillsdale; Henry Smith, Manhattan. On Friday, October 30, J. R. Killough & Sons, of Richmond, offered sixty grandly-bred Poland-Chinas in splendid condition for sale and forty pigs only brought \$517.50, an average of only about \$13, and it was a grand piece of missionary work to let such splendid animals go at such prices. However, those left will bring, at private sale, enough to compensate the loss at public sale. The exceedingly lucky buyers at this sale were as follows: H. M. Kirkpatrick & Son, Connor; Thos. D. Hubbard, Kimball; J. A. Nelson, Michigan Valley; L. W. Truett, Agricola; J. L. Henderson, J. K. Chambers, Jno. Hester, W. E. Speers, W. D. Latimer, and Dietrich & Spaulding, of Richmond; Jno. Swanson, E. B. Elwell, A. C. Heckerthorn, J. S. Stratton and E. Hall, of Ottawa; J. Tyner, Michigan Valley; Jno. Bowman, Henry Walters, Jno. Halsted, of Scipio; Jno. Lytle, Jno. M. Morris, E. F. Gregory and B. F. Walker, Garnett; Jno. Case, Lane, and W. W. Alexander, Greeley.

The Coming Sale at Fort Scott.

If the breeder of high-class Poland-China swine in Kansas is desirous of keeping up the standard and reputation of swine husbandry in the State, he will at once make up his mind to attend the coming combination sale that will be held at Fort Scott, on Thursday, November 19, and contribute as far as he is able to the further advancement of the industry, not only in his own herd but in all others scattered throughout the State. The writer calls to mind a score or more of breeders that can profit by attending if he only gets some idea of animals that are bred right, are grown out right and are right. It is a generally admitted fact that few breeders attain size and constitution, not the result of an unwillingness, but from the want of knowing how and that it can be successfully accomplished.

Allen Thomas' Berkshires.

The KANSAS FARMER takes pleasure in calling the attention of its readers interested in pedigreed Berkshire swine, to the herd of Mr. Allen Thomas, whose farm lies near Blue Mound, in southwestern Linn county, Kansas. The visitor at the farm finds a herd of about one hundred head, all ages, belonging to the more modern families of the up-eared black breed. The chief herd boars are Barkis 30040, by Snowflake 26653, and Victor Hugo 41799. The former has proven himself a very satisfactory sire, and in order to keep within the bounds of the rules of the modern swine breeder, his chief lieutenant, Victor Hugo by the noted imported Warwick Hope and out of Minnie Oxford, was introduced to the farm and has done excellent service. Among the harem queens are Lady Spang 30946, that has a litter of late spring pigs by Barkis. Queen Victoria 32325 presents the visitor with a litter of eight September pigs by Barkis. The harem queen, Mary Lease 33727, though not so noted as her namesake, shows a September 9 litter of ten by Victor Hugo. Dora Lease 33726 comes out in her matronly everyday dress with seven sons and daughters, of July farrow by Victor Hugo. An unrecorded gilt shows up ten extra fine youngsters by Victor Hugo. Two others have litters of ten and five by the son of Warwick Hope, that are sure sellers. Barkis was bred by H. B. Cowles, of Topeka, Kas., and Victor Hugo by A. Magers, of La Cygne, Kas., both well known to the Berkshire breeders of the West. The youngsters are a thrifty and typically smooth lot and of the kind that please the modern Berkshire breeder. At the late Linn county fair, held at Mound City, twenty-six head were exhibited that belonged to the Blue Mound herd and they won about all the premiums offered by the association on Berkshires. The swine exhibit was the equal of any county exhibit made in the State this year, not even excepting Miami, Franklin or Brown counties. Mrs. Thomas, the "gude wife," and her son make a specialty of Mammoth Bronze turkeys and first-class Barred Plymouth Rock chickens. More will be given concerning the fowls later on, when the chicken breeding public will have begun to recruit and stock up.

Kalamazoo, Mich., is famous for celery—also as the home of Thos. Slater, whose advertisement appears on page 15.

No Room for Doubt.

When the facts are before you, you must be convinced. The facts are that the UNION PACIFIC is leading all competitors, is the acknowledged dining car route, and great through car line of the West.

The line via Denver and Kansas City to Chicago in connection with the Chicago & Alton railroad, with its excellent equipment of Free Reclining Chair Cars, Pullman Palace Sleepers and Pullman Diners, demands the attention of every traveler to the East. Ask your nearest agent for tickets via this route. E. L. LOMAX, Gen. Pass. and Ticket Agent.

To St. Paul and Minneapolis via Burlington Route.

Two splendid through trains each day from Missouri river points to the north via the old established Burlington Route and Sioux City line. Day train has handsome observation vestibuled sleepers, free chair cars, and dining cars (north of Council Bluffs). Night train has handsome sleepers to Omaha, Council Bluffs and Sioux City, and parlor cars Sioux City north. Consult ticket agent.

L. W. WAKELEY, Gen. Pass. Agt., St. Louis, Mo.

Meals on the "Order" Plan

are now served in the dining cars run by the Great Rock Island Route between Kansas City and Chicago. This change has been made to suit the convenience of the traveling public, and with the belief that such an arrangement will better please our patrons.

All meals will be served a la carte, and at reasonable prices.

While the system of serving meals has been changed, the traveler may still rely upon the excellence of cuisine and perfection of service that have earned for the Rock Island the reputation of maintaining the best dining car service in the world.

JOHN SEBASTIAN, G. P. & T. A., Chicago, Ill.

HATCH Chickens BY STEAM
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made.
GEO. H. STABLE,
Send 6c. for Circulars free.
114 to 122 S. 6th St., Quincy, Ill.

FARMERS

DO YOU WANT TO BETTER YOUR CONDITION? If you do, call on or address: The Pacific Northwest Immigration Board, Portland, Oregon.

FARM AND FRUIT LANDS

Mild and Healthful Climate!

The Kansas City, Pittsburg & Gulf R. R.—Port Arthur Route—runs through the finest Agricultural and Fruit Lands in America. This Company owns thousands of acres of these fertile lands which it is selling cheaper than the same class of lands owned by other parties can be bought for, and on much better terms. MENA, Polk County, Arkansas, is enjoying a phenomenal growth, and the rich tributary country is being rapidly developed. No blizzards in winter or hot winds in summer. All correspondence promptly and courteously answered.

Call in person or address
F. A. HORNBECK, Land Com'r,
Seventh and Wyandotte St., Kansas City, Mo.

Every Farmer an Irrigator!

The Atchison, Topeka & Santa Fe Ry.
Is offering for sale on easy terms and at reasonable prices.

100,000 ACRES

Choice farming and grazing lands in the fertile Arkansas River Valley in South-Central and Southwest Kansas.

These are not cullings, but valuable original selections which have reverted to the company. No better lands can be found for general farming and grazing purposes or investment.

Every farmer in Western Kansas either is irrigating or is going to irrigate. Practically all of our lands are susceptible of irrigation by the use of individual irrigation plants, such as are coming into general use in Southwestern Kansas. The portions that cannot be advantageously irrigated are fine grazing lands.

A combination of crop-growing and stock-raising is the most profitable method of successful farming, for which these lands afford unsurpassed advantages.

For free pamphlets, address
JNO. E. FROST,
Land Commissioner the A., T. & S. F. Railway,
Topeka, Kas.

CHOICE SEED POTATOES

COBURN No. 1.—A new seedling of great vigor; pinkish; short but very bushy vines; white bloom; extra early; eyes shallow; very prolific; indeed; good table potato and a good keeper. Price \$1.25 per bushel, or three bushels for \$3.

EARLY KANSAS.—A large medium variety; russet straw color; medium vines; purple bloom; eyes rather deep, but a great yielder of very large potatoes, and an extra good table potato. Price \$1 per bushel, or three bushels for \$2.25.

CARMAN No. 1.—Same as the Early Kansas, except it has white bloom and does not grow so large tubers. Price \$1 per bushel, or three bushels for \$2.25.

KANSAS FARMER.—A new seedling of great vigor. A late variety, oval, flattened; eyes very shallow; straw color; very prolific; vines medium and spreading; completely covering the row; white bloom; very best of all keepers and a good eater. Surely worthy of its name and a grand potato. Price \$1.25 per bushel, or three bushels for \$3.

Three pecks of each of the above four kinds, \$2.50; packed in lined barrels and delivered at depot free. Write your name, postoffice, county and express office very plainly, and send money with order. I can furnish most all of the leading new kinds.

Address **CLARENCE J. NORTON,**
Morantown, Kansas.
When you write mention Kansas Farmer.

The Home Circle.

THE AWAKENING.

Ask me not of love; I do not know
How lilies blow,
Or first the tufted larch begins its green;
How secretly the apple-bloom grows white,
Or how the lilacs spin their purple sheen
Upon the russet boughs in one short night.

I know not how the locust, blossoming
In early spring,
Expands the withered roughness of its cell;
Till all the air is perfumed with its breath;
Or how the furry willow-catkins swell
To sudden freshness from a stem of death.

Day breaks, and lo! the daffodils unfold
Their hearts of gold;
The jasmine bursts its bud within the hour;
The barren meadow wooed by one warm sun,
Agnays itself in myriad leaf and flower—
I know not how these miracles are done.

Nor know I by what sweet and subtle art
Love warms the heart;
A clearer sapphire crowns the mellow noon;
A mystic glamour gilds the commonplace;
A brighter crescent gilds the golden moon,
And all things image one beloved face.

—Martin Franklin Ham.

TO HELP EX-CONVICTS.

Mrs. Ballington Booth's Novel Plan to Assist Released Prisoners.

Mrs. Ballington Booth has a new scheme to help ex-convicts.

The finger of scorn is no longer to be pointed at them. Men who have been in Sing Sing prison and who desire to live good and upright lives will in future have a chance to do so. They will have a chance to start life all over again.

Mrs. Ballington Booth proposes to welcome such convicts right at the gate of Sing Sing prison. She will offer them home, friends and employment.

The first thing necessary for carrying out this plan was a means of transportation for released convicts from Sing Sing to the Volunteers' place of refuge. She will have a steam launch in commission as soon as the purchase money has been secured. The boat will be called the Omer Sage, in honor of Warden Sage, and will be manned by ex-convicts. A pretty Volunteer lassie will be in command. The captain that has been selected is an expert sailor, and with her at the wheel, the little vessel filled with earnest Volunteers and happy ex-prisoners, will soon be seen darning over the neighboring waters on its mission of mercy and succor.

Among the Volunteers the men who are earnestly trying to live down their past will be given every opportunity not only to help themselves, but also to help others of their class. Mrs. Booth believes that men who have been prison



MRS. BALLINGTON BOOTH.

mates must have more or less feeling for each other, and that the influence of men who have for some time been free in their treatment of a recently discharged convict can only be for good.

Another reason for using a launch to receive the men, instead of allowing them to leave Sing Sing by train is that they may avoid all possible chance of recognition. Then, again, the sail down the Hudson river is a trip likely to be impressive by the grandeur of the scenery. In the estimation of Mrs. Booth, if ever a man can be in a position to appreciate such scenes, and so open the way for serious thought of the past and future, it is just after leaving the tomblike cells of Sing Sing and sailing, a free man once more, down the grandest river in America.

On leaving Sing Sing the vessel will set out for "Hope Hall," which is the name selected for the commodious home over which Mrs. Booth has supervision. Those who are not in good health, owing to confinement and prison fare, or from whatever cause, will be given employment at this sylvan retreat near the banks of the Hudson.

"In thinking of the hopelessness of the future of the great army of discharged criminals who walk out of prison gates every year, branded as enemies to society and law, I believe I have at last conceived a plan," said Mrs. Booth, "by which I hope to in a great measure remove the ban from this class of unfortunates. Many a man on his return to freedom means honestly to try and redeem his evil life, to be, in short, a man. But how to go about it? What can he do with the stain of prison bars upon him, to earn an honest living? Who will employ a man whom the law has caused to be confined because he is a menace to the lives and property of his fellow-men?"

Mrs. Booth has made an arrangement with Warden Sage by which her representatives shall be informed of the exact time of the departure of prisoners.

A truck farm is to be a feature of Hope Hall, and in out-of-door work men who have so long been shut in by stone walls and iron bars will undergo physical and mental rehabilitation. In this way those who are experienced in the handling of vessels and those who show aptitude for farming and gardening will be given permanent employment on the launch and about the grounds of the hall, should they desire it.

"We confidently hope," said Mrs. Booth to a New York Journal reporter, "that the feeling of self-reliance which congenial toil will inspire in these outcasts will serve to arouse their self-respect and restrain them from ever falling back into their old vicious ways. Instead of being subjected to humiliating suspicion on their return to freedom, these men will find with us a comfortable home, in which they will be surrounded by elevating influences."

FLOWERS FOR FOOD.

Dandelions and Nasturtiums Make Very Dainty Salads.

There is nothing new in the use of flowers as edibles, they are eaten variously in various parts of the world, and in many cases form a really important article of food. In India, for instance, the bassia tree blossoms are held in high esteem, in spite of their sweet and sickly taste, while the flower buds of capparispinosa, a plant which grows on walls, etc., in the south of Europe, are pickled in vinegar in Italy and form what are commonly known as capers. The ordinary cloves of commerce, familiar to all housewives, are the unexpanded buds of a small evergreen, cultivated in several parts of the East and West Indies.

In our own United States many a humble cook has discovered the value of the green dandelion as a vegetable. The first shoots only are fit for food. Later they become bitter and stringy. Cut off the roots, pick them very carefully and wash well in several waters, then put them in a saucepan of boiling water, add a tablespoonful of salt and boil an hour. When done, drain and chop fine, then fry them with a tablespoonful of butter, salt and pepper to taste, stir until thoroughly heated and serve with an egg or butter sauce.

Another method of treating dandelions is to wash the leaves through several waters, then chop them into small pieces. Beat an egg, add a half cup of cream to it, stir over a fire until it thickens, then add a piece of butter the size of a walnut, two tablespoonfuls of vinegar, salt and pepper to taste. Drop in the dandelion and stir over the fire till they are wilted and tender.

Salads of dandelions and nasturtium blossoms are made and served exactly as one would serve lettuce. Choose the best and tenderest shoots, wash and dry them thoroughly, carefully cover them with a French dressing and serve immediately.—N. Y. Journal.

Takes Place of Ice Cream.

A choice cold dessert that may be served at dinner or tea in place of ice cream is made by using layers of fruits and nuts in a lemon or orange jelly made from gelatin. Make the jelly and have ready sliced figs dipped in sherry, sliced stoned dates, and chopped almonds or English walnut meats. When the jelly has begun to thicken, pour a layer in a mold that is wet, and use a layer of the jelly, and so on until the mold is filled. Serve very cold with whipped cream. Candied fruits may be used if one prefers them to the dates and figs.

Scott's Emulsion

Of Cod-liver Oil, with Hypophosphites, will fill out the sunken cheeks of pale children, and give color to the lips.

It furnishes material for the growth of bone, and food for the brain and nerves. It lays a strong foundation for growth and development.

50c. and \$1.00 at all druggists.

WINTER FURBELOWS.

The Frou-Frou collar as worn by Ellen Terry is very dainty in appearance and finishes up a costume beautifully.

The Trilby frill marks a new era in neckwear. It brings up the high collar, the stiff ruche and the tailor-made necklet.

An evening fichu, fashioned in Elizabethan style, in lavender and white, is one of the new additions to the ball-room toilet.

Beaded and sequin nets are finding favor for waist trimmings. They give a brightness to a costume which is well worth striving for.

The following antique and modern laces are in vogue: Tambour, Florentine, Japanese point, Point d'Alencon, guipures and Valenciennes.

Delicious Corn Pudding.

Slit the kernels lengthwise upon a dozen ears of corn, scrape out the milk and pulp into a bowl and add to it three eggs, beaten very light, a teacup of sweet milk, a generous pinch of salt, a teaspoonful of sugar and butter the size of an egg. Beat together until smooth and light, then pour into a baking dish and cook half an hour in a quick oven. Send to table in its own dish. This is as good cold as hot. An excellent supper dish.

The bedding for children's cribs should be soft and warm, and the covering as light as it can be, consistent with the requisite warmth during the cold seasons. After the first year a horsehair or a good flock mattress is better for children than feather beds, unless in cases of delicate, thin children, whose feeble circulation seems to stand in need of more indulgence in warmth than the more robust.

Treatment of the Bodice.

She is an unwise woman who hangs up her jacket by a loop at the back of the neck. It makes the coat sag where the strain comes, and it gives it a dragged and droopy appearance. If loops are used at all they should be at the armholes, and so put on as to stand upright, and are not stretched across an inch or so of space. This obviates the pulling at the cloth. But the best way to keep a coat fresh and in good shape is to keep it, when not in active service, on a wooden hanger.

Silk Culture by Women.

A joint stock company has been formed in Sydney to promote the cooperative settlement of women for silk culture. With raising of silk are combined flower-growing, scent-making and bee-farming.

A Money-Maker in Hard Times.

I have for the past five years had a pretty hard struggle to make a living, but about three months ago I began selling Self-heating Flat Irons, and have made from \$4 to \$5 every day, which I think is pretty good for an inexperienced woman. My brother is now selling irons and makes more money than I do, but he has sold other things and is more experienced. The iron is self-heating, so it is the proper heat all the time; and you can iron in half the time you commonly do and have the clothes much nicer. You can iron out under a tree or in any cool place, and 1 cent's worth of benzine will do an ordinary ironing, so you save the price of the iron in fuel in a few weeks. By addressing W. H. Baird & Co., 140 South Highland Ave., Station A, Pittsburg, Pa., you can get full particulars, and I know any one can do splendidly anywhere. We sell at nearly every house, and every woman that irons once with a self-heating iron will have one, as it saves so much labor and does so much better work.

Mrs. M. B.

A COMPOSITE PICTURE
of all who have been cured of
diseases of the **LIVER, KIDNEYS**
and **BLADDER** would show
thousands restored to
PERFECT HEALTH



BY USING
Dr. J. H. McLEAN'S
LIVER AND KIDNEY BALM
THE PEERLESS REMEDY, RELIEVES QUICKLY
AND WORKS A PERMANENT CURE
For Sale at Druggists Price, \$1.00 a Bottle.
THE DR. J. H. McLEAN MEDICINE CO. ST. LOUIS, MO.

The Young Folks.

THE CARDINAL.

From out the woods to where I lie
There comes a clear and loud good-by;
"Good-by—good-by—good-by!"
A clear and strong
Vibrating strain,
As if low song,
Had loud refrain,
And voicing filled the green retreat
With words to music wild and sweet,
Now low, now high—
"Good-by—good-by—good-by!"

A flash of flame betrays the bird
That gives this summer parting word,
"Good-by—good-by—good-by!"
I see it float
The trees between
A scarlet boat
On seas of green;
And know it as the springtime friend
Who sang to signal winter's end.
While leaves were dry:
"Good-by—good-by—good-by!"

Ah, yes! 'twas he in budding spring
Who came to speed the cold and sing:
"Good-by—good-by—good-by!"
And now to heat
He sings the same
And makes retreat
In coat of flame.
His spring and summer days are past,
And autumn leaves are turning fast,
And winter nigh—
"Good-by—good-by—good-by!"

Thus to the seasons as they go
He sets his music-stream aflow:
"Good-by—good-by—good-by!"
To snow and sun
His whole life long
He sings the one
Brief parting song.
I, therefore, wonder not to hear
His autumn voice so loud and clear,
From where I lie—
"Good-by—good-by—good-by!"
—Henry T. Stanton, in the Century.

YOUNGEST LIFE SAVER.

How a Boston Boy Saved a Young Companion from Drowning.

The youngest life-saver on record is 11-year-old Victor E. Gilbert, of Boston, Mass., who with his parents is spending the summer at Winthrop Beach. Regardless of possible consequences, while older boys than he stood aghast watching their playmate struggling in the water, he plunged in and brought his drowning companion safely to land. He himself tells the story in the following words:

"You see it was this way. We all went down to the beach for a swim, and were having a great time, when along came Robbie Turnbull, and he came in with us. Bobbie is a nice boy, but he can't swim much. There's no place to dive on the Winthrop beach, and we went back a little ways to an inlet where there is a high dock to dive from.

"The water there is about ten feet deep, and the inlet is maybe 100 feet wide at that point. It's a bad place for a beginner, but all right if a boy can swim. Bobbie took a header and went out a little way, and we watched him.



VICTOR E. GILBERT.

I thought he was doing all right, and so did the rest. We saw him splashing around a good deal, and he looked very funny with his head under water half the time.

"I don't remember who it was, but somebody said: 'He's drowning.' Nobody believed it, and I called out to him: 'Keep it up, Bobbie, you are doing right.' He didn't answer and then I saw him throw up his arms and go down. I thought that was a funny way to swim; and then he came up again. That time I was sure he was in trouble, he had such a funny look in his face. I can't tell just what it was like, but he looked as if he had seen something he was afraid of.

"I don't think I thought much about anything at the time, except I remember I felt sorry for his mother, and wondered how she would feel if Bobbie should drown. None of the boys seemed to understand what the matter was, so I went in and caught him by the hair. I can swim in all kinds of ways,

so I turned over on my back, holding Bob with one hand, and swam back to shore.

"It was a hard pull and I got pretty tired, but we got in all right, though he was so full of water that he didn't know anything. We turned him over and rolled him about, and pretty soon he was all right. I don't think there was anything particularly great about what I did. We didn't say anything about it, because we were afraid that if we did we couldn't go swimming any more. I'm teaching Bobbie how to swim now, and before long he will be as good a swimmer as any boy at Winthrop Beach."

A REMARKABLE BOY.

Has Had More Hard Luck Than Any Other Youngster Alive.

Victor Bedingfield, the 12-year-old son of the editor of the Flatbush Press and Kings county Gazette, seems destined to reap the rewards promised in the beatitude which says something about the long suffering, says the New York Tribune. He has probably suffered more pain and experienced more hard luck than any other Flatbush youngster alive at the present day. The father as well as the subject of this story was seen the other morning by a reporter.

"Victor is a bright boy, and reads a good deal," said the father. "He was not born on Friday and I am not sure that any of the accidents with which he has met happened on the 13th day of the month. When the lad was about six years old we lived in York street, Brooklyn. One day Victor, while playing with another boy, was asked to walk down a plank which had been placed on the stairs. Well, he was not to be dared, and started to perform the feat. He fell and was picked up unconscious. Our physician said he would have to undergo an operation as several of the blood vessels in his head had burst. We took him to the Brooklyn hospital, where the physicians said an operation would kill him. They, however, bandaged the head tightly and forced the blood into the system. The marks of the bandages are still on the child's forehead. His head at the time was swollen until it was twice the natural size.

"Several years ago my wife gave all the children creosote. Victor swallowed two spoonfuls of the poison and was once more rescued from the brink of the grave. My wife administered the fluid thinking it was cough mixture. The doctor said the dose was sufficient to kill two men. When he recovered from this illness I bought him a bicycle. This was smashed one day and Victor was carried to the Kings county hospital. A soda water wagon had run him down and had almost severed his right leg from his body. They were going to amputate the limb when I arrived at the hospital, but I would not permit it. Today as you can see, he is able to walk as well as anybody, notwithstanding the fact that he has undergone 13 operations. Ah! that is the only place, I think, in which that number figures in his life. The doctors wondered at the vitality of the boy and I think some of the operations performed on him have been unprecedented. When Victor came out of the hospital he was forced to use crutches. One day while walking in Flatbush avenue he fell and again split his head open. Once more he was laid up. The latest accident happened six weeks ago, when he upset a kettle of boiling water. He is now gradually recovering from this and the flesh on his foot, which was burned nearly to the bone, is rapidly healing."

Victor was born in the city of Christ Church, which is the south island of New Zealand. He has a pleasant face, and, as his father says, he is bright.

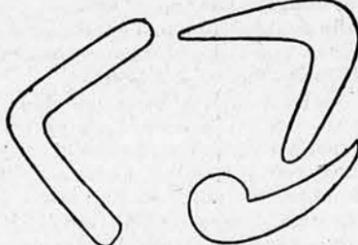
Tropical Trees That Whistle.

The musical or whistling tree is found in the West India islands, in Nubia and the Soudan. It has a peculiar-shaped leaf, and pods with a split or open edge. The wind passing through these sends out the sound which gives the tree its peculiar name. In Barbadoes there is a valley filled with these trees, and when the trade winds blow across the islands a constant moaning, deep-toned whistle is heard from it, which in the still hours of the night has a very weird and unpleasant effect.

PAPER BOOMERANGS.

How to Make a Toy That Affords Lots of Harmless Amusement.

If the children must amuse themselves, let them cut out of stiff cardboard—ordinary business cards will answer the purpose admirably—any one or all of these little boomerangs (see cut), and set them upon a book with one end projecting. Then a sharp, quick blow with a stick, or snap with the thumb and forefinger, will cause them to fly off in the most unexpected directions. These boomerangs may also be made of wood of a considerable size, and thrown in some vacant lot, where there is plenty of space for them to describe their erratic curves; the investi-



PAPER BOOMERANGS.

gating boy can find out how good an Australian hunter he would make. The natives in that country hunt their game with the boomerang. They throw it with great skill, and the unsuspecting game is taken unawares by the strange direction from which the blow comes. If they attempt to fly from the approaching missile, or to dodge it, they are more than likely to put themselves exactly in the way of it.—Chicago Times-Herald.

A BRIGHT IOWA BOY.

How He Tells the Time Without the Aid of a Watch.

One of our boys who doesn't own a watch writes about how he tells the time of day. He works in a wheat elevator in an Iowa town. A big window almost fills one side of his little office. Into a corner of the window creeps the early sunlight in the morning and it shines in all day long and creeps out of the other corner in the evening. On the floor where the edge of the shadow from the sash falls just at noon our boy has placed a long chalk mark and a little further away there is another mark for one o'clock, and so on up to six. The forenoon is similarly divided on the floor. Each day by simply looking at the edge of the sun's light he can tell what time it is. Once in two weeks he changes all these marks because the shadows change as the sun gets higher in the spring or lower in the fall.

This clever device—any of you may use it—suggests the way that the natives of Liberia, in Africa, who have no clocks, tell the time. They take the kernels from the nuts of the candle tree and wash and string them on the rib of a palm leaf. The first or top kernel is then lighted. All of the kernels are of the same size and substance, and each will burn a certain number of minutes and then set fire to the one next below. The natives tie pieces of black cloth at regular intervals along the string to mark the division of time. Among the natives of Singar, in the Malay archipelago, another peculiar device is used. Two bottles are placed neck and neck, and sand is put in one of them, which pours itself into the other every half hour, when the bottles are reversed.—Chicago Record.

Long Time Between Meals.

Some of our boys and girls think that one forenoon is a great deal of time to



YOU HAVE BACKACHE

Get Rid of It!

It is a sign that you have Kidney Disease; Kidney Disease, if not checked, leads to Bright's Disease,

and Bright's Disease Kills!

Because the Kidneys break down and pass away with the urine.

Heed the Danger Signal

and begin to cure your Kidneys to-day by taking

Warrant's Safe Cure

Large bottle or new style smaller one at your druggist's.

wait for dinner after breakfast is over. But there is a big anaconda in the Philadelphia Zoo which ate its breakfast almost two years ago—22 months, to be exact,—and has just got around to its dinner. During all that time it didn't seem to be a bit hungry, although when it was really ready for a meal, it ate the whole bill of fare, which consisted of a fat rabbit, all at one gulp. It is not very unusual for a snake to abstain from food for several months, at the end of which time death generally results; but the anaconda's case was distinctly different from any other. Its fast lasted over twice as long as any in the history of the Zoo, and during the whole of its continuance there was no evidence of ill-health.

We often hear people say there is only one good cough medicine, and that is Dr. Bull's Cough Syrup, the specific for cold.

All kinds of news-**WE BUY** paper clippings and acquaintances names. \$50 a thousand. Particulars for stamp. NEWS CLIPPING CO., Dept. H. N., 204 W. 100th St., N. Y.

THE BEST Place for young people to go for a superior Business, Shorthand or Penmanship course is to the **EMPORIA BUSINESS COLLEGE** of Kansas. No out-of-date, textbook course in Book-keeping, but Business Practice from start to finish. Nothing else like it. Graduates successful. Board \$1.00 per week. Write for particulars to C. E. D. PARKER, President, Emporia, Kansas.

Washburn College, TOPEKA, KANSAS.

Progressive Management, Thorough Courses of Study, Economical for Students.

Academic and Collegiate departments. Special teachers of Oratory, Music and Art. THE FALL TERM begins Wednesday, September 16, 1896.

GEO. M. HERRICK, President.

Topeka Business College TOPEKA, KAN. BEST BUSINESS, SHORTHAND, PENMANSHIP COURSES.

Large School Good Positions. Elegant Catalogue Free. Address L. H. STRICKLER

FARRIAN BUSINESS UNIVERSITY 628-630 KAN. AVE. TOPEKA, KANSAS. A PREPARATORY, BUSINESS AND PENMANSHIP INSTITUTE.

PREPARATORY COURSE.—Spelling, Reading, Elocution, Writing, Grammar, Defining, Arithmetic, Correspondence, Geography and Short Methods.

BUSINESS COURSE.—Double Entry Bookkeeping, Single Entry Bookkeeping, Business Law, Practical Arithmetic, Rapid Calculation, Civil Government, Practice for keeping books for the different trades and professions, Practical Grammar, Business Form, Practical Penmanship, Correspondence, Office Practice, Spelling and Defining, Banking.

PENMANSHIP COURSE.—Penmanship—Artistic, Business, Abbreviated, Plain, Running, Shade, Base, Card Writing, Backhand, Vertical Hand, Marking, Flourishing, and Theory of Penmanship.

DAY AND EVENING SCHOOL all the YEAR. We make a specialty of preparing persons for Civil Service Positions. Instruction thorough. Students can enter at any time. Positions secured for graduates. For further particulars address

JOHN W. FARR, Principal, 628-630 Kansas Ave., Topeka, Kansas.

KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Thursday by the

KANSAS FARMER COMPANY.

OFFICE:

No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.

 Address **KANSAS FARMER CO., Topeka, Kansas.**
ADVERTISING RATES.

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

Special reading notices, 25 cents per line.

Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of KANSAS FARMER free.

Electrotype must have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

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

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

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

If our friends whose subscriptions will expire January 1 will bear in mind that the labors of our subscription department at that time may be lightened by early renewals, and take the first opportunity to send in their dollar bills, they will confer favors which will be greatly appreciated.

Incomplete election returns have been received at the time of going to press, on Wednesday morning, but sufficient is known to indicate the almost certain election of McKinley for President. Republicans claim both branches of Congress. Kansas returns are slow but indicate the election of Morrill for Governor.

APPLES SHIPPED TO EUROPE.

The American Fruit Growers' Union reports the amount of apples exported to Europe for week ending October 24, 1896:

	Barrels.
New York.....	16,034
Boston.....	48,644
Montreal.....	48,684
Hullfax.....	11,128
Total this week.....	157,450
Same last year.....	53,059
Excess of week over week last year.....	104,391
This season to date.....	1,079,770
Last.....	174,568
This season excess of last.....	905,202

The above shows that the claim that the exports would reach millions of barrels has already been verified, and the season is just commencing.

HOW DO YOU MAKE FARMING PAY?

The KANSAS FARMER desires papers on this subject from practical farmers in every county in Kansas, and, in order to secure the best, makes the following offer: For the best paper from each county we will give one year's subscription to the KANSAS FARMER; for the second best, six months' subscription. In this way two persons in each county can get the FARMER free.

The papers are not to be longer than 1,000 words each. It is desired to hear from the successful farmers, but mere brag has no merit and is not desired.

This offer is open for all papers received at this office before Christmas.

The able paper by Mr. C. Wood Davis, which appears on pages 706 and 707 of this number of KANSAS FARMER, presents the serious views of a candid and aggressive thinker as expressed to an intimate and old-time friend. The editor was inclined to strike out the thrusts at politicians, but, on mature consideration, thought it would be unfair, both to Mr. Davis and to the reader, to present less than the full line of thought expressed in the letter. It is advised, however, if any reader finds his own political idols liable to demolition—of course this can take place only in his mind—that he skip the political thrusts the same as if the editor's blue pencil had been passed over them in the manuscript, thereby causing the printers to skip them when setting up the letter.

Salvation Oil gives perfect satisfaction for horses with cracked heels.—C. W. Lee, 414 West Baltimore St., Baltimore, Md.

FOOD AND CLOTHING IN THE FUTURE.

Consideration of the indisputed fact that, while the population of the earth increases rapidly, the area capable of producing things necessary for human comfort, or even existence, is fixed, has led philosophers to interesting conclusions as to results. Until recently none have been able to even approximate a date at which demands for food and capacity for production of food staples should balance, and after which the demand should so press upon possible production as to insure remunerative prices for the farmer. That this time is practically at hand, and that the change has been entered upon, while doubted by many, is held by some of the closest observers and most careful statisticians of the present.

The fixed limitation of possible productive area is in marked contrast with the possibilities of expansion of mining and certain classes of manufacturing. The mineral wealth of the earth has been only touched. The possibilities of the extension of manufacturing are only limited by the supplies of raw materials. These, in some cases, are practically unlimited and in others limited by the productive capacity of agriculture. If, then, it be true that the time has arrived when demand for agricultural products is to press upon production, the situation is one which makes the ownership of agricultural land most desirable. Thus is the farmer's prospect for the near future a pleasing one. That the realization of this condition will make a demand for productive land, will increase its selling price, and result in the transfer of much of it to wealthy holders, who will till it by proxy! is also to be expected.

If consumption has now overtaken production of agricultural products and expansion of productive capacity is to cease, shortage must soon ensue, for, while the world's increase of population is not easily ascertained, the increase of the leading nations is a matter of record. The rate of increase in the United States is about 1,500,000 per year. The immense surplus of food and cotton produced in this country will long exceed the home demand, but we shall not be able to increase our exports to meet the increasing foreign demand. On the contrary, we shall have to keep at home for each year enough for the wants of one and a half millions more people than for its immediate predecessor. While America will not, therefore, have soon to face a shortage according to anybody's calculations, Europeans may soon desire more than we can spare them, and later suffer privation.

The question as to whether it is to be the ultimate fate of mankind to starve is one on which some writers in the past have been exceedingly pessimistic, and have held that war, pestilence and famine are the remedies of nature against over-population. But Christianity has undertaken to educate the world against war, and it must be admitted that it is progressively succeeding pretty well. Medical science is rapidly gaining the ascendancy over disease, so that pestilence is rapidly being relegated to the ages of the past. The contest with the third and last of the trio, famine, becomes, then, the more interesting.

What has the advancement of the age to offer against famine? There is no other new world for a new Columbus to discover. The extension of cultivation over the prairies has come to an end. More than this, each year shows a reduction of population of the districts bordering the arid regions, showing that the tide of population has swept too far. Again, lands are being so cropped that their productive capacity is declining. The modern science of agriculture is reducing this loss, but there is yet a loss from this cause. Irrigation is making almost inconsequential additions to the productive areas.

What, then, of the somewhat remote future? Is population to be kept within the limits of the capacity of the earth to feed and clothe only by the effects of famine on the weaker members of the race?

A more agreeable view is presented by those who look upon the achieve-

ments and contemplate the possibilities of modern science. It is fully established that plants and animals may be, and actually are, greatly modified by the skill of the biologist. The feed required to make a pound of beef or pork is now much less than before improvements in cattle and hogs were undertaken. A pound of milk or butter represents the use of far less land than before the development of the dairy breeds. Electricity and other means of applying the power of heat to the work formerly done by horses, has, within a few years, made considerable inroads upon the position of the noble animal, and will in the near future make notable reduction in the relative amount of the earth's substance consumed by him. Not unlikely the most radical means of economizing the productions of the earth will come from such modifications of food plants as shall enable vegetable products, to an increasing degree, to displace meats. A characteristic difference between vegetable foods, including cereals, and animal foods, is the larger per cent. of nitrogenous substances contained in the latter. More recent than the discovery that animals may be improved by skillful breeding is the knowledge that plants of all kinds are even more susceptible to change at the hands of the skillful propagator. It has been found possible to vary the proportion of the constituents of plants to a remarkable degree. One of the most familiar changes, in this respect, is that wrought in the sugar content of the sugar beet, which, originally, yielded about 3 per cent. of its weight in sugar, and now yields over 12 per cent. Sugar performs much the same function as fat in human foods. The comparative amounts of sugar and fat produced from an acre may be interesting. An acre of corn, yielding, say, thirty bushels, may, if judiciously fed, produce 300 pounds, live weight, of pork. An acre of beets, yielding, say, eight tons, may as easily produce 1,600 pounds of sugar.

But the hardest problem, in the production of food, has been to secure cheaply sufficient of the nitrogenous foods. The family of plants to which the bean belongs has long been known for the production of nitrogenous materials. There is great variation in the amounts of nitrogenous substances found in the several kinds of beans, and, not unlikely, the proportion of these may be greatly increased, and the quality be otherwise improved by the skill of the biologist. Other plants, also, are capable of taking the place of meat to some extent. The large use of cabbage by some people enables them to live with less meat than they would otherwise demand. It is not beyond conjecture that the adaptation of vegetable products to the needs of man for both food and clothing may be such that posterity will look with commiseration upon their ancestors for having eaten dead animals, and with astonishment at their profligacy in producing their nitrogenous food by so expensive a process as the feeding of at least six pounds of vegetable food for the production of one pound of meat, an article which in their day may be exceeded both in nutritive value and in palatability by the direct products of the soil.

If, in the evolution that is taking place, animals shall be eliminated as sources of power and of food and clothing, there will be room in the earth for generations yet to come.

No doubt the incentive of higher prices and the prevision of probable want will precede the marked changes which must take place if the world is to be well fed and well clothed at the middle of the next century. It is true that want stares some of the weaker ones of the world in the face, even while the surplus of production is great. Possibly the ghost of starvation will become more familiar than now as the turn is taken from granaries filled with great reserves to short supplies. But if both the economic scientists and the economic statesmen do their duty there should be produced and distributed enough for all for long, these many years.

Wheat is again advancing in price. Speculators enjoy the sudden ups and downs by which a few secure fortunes.

IT IS AFTER ELECTION NOW.

At this writing—Saturday morning—no one knows how the election will go. If the confident claims of political managers are to be believed, both McKinley and Bryan are certain of election. So, also, it is easy to prove by the most confident assertions of prominent politicians that the country is about to enter upon an era of unparalleled prosperity, for the partisans of each promise the return of the good old times and better new ones in case of their candidates' success. So, also, does each party predict the gloomiest future in case of the success of the other. It is not well to go into hysterics about the matter. In no case is the country going completely and immediately to the dogs. In any case, there is almost certain to be an improvement, at least so far as Western interests are concerned. Certainly we shall all breathe easier and many will sleep better than during the weeks and months of the most intense and most spectacular political campaign ever passed through by the people of this country. It will be time when these lines are read, to shake hands with the old friends and to plan a campaign for individual prosperity in the work of one's own hands. The time when anybody can make a living at "saving the country" is now past. Attention to crops, to stock, to markets, to improving methods, to economies of production, to the business of farming, always pays the individual better than politics. While the latter is by no means to be neglected, and should always receive intelligent and careful attention, should be read about and talked about, the time is here to relegate politics to a subordinate place and to make the business of farming first and most important.

Keeping Fall and Winter Apples.

By James Troop, Horticulturist Purdue University Experiment Station.

In many localities in Indiana there are often more apples grown than can be disposed of profitably at the time of gathering, and so serious loss to the growers is the result. Much of this loss could be prevented by a proper handling of the fruit, and by providing a suitable place for storing until the congested state of the market is relieved.

In order to keep well, apples must be picked at the proper time. Care must be exercised in handling to prevent bruises, carefully assorting the ripe from the unripe, the perfect from the imperfect, and storing in a cool, dry place, with plenty of pure air free from all odors of decaying vegetables or other substances.

The average fruit-grower does not exercise enough caution in handling and assorting his fruit.

The degree of maturity will have much to do with the keeping qualities. A late fall or winter apple should be mature, but not ripe, when picked, if it is expected to be kept for any considerable time. The process of ripening is only the first stage of decay, and if this is allowed to continue before picking till the apple is ripe, or mellow, this breaking down process has proceeded so far that it is a difficult matter to arrest it. As soon, therefore, as the stem will separate freely from its union with the branch the apple is sufficiently mature for storing.

The proper temperature for keeping apples is as near 35° Fahr. as it is possible to keep it, and in order to maintain this, it will often be necessary in this climate to provide a separate place for storing the fruit, as the average cellar under the dwelling house is wholly unfit for this purpose. If the cellar consists of several compartments so that one can be shut off completely from the others, and the temperature in this kept below 40°, it will answer the purpose very well. If this cannot be done, a cheap storage house may be built in connection with the ice house, by building a room underneath, having it surrounded with ice on the sides and overhead, with facilities for drainage underneath, keeping the air dry by means of chloride of calcium placed on the floor in an open water-tight vessel, such as a large milk crock or pan. In this way the temperature may be kept very near the freezing point the year round, and apples may be kept almost indefinitely.

Kaffir Corn and Alfalfa.

EDITOR KANSAS FARMER:—I have been for some years something of an enthusiast on the subject of Kaffir corn and alfalfa as valuable crops for the Kansas farmer to raise. My observation this year has taught me some new things. This ranch that I have charge of contains 800 acres and every foot of the ground is devoted to these two crops. We had no rain in the spring. Wheat on land adjoining made two to four bushels per acre—the same old story. The first crop of alfalfa started slowly, finally stopped growing. Grasshoppers attacked it, and by June 1, there was hardly a leaf on the whole field. Then the rains came and the old stalks leaved out and new shoots put out at the ground, and in two weeks there was a good show for a hay crop, and in four weeks there was at least one and a half tons per acre on the ground. I desired to secure the seed and left this crop to seed. While the rains continued to fall new shoots and new blossoms continued to grow, but when the rains ceased the seed all matured and it made the cleanest, most uniform and pretty seed I ever saw. There will be 1,000 to 1,500 bushels, which I shall sell for this crop in this unfavorable year, and all grown in six weeks time. We have not had anything like the rain here that fell twenty miles north, but our alfalfa will probably yield \$12 to \$15 per acre, while the best corn crops will only yield \$3 to \$4. I think seed grown in this region is better than the Colorado grown seed or better than any grown under irrigation and on old land. The seed are more uniform in size and in quality and somewhat smaller. The same measure of seed will seed more ground, and then it has no noxious weeds as almost all seed coming from the West has. We want to get acclimated alfalfa, and if I were going to sow a thousand acres I would always get Kansas-grown seed, and seed grown as near as possible under same conditions as existed where I expected to grow it. If you wanted to plant a fruit tree you would rather have one grown on your own soil than in some highly fertilized or highly watered bottom land 500 miles away. I am told Colorado potatoes brought from the irrigated fields of the West will hardly do any good here. Colorado potatoes are not Kansas potatoes, Colorado wheat is not Kansas wheat. Colorado alfalfa is not Kansas alfalfa.

On this ranch which I manage there is to-day more green feed than in all the balance of the township. More alfalfa should be sown. It should be properly cared for and then it is all easy and simple. I have written so much I will leave the Kaffir corn till next time. W. E. HUTCHINSON.
Pretty Prairie, Kas.

Selection of Seed Corn.

EDITOR KANSAS FARMER:—I have seen several articles, of late, upon the selection of seed corn, and they have prompted me to write up my theory for the improvement of our seed.

Our corn has hardly been improved since discovered—simply has been kept up and that is all. Of course, different kinds have been bred pure, but as for improvement, from year to year, I do not see that we have much to boast of. We have, by the different manners of selection, just been able to keep from retrograding, and there must be some other way to follow if we want to improve our corn.

Prof. H. R. Hilton and Prof. Morrow have been the cause of my studying up this subject, and I would like to have each of them write the FARMER a letter on this theory of mine.

Let us go back and travel over Prof. Hilton's remarks about how the corn plant grows, and we will see that the kernel sprouts, sends up a shoot to the air above, and four to six small rootlets that sustain the top until the first lateral roots begin to grow, when these first roots have practically performed their mission. The first lateral roots grow out near the surface and gradually turn down as the soil warms, until the heat of the soil makes it necessary for the second lateral roots to start and at a lower depth, seeking, as they do, after cooler earth. These two sets of lateral roots are the great food-

gatherers, and the concentrated plant food gathered by them is deposited in the leaf, and this food is held in the leaf until the spur roots furnish the proper amount of moisture to transfer the concentrated food deposited in the leaf, into the ear.

Now, then, let us reason a little along Prof. Morrow's line, and we will see at once that the stalk with the most leaves will, of necessity, have the most concentrated plant food deposited, and if the spur roots, which are the great water-gatherers, can furnish enough water (subsoiling comes in here) to fully transfer the plant food deposited in the leaf, to the ear, the latter will be a perfect ear with corn all over the cob, even to a single kernel over the tip of the cob. Now we know that the leaves grow out at the joint, and of course the more joints the more leaves we will have to secrete the concentrated food necessary to make a perfect ear of corn. The tallest stalk will not always produce the most leaves, but the stalk that has the shortest joints will, as a rule, have the most leaves, and of course the most food deposited, and as a result the most perfect ear. Now, then, we see that if all the growing conditions are favorable, the stalk of corn with the greatest number of joints (shortest joints as a rule) will have the most leaves, and the more leaves the more concentrated food deposited, and the more food deposited the better the ear or ears. From this it would seem that the field were the best place to select seed for the improvement of our corn and the crib the place to simply keep it as good as it was. From this we may conclude that a short ear in the crib, that may have been the second or third ear on a single stalk, is better than a large one for seed, provided the short ear grew on a stalk with short joints and the large one on a common stalk. If an ear has had a parent stalk with an abundance of leaves to produce the best results, it will have the cob entirely covered with corn and a single kernel at the tip, and it is only such ears that should be shown at our fairs.

Men who grow cobs for the pipe factory, always plant the corn taken from the largest cob, as they well know that a kernel will produce approximately the same kind of a cob as the one it grew on. This being true, the tip and butt kernels are just as good for seed as the large middle kernels.

CLARENCE J. NORTON.

Morantown, Kas.

How to Stretch Wire Netting.

EDITOR KANSAS FARMER:—In your issue of October 1, T. E. Whitlow asks for a successful method for putting up woven wire hog fencing. The surest way of getting it to tighten evenly that I have found is to take a piece of scantling, a little longer than the width of the netting, and staple every wire fast. Then by fastening a rope to the scantling at each end it can be stretched to a uniform tension by stretching with a wagon wheel, as in the case of barb wire.

Erwin, Okla. T. N. FERGUSON.

Farmers' Institutes.

The following dates and appointments for farmers' institutes in this State, under the auspices of and to be attended by representatives from the Agricultural college, have so far been made:

Oneida, Nemaha county—December 10 and 11; Profs. Hitchcock and Willard.
Nortonville, Jefferson county—December 17 and 18; Prof. Olin and Mrs. Kedzie.
Hiawatha, Brown county—December 30; Dr. Mayo.
Ablene, Dickinson county—State dairy meeting, November 19; Profs. Graham and Georgeson.

Some others are under consideration but the dates have not yet been fixed.

While European beet sugar is sold at such prices as to almost drive other kinds out of the world's markets, the German people consume only 22½ pounds and the French only 29 pounds per capita per annum, while the people of the United States each consume 59½ pounds, and of England 78½ pounds per annum. England produces no sugar and the United States produces less than one-tenth of requirements.

Every man should read the advertisement of Thos. Slater on page 18 of this paper.

Corn Fodder.

EDITOR KANSAS FARMER:—Friend Norton's article for KANSAS FARMER (October 22) is timely and to the point, but I fear some readers will get the impression from his article that to handle fodder is a complicated matter.

I have handled and fed fodder all my life, and want to say, right here, that for rough feed for any and all kinds of stock there is nothing grows out of the ground that makes better feed than corn fodder, if properly cared for. I am not guessing at this, because I have about every other kind of feed one can raise, and have never found anything superior to corn fodder, and to me it looks like great waste—sinful waste—when I see hundreds of acres of fodder standing in the fields, all a shuckless, shiftless waste. This, too, on farms where the stock next spring will be reduced to mere shadows for the want of feed.

If I am not mistaken, chemical analysis shows 40 per cent. of the nutriment in a corn plant to be in the fodder, and when fodder is allowed to stand until dead ripe, 70 per cent. of its feeding value is lost to the farmer. Then, am I not right, when thousands of acres are treated as they are, in saying a sinful waste?

But I intended more particularly to give my method of handling corn fodder, without any machinery, only that found on the average farm. In the first place, we want to be sure to be ready to cut our corn at the proper stage of ripening. This is just as important in cutting fodder as in cutting hay; and as soon as the corn begins to dent, then all hands go to cutting corn, and the work is pushed as rapidly as possible. This is an important point in this State, as corn ripens very fast when the weather is dry and hot, and it may take hustling sometimes to save the crop when at its best. Some years the fodder will be very green and the grain more mature, and the grain is what one wants to watch. It matters not how green the fodder, if the grain is sufficiently mature it will fill out all right after the corn is in the shock. We cut our corn with what friend Norton terms the "armstrong machine." They are found on all farms, and are the best under all conditions we have ever found. We put 144 hills in a shock, and tie our shock twice; the first time after four armfuls have been set up, then again after the shock has been completed, using great care to set each armful up in its proper place, setting it up straight, leaning the tops toward a common center. We allow it to stand in shock until the corn is dry enough to crib, when we begin husking, tying the fodder in bundles with binder twine, making the bundles just large enough so they can be handled readily. We put the fodder from four corn shocks into one fodder shock, setting them up close and straight as possible. After the fodder shock is completed, then we draw the tops of the shock together with a rope with ring at one end, as tight as we can, then tie with binder twine. Recollect, that to get the best results from corn fodder, as from anything else, everything must be done at the right time and done right—no slouching about it.

As soon as we are done husking, or as soon as we have enough husked for a rick, we hitch to a wagon and haul it to where we want to feed it, which, with us, is always in the manure yard. We generally put from seven to ten large loads in a rick, but one can make the rick as long as he wishes. It is a very easy matter to build a fodder rick so that it will save perfectly with but very little exposed to weather. Our fodder is now (October 23) all in the rick, where we can feed it in the stable and around the straw stack, while our neighbors' cattle are picking around in stalk fields trying to find something to fill their empty stomachs. Our cows will give an abundance of the lacteal fluid out of which we coin golden ducats. Our calves, colts and horses grow sleek and frisky. We do not need to fear corn stalk disease, and believe that it would be a blessing to our farmers if this disease would spread until from sheer necessity they would be compelled to cut their corn in a rational manner. M. E. KING.

Elm City, Kas.

Winter Quarters for Hogs.

"The winter care of hogs goes far toward settling the question of profits," says the *Western Swineherd*. "Spring, summer and fall, given a sufficiency of food, hogs will lay on a fair percentage of flesh and fat regardless of the care received, though proper care will increase it. But during the cold season now opening the question that confronts us is different. A portion of the food must serve as fuel to keep up warmth. How much food must be expended that way depends upon how good care is taken in providing comfortable quarters for the hogs. If left to the full severity of the weather, practically without shelter, it will be found that about all the food fed will be consumed as fuel and but little, if any, of it go into flesh and fat. In short, unless proper shelter is provided all that is expended in food will merely serve to sustain life, and the margin of profit be cut down to nothing. The hog that is fed a week and does not make a pound of gain loses to his owner the cost of the feed, the cost of the labor and the interest on the price of the animal. So it will be seen that self-interest demands that in growth and fat the hog must improve every day in order to be a profitable investment. Warm, well-ventilated quarters, pure water with the icy chill taken off, are essential to continued growth and fat increase in cold weather. The hog cannot chill its stomach on ice water and make its meal on frozen corn and thrive as it ought. We need not here describe any special conveniences essential to proper winter care of stock. The conditions on different farms and in different localities vary so that where one man finds well-built lumber houses cheapest, another must construct houses of straw, logs, or even stone. There are one or two features, however, common to all construction that meet the demand. They must be dry, well ventilated and accessible for cleaning out. If these points are well covered all the rest are secondary. The cheaper hogs are the more essential it is that economy in food consumption in proportion to increase of flesh be used. Because corn is only 10 or 20 cents a bushel it is too generally reasoned that feed is cheap and there is no use of economizing. The error of such reasoning lies in the fact that cheap feed means cheap pork, and the margin of economy is just as broad on \$2.50 pork raised on 20 cent corn as it is on \$6 pork raised on 50 cent corn. The aim should be to not let cold weather interfere with growth and fattening. It is, therefore, cheaper to spend something on comfortable quarters than to spend it in food to keep up warmth without quarters. If imbued with the spirit of thrift you are desirous of realizing the most possible from the efforts you put forth, consequently in the feeding and care of your hogs you should consider that every comfort which adds a pound of meat for the amount of food consumed is a profitable speculation for you. Don't wait till the severe weather is upon you, but get winter quarters ready now."

THE THREE BIG THINGS

That Made the Greatest Impression at the World's Fair.

There is little left of what was once the beautiful White City. Time has effaced the memory of all but a few of its wonderful sights.

We can all remember at least three of the most striking features—that ponderous implement of warfare, the Krupp gun, the wonderful Ferris wheel, and last, but not least, the big "Garland" stove—a mammoth cooker large enough to supply meals for a tribe of giants. It loomed up above all other exhibits. It was twenty-five feet in height, thirty feet in width, and weighed ten tons.

These three productions have scattered. The Krupp gun is back in Germany, the Ferris wheel was reconstructed on the beautiful North Side of Chicago, the big "Garland" stove is still a wonderful attraction. On constant exhibition in Detroit in front of the works of the largest stove-makers in the world—the Michigan Stove Co.—it is seen and admired. It shows on an exaggerated scale the many and distinctive good points of Garland stoves and ranges, "The World's Best."

This line of heaters and cookers is well and favorably known everywhere, so well known, in fact, that the market is full of imitations and counterfeits. The genuine "Garlands" can be had at the same price by simply calling for them by name and insisting upon getting them.

Horticulture.

PLANT-BREEDING.

We are most of us now-a-days so much accustomed to see our gardens or our houses bedecked with flowers, and our tables supplied with vegetables and fruit, that we take these things for granted, and do not trouble to inquire whence they come or how they are produced. But if we look back even a few years, we shall see how much larger a share plants have now in our lives than they had then. We shall see, moreover, that while there has been enormous numerical increase, there has also been in many cases continued progression in form and other attributes. We are not concerned here with the introductions from foreign countries, important though they are; our business for the moment lies with the changes resulting from the natural processes of variation as controlled by the art of the gardener. The garden roses of to-day, for instance, are not the roses of a dozen years ago; and as to the sorts that were grown by our fathers and grandfathers, they have, with some few exceptions, utterly gone. It is the same with peas and potatoes, and with most other plants that are grown on a large scale. True, there are some exceptions; there are some "good old sorts," which seem to show by their persistence that they are the fittest to survive under existing conditions. The Black Hamburg grape is an illustration, the old double white Camellia is another; but these plants are not reproduced by seed, and therefore do not invalidate the rule, that each succeeding generation of plants differs in some degree from its predecessor. At first the differences are slight, and it may be imperceptible to all but the trained expert; but they become more accentuated as time goes on, till at length they eventuate in forms so different from that from which they sprang, that they would undoubtedly be considered of specific if not of generic rank, were not their history known. The Jackman Clematis and its near allies may be cited as cases in point; and still more remarkable are the tuberous Begonias, which, like the Clematis just mentioned, have been created, so to speak, within the last quarter of a century, and which are so different from anything previously known among Begonias, that they have actually been raised to the dignity of a genus by M. Fournier, a French botanist.

NEW SPECIES.

Pansies and Auriculas—garden productions both—are now, morphologically speaking, as good species as are most of the groups of individuals to which this rank is assigned by naturalists. Of their seedlings a large proportion comes true—that is the parental characteristics are so far reproduced that there is no greater amount of variation among the offspring of many of these artificially-made species than there is in the progeny of natural species. If, as is the case in some Auriculas and the gold-laced Polyanthus, we find little change has occurred during the last few years, may not this relative invariability be the result of the gradual assumption of a degree of stability which we usually associate with the idea of a species? Again, it often happens that these high-bred, close-fertilized plants become sterile, so that their continuance can only be insured by cuttings, or some means of vegetative propagation. Is not this analogous to the retrogression and ultimate extinction which occur in natural species? It is not necessary here to cite more illustrations; our concern lies rather with the way in which these changes are brought about. This leads us to what is called the improvement of plants, or plant-breeding. There seems to be a growing tendency to make use of the latter term; but if it is to be adopted, it must be taken in a broad sense, and not limited to the results of sexual propagation.

METHODS USED.

The two methods made use of by gardeners and plant-raisers for the improvement of plants are selection and cross-breeding—the latter, as far as

results are concerned, only a modification of selection. The natural capacity for variation of the plant furnishes the basis on which the breeder has to work, and this capacity varies greatly in degree in different plants, so that some are much more amenable and pliant than others. The trial-grounds of our great seedsmen furnish object lessons of this kind on a vast scale. Very large areas are devoted to the cultivation of particular varieties of cabbage, of turnips, of peas, of wheat, or whatever it may be. The object is two-fold—primarily to secure a "pure stock," and secondarily to pick out and to perpetuate any apparently desirable variation that may make itself manifest.

The two processes are antagonistic—on the one hand every care is taken to "preserve the breed," and to neutralize variation as far as possible, so that the seed may "come true;" on the other hand, when the variation does occur, the observation of the grower marks the change, and he either rejects the plant, manifesting it as a "rogue," if the change is undesirable, or takes care of it for further trial, if the variation holds out promise of novelty or improvement. It is remarkable to note how keen the growers are to observe the slightest change in the appearance of the plants, and to eliminate those which do not come up to the required standard, or which are not "true."

Where the flowers lend themselves freely to cross-fertilization by means of insects, as is the case with the species and varieties of Brassica, it is essential, in order to maintain the purity of the offspring, to grow the several varieties at a very wide distance apart. In passing along the rows or "quarters," the plant-breeder not only eliminates the "rogues," and retains what he thinks may be desirable variations, as we have said, but he especially marks those plants which most conspicuously show the characteristic features of the particular variety he desires to increase, and he takes care to obtain seed from the plants so marked. The variety thus becomes "fixed," but it is obvious that that word is only used relatively; really, there is a constant change, which may be either in a retrograde direction, or what may be looked on as an amelioration. Thus, in the seedsmen's advertisements we see announcements of this character: "So-and-so's Improved Superlative Cucumber," or whatever it may be. This "improvement," when it exists, is the result of the careful scrutiny, elimination, and selection exercised by the raiser. These are repeated season after season, till a degree of fixity is attained, and a good "strain" is produced.

PROGRESSIVE MODIFICATION IN A VARIETY.

Fierce competition and trade rivalry forbid the growers to relax their efforts, and thus it happens that the pea or the potato of to-day is not the same, even though it may be called by the same name as its predecessors. To the untrained eye, the primordial differences noted are very often slight; even the botanist, unless his attention be specially directed to the matter, fails to see minute differences which are perceptible enough to the raiser or his workmen. Nor must it be thought that these variations, difficult as they are to recognize in the beginning, are unimportant. On the contrary, they are interesting physiologically, as the potential origin of new species, and very often they are commercially valuable also. These apparently trifling morphological differences are often associated with physiological variations which render some varieties, say, of wheat, much better enabled to resist mildew and disease generally than others. Some, again, prove to be better adapted for certain soils or for some climates than others; some are less liable to injury from predatory birds than others, and so on. These co-relations, then, are matters of the greatest importance to the biologist intent upon the study of progressive modification, and to the merchant and the cultivator for practical reasons.—*M. T. Masters, in Nature.*

A COUGH, COLD OR SORE THROAT requires immediate attention. "Brown's Bronchial Troches" will invariably give relief.

GARLAND STOVES AND RANGES

The World's Best

MICHIGAN STOVES RANGES

A full and complete line of Cooking and Heating goods for all kinds of fuel, made by the same mechanics and of the same material as "Garlands." "Michigans" are the peer of ANY other line EXCEPT "Garlands."

MICHIGAN STOVES RANGES

THE MICHIGAN STOVE COMPANY, Largest Makers of Stoves and Ranges in the World.

"Among the Ozarks."

"The Land of Big Red Apples," is an attractive and interesting book, handsomely illustrated with views of South Missouri scenery, including the famous Olden fruit farm of 3,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks, and will prove of great value, not only to fruit-growers but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address, J. E. LOCKWOOD, Kansas City, Mo.

KANSAS HOME NURSERY now offers choice Berries and orchard fruits of all kinds in their season. Fresh shipments daily by express. Prices to applicants. A. H. GRISSA, Box J, Lawrence, Kas.

SMITH'S SMALL FRUITS FOR SPRING 1897

100 varieties old and new Strawberries, including Wm. Belt, Brandywine, Paris King, Bissel, Isabel, Barton, Marshall. New Raspberries—Egyptian, Miller, Bishop, Columbian. If you want plants I have two millions for sale. B. F. SMITH, Box 6, LAWRENCE, KAS.

Garnahan's Tree Wash and Insect Destroyer

Destroys the bore worm and apple root louse, protects the plum from the sting of the orcutulo and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas., and Cleveland, Ohio.

NASAL CATARRH

is a LOCAL DISEASE and is the result of colds and sudden climatic changes. This remedy does not contain mercury or any other injurious drug.

ELY'S CREAM BALM

Opens and cleans the Nasal Passages, Allays Pain and Inflammation. Heals and Protects the Membrane from Colds. Restores the Senses of Taste and Smell. Is quickly absorbed. Gives relief at once. 50 cents at Drug-gists or by mail; samples 10 cents by mail. ELY BROTHERS, 66 Warren Street, New York.

ORGANS FREE on trial. High-priced Organs, such as never were offered before. Unequaled for sweetness of tone and beauty of design. We have a large assortment at lowest prices. Send for Our Mammoth Catalogue. H. R. EAGLE & CO., 68 and 70 Wabash Ave., Chicago, Ill.

SALESMEN to sell Cigars to dealers; \$25 weekly and expenses; experience unnecessary. Reply with 2c. stamp. National Consolidated Co. Chicago.

Plant Trees and Orchards in 1896.

The old reliable Hart Pioneer Nurseries, of Fort Scott, Kas., have large supplies of choice stock for sale at special prices. 600 acres in nursery, 240 acres in orchard. Extensive growers for the wholesale trade. Write and obtain prices before placing your orders elsewhere. No transfer or exposure of stock. We take up, pack and ship from the same grounds. Send for our Illustrated Planter's Catalogue and Price List.

We solicit your correspondence and invite inspection of our stock.

Reliable Salesmen Wanted.

ADDRESS

HART PIONEER NURSERIES,

FORT SCOTT, KANSAS.

Early Ohio Grape, Six Weeks Earlier Than Concord.

In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm. Address all communications Topeka, Kas.

Ripening Cream Properly.

A bulletin from the Iowa Experiment Station makes the following statements in regard to ripening cream:

"It would seem from experiments that the right degree of acidity largely governs the flavor of butter, all other conditions being favorable. Another essential feature in making good butter is, that the cream should be frequently stirred during the ripening process, as many of the lactic acid germs are aerobic and require free oxygen. Where the cream is warmer than the surrounding atmosphere, odors are given off; where the cream is cooler, odors are taken on. We have found the best results to be obtained by quick ripening, with frequent stirring. Our highest flavored butter was produced when the acidity was about 37 and the cream ripened at a temperature above 70°. The writer could not say that 37 would do for all localities, as no experiments have been conducted outside of the college creamery. We found no difficulty in changing the flavor of butter from one to three points where the same cream was divided and ripened to different degrees of acidity at various temperatures. It was found when the cream was ripened to an acidity above 40 that it took on a bitter flavor. The same results were noticeable when the cream was ripened for a long period at a low temperature, without much stirring. Low temperatures seem to be favorable to the growth of germs that impart a bitter flavor to the cream."

Stay by the Cows.

"We do not say that cheese will ever sell again at 22 cents and butter at 55 cents per pound, but we do distinctly remember drawing cheese to the market in October—the summer's make—and selling them at 4 cents and the butter at 9 cents per pound, and that is very much below the sums realized for the same articles now," says the *Practical Farmer*. "True, it was then that Australia, Sweden, Denmark and the Argentine Republic had not been discovered—as dairy countries—and they are competitors now, as well as the vast Western country that now produces the greater half of our dairy produce. But up to a recent period—less than two years—the demand kept up with supply. There are just as many people now and not quite so many cows. 'When the mills start,' we believe the pendulum will swing back a good part of the way and fair prices will again obtain, and if the man has in the meantime shifted around so to have better cows, has cheapened their cost of keep about half, which he can do, and uses better appliances in manufacture, the prices obtained will put him about where he was before the 'drop.' That is to say, don't sacrifice good cows to go out of dairying. Stay in with fewer but greatly better cows. The dairy business cannot be suddenly boomed if prices should go skyward. Cows have to be raised, and it takes three years at the best to do this, and half of them will be of little value bred as they would be. With the prices as they are, cows are the best selling stock we have, and most in demand. Cows are selling for full 1893 prices, and what is commendable about it is that they are of the better class, as 'scrubs' are not wanted, a hopeful sign in itself."

High Scoring of Butter and Cheese.

The following butter and cheese scored 100, or perfect, at the Wisconsin State fair lately. There were ninety-seven entries of butter and seventy-two of cheese. H. C. Taylor, of Orfordville, Rock county, whose Jersey cow, "Brown Bessie," took first premium at the World's Fair, at Chicago, and which he sold for \$4,000, whose print butter scored 100, was awarded first prize in that class. The first prize dairy butter of F. C. Curtis, Rocky Run, Wis., also scored 100, as did also the creamery butter of John A. Brunner, of Tarrant, Pepin county, Wisconsin, and the cheddar cheese (flats) of Wm. Nisbet, of Hub City, Richland county, Wisconsin, and

the Domestic Swiss cheese of O. Luchsinger & Co., Monroe, Wis.

We believe this is the first instance where the 100 mark has been placed upon more than one exhibit of butter or cheese at the same meeting. Some judges never do this, claiming that perfection is seldom reached. The judges this year took a sensible view of the matter, and used their commercial judgment, believing, no doubt, that whatever fills, in every particular, the highest demands of the market for the choicest article is entitled to the highest score.

Another fact, reported by Mr. W. W. Chadwick, Superintendent of dairy department, and worthy of special attention, is that eleven out of the sixteen prizes in the four classes in which former students of the Wisconsin Dairy school made entries, were won by these students. While there are many first-class makers of butter and cheese who never attended a dairy school, yet it is a fact that the percentage of prize-winners was very much larger among these students than with the others. The careful training they have had during two terms in the dairy school shows its practical effect.

Dairy Notes.

We want milch cows neither fat nor lean, but half way between.

It will not pay to winter a cow that does not make a good milk showing on grass.

There isn't one cow in fifty but what might do better in milk yield if she had more to eat and drink.

There are about 17,000,000 cows in this country, or one to every four inhabitants; one cow, however, furnishes the milk, butter, and cheese for more than four persons, as large quantities of dairy products are exported.

One hundred pounds of good milk contains about the following amounts of the different constituents: 87 pounds of water, 4 pounds of fat, 5 pounds of milk sugar, 3.3 pounds of casein and albumen, and 0.7 pounds of mineral matter or salts.

Globules of different sizes are found in the milk of any cow, but with certain breeds the size is uniformly larger than with other breeds. The milk of Jersey and Guernsey cows has this peculiarity, which explains why the cream rises so readily on it and why the skim-milk is so thin and poor, large globules naturally being able to get on the top more quickly than small ones, many of which cannot rise at all.

The city of Owatonna, Minn., by subscribing \$500, to be applied on the premium list, the free use of halls for the exhibits and the meeting of the association, and also room for a working dairy, and free drayage of all exhibits from railroad station to hall and back, has secured the next meeting of National Creamery Butter Makers' Association, to be held at the above place, on January 20 to 25, 1897.

Many are the tribulations of the city milkman. Numerous well-authenticated cases are known where customers have complained of milk received, and upon investigation it has been proved that servants in the house tampered with the milk, removing cream for their own use or adding old milk or vinegar to make it sour prematurely. The object of the latter was, in connivance with some outsider who supplied the motive, to cause the buyer to change to some other dealer whom the servant was ready to recommend.

Dairy Education Pays.

That dairy education pays is proved by the experience of the Canadians. Those people decided that they would teach their dairymen how to make good butter and cheese and how to take possession of the foreign markets. Instructors were put into the field and these instructors went about doing good. The government took an interest in the matter and did what it could to make a reputation for its cheese in England. The result was that in a few years Canadian cheese had nearly driven American cheese from the English market. Education counted. It is the only salvation of the cheese-makers and butter-makers of America.

A cough which persists day after day should not be neglected any longer. It means something more than a mere local irritation, and the sooner it is relieved the better. Take Ayer's Cherry Pectoral. It is prompt to act and sure to cure.

GIRLS WILL MARRY.

Even Though Their Employers Don't Like It.

Some Girls Who Know Just on Which Side Their Bread is Buttered.

"It is always the smartest girls who go off and get married," said the head of large dry goods house, talking with a reporter. This was said in a rather injured tone as if it was a personal grievance. But what could he expect?

Of course an employer naturally wants to keep the most valuable girls. That's his business. But being girls they will get married, that's their business.



There is no particular fun in waiting behind a counter or making dresses or banging a writing-machine or working in a factory, or keeping school. A woman who earns her living in any of these occupations is a credit to her sex. She shows a good deal of pluck and perseverance, to say nothing of endurance.

A woman's endurance is often greater than a man's, but her organism is much more delicate and many of the occupations which she is obliged to follow, subject her to an unnatural strain upon the special organism of her sex, which sooner or later results in some weakness or disease.

Every woman whose occupation tends to induce or aggravate these delicate complaints, needs the strengthening assistance of Dr. Pierce's Favorite Prescription. It is an absolute cure for all diseases of this nature.

It both heals and strengthens the distinctly feminine organs; imparts firmness and supporting power to the ligaments, healthy vigor to the nerve-centers and sustaining energy to the entire system.

It fortifies women at every critical period of development, from puberty until the change of life. It is a marvelous health-bringer for delicate wives and prospective mothers. It frees motherhood from all dangers and makes the coming of baby comparatively painless.

It is the only medicine of its kind devised by an educated experienced physician, a skilled specialist in this particular class of disorders. Its sale is greater than the combined sales of all other medicines for women. This fact shows the unbounded confidence which women place in Dr. Pierce's splendid ability. He has been for nearly thirty years chief consulting physician of the Invalid's Hotel and Surgical Institute, of Buffalo, N. Y. During this time he has achieved a world-wide reputation for his successful treatment of the

most complicated and obstinate ailments peculiar to women.

Any woman may consult Dr. Pierce either personally or by letter without cost, and with absolute assurance of receiving the best professional advice and directions for self-treatment; without any necessity for the repugnant examinations which most doctors insist upon; and which are generally worse than useless.

Some of the most famous remedies in the world were discovered and invented by Dr. Pierce. His "Golden Medical Discovery" is recognized as the only positive specific for consumption and bronchial diseases, and his "Pleasant Pellets" are everywhere known as the most perfect cure for constipation.

As a medical author he has attained high eminence. His great thousand-page illustrated book, "The Common Sense Medical Adviser," is the ablest family medical volume ever published. 680,000 copies were sold at \$1.50 each. A paper-bound copy will be sent absolutely free to any one sending twenty-one 1-cent stamps to pay the cost of mailing only. Address World's Dispensary Medical Association, Buffalo, N. Y. For a handsome, cloth-bound copy, send ten stamps extra (31 cents in all).

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

Great Rock Island Route Playing Cards.

Send 12 cents in stamps to John Sebastian, General Passenger Agent C. R. I. & P. railway, Chicago, for the slickest pack of playing cards you ever handled, and on receipt of such remittance for one or more packs they will be sent you postpaid.

Orders containing 60 cents in stamps or postal note for same amount will secure five packs by express, charges paid.

A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-engraved views of varied scenery in south Missouri. From these views an accurate knowledge can be obtained as to the productions and general topography of that highly-favored section that is now attracting the attention of home-seekers and investors the country over.

The title of the book is "Snap Shots in South Missouri." It will be mailed upon receipt of postage, 4 cents. Address J. E. Lockwood, Kansas City, Mo.

Popular Low-Price California Excursions.

The Santa Fe Route personally conducted weekly excursions to California are deservedly popular. About one-third saved in price of railroad and sleeper tickets as compared with first-class passage.

The improved Pullmans occupied by these parties are of 1896 pattern and afford every necessary convenience. A porter goes with each car and an experienced agent of the company is in charge.

The Santa Fe's California line is remarkably picturesque, and its middle course across the continent avoids the discomforts of extreme heat or cold.

Daily service, same as above, except as regards agent in charge.

For descriptive literature and other information address G. T. Nicholson, G. P. A., A., T. & S. F. Ry., Chicago.

To Colorado, Montana, Hot Springs, Puget Sound and Pacific Coast via Burlington Route.

Take the shortest and most desirable line to the far West; complete trains from the Missouri river. Daily train leaves Kansas City at 10:40 a. m., arrives Billings, Montana, 1,050 miles distant, 6:45 next evening; free chair cars Kansas City to Billings; sleepers Kansas City to Lincoln; through sleepers Lincoln to Billings. Connects with fast train beyond to Montana and Puget Sound. Ten to twenty-five hours shorter than other lines from Kansas City.

Through sleepers and chair cars Missouri river to Denver; Rio Grande scenic line beyond for Colorado, Utah and California. Ask agent for tickets over the established through lines of the Burlington Route.

L. W. WAKELEY, Gen. Pass. Agt., St. Louis, Mo.

Rose Registered Jersey Cattle and Poland-China Swine

are unrivaled. JERSEYS are grandsons of Pedro and Marjoram 2d—won first premium New Jersey State fair, 1894, when a calf. Herd boars fashionably bred and high-class individuals. Head herd boar Rosewood Medium 16453 by Woodburn Medium, dam Fantasy by One Price. Assisted by Tecumseh 2d; dam Moss Wilkes by Geo. Wilkes. Second assistant Domino 16734 by What's Wanted Jr.; dam Bonnie Z. by Gold Coin, he by Short Stop. Domino won first pig under 6 months, Nebraska State fair, 1896. Our SILVER WYANDOTTES are high scorers. We have the best equipped dairy farm and most complete breeding establishment in northern Kansas. Farm in Republic county, near Nebraska State line. Take U. P. or Rock Island railroad to Belleville, or write: JOHN F. TOLFORD, Manager, Chester, Neb.

The Apiary.

A Colony of Bees.

A colony of bees consists of from ten thousand to fifty thousand worker bees, a few hundred drones, and a queen, the number varying with the season of the year.

The queen is a female, and the only fully developed female in the colony. She lays all the eggs and is the mother of the entire colony.

The queen lays two kinds of eggs, infertile and fertile. The eggs produce three kinds of bees—the queen, the worker and the drone.

The fertility of the queen lasts to the end of her life, and she produces the same kind of stock throughout her existence that she commenced with.

The drones are the male bees. They do no work whatever in the hive; nature did not intend they should.

The worker bee is the "busy bee" and in sex is an undeveloped female, and is termed neuter.

The only permanent cure for chronic catarrh is to thoroughly expel the poison from the system by the faithful and persistent use of Ayer's Sarsaparilla.

Mitchell & Ramsey announce that they have located at 119 South Third street, St. Joseph, Mo., where they purpose carrying a full line of grass and field seeds for the wholesale and jobbing trade.

this time forth their principal work is gathering honey and pollen, defending the hive, etc. Pollen is the fertilizing dust of flowers and blossoms; this the bees gather in large quantities for the sole purpose of feeding their young.

November Notes.

Crowd the fattening now.

Now is a good time to do the fall plowing.

Push the corn-gathering—get it under shelter.

Be ready to shelter the stock on cold, stormy days.

Feed fattening stock all that they will eat up clean.

Gradually increase the rations of the growing stock.

Be prepared to make all stock comfortable during the winter.

Be ready to mulch the strawberries as soon as the ground freezes.

Put an extra covering on the vegetable pits after the ground freezes.

Market all stock as soon as ready. Long feeds are usually unprofitable.

Protect all young trees from rabbits and apply a good mulch around them.

It is rather poor economy to sell products in the fall and buy again next spring.

Unthreshed oats run through a cutting-box makes one of the best rations for growing colts.

In all feeding it is quite an item to give a good variety, and the better way is to plan for this in good season.

Young trees are heeled in care should be taken to separate well and to see that the soil is well filled in around the roots.

Watering the stock regularly is an important item in winter. Now is a good time to arrange to do it conveniently.

During the fall and early winter is the best time to haul out and apply manure on the meadows and in the orchards.

Unless stock can be kept thrifty through the winter the better plan is to commence selling off now at every opportunity.

While we may have fine weather until Christmas, the better plan is to be ready for cold, stormy weather at any time.

Have an old wagon and throw the manure directly into it, and whenever there is a load haul out and scatter in the fields.

In nearly all cases it will be found a good plan to plow the garden thoroughly and haul out and apply a good dressing of manure.

Either feed the poultry so as to get into a good marketable condition as soon as possible or count on feeding until after the holidays.

Before the ground freezes see that good drainage is provided around the stables and sheds, the fruit and vegetable pits and in the orchard.

If stock-raising and feeding is to be made most profitable every advantage must be taken to lessen the cost of feeding, both during growth and in fattening.

Generally at this time with all stock intended for market it is a safe rule to sell whenever a price can be realized that will give a fair per cent. of profit for the feed and care given.

N. J. SHEPHERD, Eldon, Mo.

The only permanent cure for chronic catarrh is to thoroughly expel the poison from the system by the faithful and persistent use of Ayer's Sarsaparilla.

Mitchell & Ramsey announce that they have located at 119 South Third street, St. Joseph, Mo., where they purpose carrying a full line of grass and field seeds for the wholesale and jobbing trade.

Remember that you can get the KANSAS FARMER and the Kansas City Daily Star, both for one year, for \$4. or the KANSAS FARMER and the Kansas City Weekly Star, both for one year, for \$1.20.

Did You Ever See an Indian? Expect not, so send a 2-cent stamp to the General Passenger Agent Colorado Midland Railroad, Denver, and he will send you a fine colored picture of one.

Important to Breeders. Every one interested in improved stock should have the Breeder's Gazette, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one—both papers one year for only (\$2) two dollars; or we will supply the National Stockman and Farmer, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50.

Send for sample copies to the papers direct, and save money and get a big benefit by sending your subscription to KANSAS FARMER, Topeka, Kas. No progressive farmer or breeder can afford at this low price to be without this great trio of farm magazines.

"Dairying for Profit, or the Poor Man's Cow," is practical, was written by a woman who knows what she is talking about, and is cheap—only 10 cents for a 25-cent book, to subscribers for the KANSAS FARMER. Send to this office.

Publishers' Paragraphs.

The city of Bath, Maine, has been for a long period perhaps the principal shipbuilding point in the United States, and its present shipbuilding interests are most important. Mr. Edward C. Plummer contributes a valuable article upon the place to the November number of the New England Magazine, under the title of "Bath, the City of Ships."

A CHARMING BOOK ABOUT OLD VIOLINS. Violinists everywhere will hail with delight the beautifully printed and authoritatively written book about old violins, just published by Lyon & Healy, Chicago.

"Great Personal Events."

A series of articles of unique interest has been undertaken by The Ladies' Home Journal. It is to be called "Great Personal Events," and will sketch the most wonderful scenes of popular enthusiasm and thrilling historic interest which have occurred in America during the past fifty years.

Remember that you can get the KANSAS FARMER and the Kansas City Daily Star, both for one year, for \$4. or the KANSAS FARMER and the Kansas City Weekly Star, both for one year, for \$1.20.

Did You Ever See an Indian? Expect not, so send a 2-cent stamp to the General Passenger Agent Colorado Midland Railroad, Denver, and he will send you a fine colored picture of one.

Important to Breeders. Every one interested in improved stock should have the Breeder's Gazette, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one—both papers one year for only (\$2) two dollars; or we will supply the National Stockman and Farmer, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50.

Send for sample copies to the papers direct, and save money and get a big benefit by sending your subscription to KANSAS FARMER, Topeka, Kas. No progressive farmer or breeder can afford at this low price to be without this great trio of farm magazines.

THE STRAY LIST.

FOR WEEK ENDING OCTOBER 29, 1896.

Marion county—W. V. Church, clerk. STEER—Taken up by Wm. Jolliffe, in Grant tp. (P. O. Marion), October 9, 1896. One red steer, weight about 750 pounds, branded C.O.X. on right side; valued at \$20.

FOR WEEK ENDING NOV'R 5, 1896.

Wallace county—W. E. Ward, clerk.

MARE—Taken up by C. C. Halsey, of Sharon Springs, September 11, 1896, one bay mare, white spot in forehead; valued at \$10.

COLT—By same, one bay colt, white spot in forehead, no marks or brands; valued at \$5.

MARE—Taken up by M. Kelley, of Sharon Springs, June 22, 1896, one black mare, white in forehead, white on front and hind foot, white on left side from fetlock to within inch of hoof; valued at \$10.

Wabaunsee county—J. R. Henderson, clerk.

HORSE—Taken up by E. O. Place, (P. O. Eskridge), September, 1896, one black horse, white spot in forehead, 10 years old; valued at \$10.

MARE—By same, one bay mare, white hind foot, 11 years old; valued at \$10.

MARE—By same, one sorrel mare, 5 years old, hind feet white; valued at \$10.

Marion county—W. V. Church, clerk.

COW—Taken up by E. F. Dutocher, in Center tp., October 17, 1896, one red and white cow, about 10 years old, weight about 800 pounds, unknown brand on left side.

Doniphan county—W. H. Fornbrook, clerk.

PONY—Taken up by H. B. Morgan, in Washington tp. (P. O. Wathena), September 7, 1896, one black mare pony, 6 or 7 years old, left fore foot crippled.

TWO MULES—By same, one bay horse mule, 10 or 12 years old, and one black horse mule, 10 or 12 years old; valued at \$115.

VETERINARY SURGEON.

D. U. B. MURPHY, Veterinary Surgeon. Graduate Ontario Veterinary College, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

LIVE STOCK AUCTIONEERS.

Live Stock Auctioneer, JAS. W. SPARKS, Marshall, Mo.

Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer. Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

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

BEFORE BUYING A NEW HARNESS

Send your address with 2-cent stamp for Illinois Catalogue, giving full description of Single and Double Custom Hand-Made Oak Leather Harness. Sold direct to consumer, at wholesale prices. King Harness Co., No. 87 Church St., Oswego, N. Y.

LADIES I Make Big Wages—At Home. Want all to have same opportunity. The work is very pleasant and will easily pay \$18 weekly. This is no deception. I want no money and will gladly send full particulars to all sending 2c. stamp. Miss M. E. Stebbins, Lawrence, Mich.

Wanted, an Idea. Win or lose think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write John Wedderburn & Co., Patent Attorneys, Washington, D. C. for their \$1,500 prize offer and list of 200 inventions wanted.

THE FAMILY MONEY MAKER!

Worth \$100 a year and more to all who own land, a garden, orchard or conservatory; covers, in plain language, by practical men, the care and cultivation of flowers, fruits, plants, trees, shrubs, bulbs, etc., and tells how to make home grounds attractive.

3 AMERICAN GARDENING 10. America's brightest and most reliable gardening and family paper. Established fifty years. Illus. Weekly. \$1.00 a year. WITH HANDSOME PREMIUM.

To introduce it to new readers we will send AMERICAN GARDENING 3 months (12 numbers) to any address on receipt of 10 cents, in stamps or coin. Sample free.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

DO YOU WANT TO MAKE MONEY? THEN BUY CRIPPLE CREEK STOCKS

NOW! and take advantage of coming advance in prices. Bull Hill Gold Tunnel Stock

we are recommending, and have a limited amount of TREASURY stock, full paid and non-assessable, that we can sell at 3 cents a share.

This Tunnel site runs under the famous Bull Hill and cuts many valuable veins. Eight hundred feet of work already done. Prospectus, map, etc., furnished if desired. Send orders to

THE MECHEM INVESTMENT CO., Colorado Springs, Colo.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, DR. N. S. MAYO, Professor of Veterinary Science, Kansas State Agricultural college, Manhattan, Kas.

RUNNING SORE.—A cow has a running sore on the side of her head, between the eye and ear. It has been there since last spring. It came from a kick. There is a lump nearly the size of one's fist. Is her milk fit for use? Furley, Kas. D. G. T.

Answer.—Open the lump so as to give free drainage. Make a swab on a small stick and swab out the inside of the sore with pure carbolic acid, once only. Then make a solution of one part of carbolic acid in twenty parts of rain water and wash out sore once daily with this. If it doesn't heal in ten days or two weeks, swab it out again with the pure acid. If the cow is in good condition and not feverish the milk would not be affected, but if the cow is thin or her general health affected, the milk should not be used.

Don't WORRY about your health. Keep your blood pure by taking Hood's Sarsaparilla and you need not fear the grip, colds, bronchitis, pneumonia or typhoid fever.

Hood's PILLS are the favorite family cathartic, easy to take, easy to operate.

Thos. Slater has a message for every man on page 15.

A View of Irrigators.

During the Kansas Irrigation Congress at Great Bend, last week, F. W. Litchfield, manager of the Wichita View Co., made a very fine photograph of the Congress, which he will mail to any one interested for only 50 cents

Home-Seekers' Excursions.

Very low rates will be made by the Missouri, Kansas & Texas railway, on November 8 and 17, December 1 and 15, to the South. For particulars apply to the nearest local agent, or address G. A. McNutt, D. P. A., 1044 Union avenue, Kansas City, Mo.

Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for home-seekers.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

Unequaled Service

Denver to Chicago via Kansas City is given via the UNION PACIFIC and Chicago & Alton railways.

Through Pullman Sleepers, Pullman Dining Cars and Free Reclining Chair Cars leave Denver Daily. The Union Pacific is the great through car line of the West. Ask your nearest ticket agent for tickets via this line. E. L. LOMAX, Gen. Pass. and Ticket Agent, Omaha, Neb.

Tours in the Rocky Mountains.

The "Scenic Line of the World," the Denver & Rio Grande railroad, offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the trans-continental traveler the grandest scenery. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman sleepers and tourists' cars between Denver and San Francisco and Los Angeles. Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.

Ho! for Cripple Creek.

Remember that the Chicago, Rock Island & Pacific is the only line running directly from the East to Colorado Springs, the natural gateway to the Cripple Creek District.

Colorado Springs lies at the foot of Pike's Peak at its eastern base, and Cripple Creek is part way down the southwest slope of Pike's Peak and near its western base.

Two all rail routes from Colorado Springs are offered you. One by the Midland railway up Ute Pass, via Summit, to Cripple Creek. Another over the Denver & Rio Grande, via Pueblo and Florence, to Cripple Creek. Take the great Rock Island Route to this wonderful gold mining camp. Maps, folders and rates on application. Address JNO. SEBASTIAN, Gen'l. Pass. Ag't., Chicago.

Horse Owners! Use



GOMBAULT'S Caustic Balsam

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blebs from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

MARKET REPORTS.

Kansas City Live Stock.
KANSAS CITY, Nov. 2.—Cattle—Receipts since Saturday, 6,594 calves, 431; shipped Saturday, 2,193 cattle, 8 calves. The market was steady to 10c higher. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price	No.	Ave. Price
99.....	1,590 \$4.60	127.....	1,374 \$4.45
19.....	1,396 4.30	103.....	1,302 4.15
18.....	1,420 4.15	88.....	1,366 3.90
31.....	1,188 3.80	46.....	1,259 3.75

TEXAS AND INDIAN STEERS.			
No.	Ave. Price	No.	Ave. Price
100.....	1,107 \$3.50	80.....	1,001 \$3.20
25.....	1,082 3.00	24.....	802 2.90
6.....	924 2.50		

NATIVE HEIFERS.			
No.	Ave. Price	No.	Ave. Price
2.....	815 \$3.25	36.....	823 \$3.08
1.....	440 3.00		

NATIVE COWS.			
No.	Ave. Price	No.	Ave. Price
4.....	920 \$2.90	11.....	919 \$2.65
3.....	426 2.40	4.....	1,057 2.35
4.....	860 2.30	2.....	1,030 2.25
1.....	1,055 2.10	1.....	930 1.50

NATIVE FEDDERS.			
No.	Ave. Price	No.	Ave. Price
99.....	997 \$3.20	3.....	926 \$3.00
11.....	892 \$3.00		

Hogs—Receipts since Saturday, 3,172; shipped Saturday, none. The market was 5 to 10c higher. The following are representative sales:

78.....	201 \$3.40	150.....	181 \$3.40	99.....	189 \$3.40
73.....	211 3.40	78.....	183 3.37 1/2	78.....	219 3.31
44.....	168 3.35	56.....	206 3.35	69.....	208 3.32 1/2
39.....	27 3.32 1/2	101.....	162 3.31 1/2	56.....	234 3.32 1/2
63.....	277 3.30	63.....	293 3.30	91.....	230 3.00
43.....	248 3.27 1/2	9.....	351 3.25	60.....	196 3.25
55.....	288 3.25	11.....	406 3.22 1/2	60.....	376 3.20
11.....	378 3.12 1/2	8.....	405 3.12 1/2	12.....	366 3.13 1/2
43.....	106 3.10	16.....	111 3.05	25.....	124 3.00

Sheep—Receipts since Saturday, 4,204; shipped Saturday, none. The market was 10 to 15c higher. The following are representative sales:

469 Col. sh.....	91 \$2.90	549 Col. mix.	93 \$2.50
------------------	-----------	---------------	-----------

Horses—Receipts since Saturday, 93; shipped Saturday, 74. The market was steady on the few private sales to-day, but there was no extended demand or any class. A few southern buyers are looking around and they have several orders to fill. The regular auction sales will begin to-morrow, but there is not much encouragement in the present outlook for the opening day, as nearly all the horse traders are deeply interested in the outcome of the election and many have gone home to vote.

Chicago Live Stock.

CHICAGO, Nov. 2.—Cattle—Receipts, 12,500; market strong, 10c higher; fair to best beefs, \$3.45@5.25; stockers and feeders, \$2.60 2.70; mixed cows and bulls, \$1.25@3.25; Texas, \$2.65@3.50.

Hogs—Receipts, 17,000; market generally 10c higher; light, \$3.20@3.60; rough packing, \$3.10 @3.20; mixed and butchers, \$3.25@3.60; heavy packing and shipping, \$3.25@3.55; pigs, \$2.50 @3.50.

Sheep—Receipts, 12,000; market 10c higher; lambs 15 to 25c higher; native, \$1.75 @3.40.

St. Louis Live Stock.

ST. LOUIS, Nov. 2.—Cattle—Receipts, 2,000; market strong to 10c higher.

Hogs—Receipts, 4,500; market 10c higher; Yorkers, \$3.40 @3.45.

Sheep—Receipts, 1,000; market 10c higher.

Chicago Grain and Produce.

	Nov. 2.	Opened	High'st	Low'st	Closing
Wh't—Oct.....	73 3/4	73 3/4	73 3/4	73 3/4	73 3/4
Dec.....	73 3/4	73 3/4	73 3/4	73 3/4	73 3/4
May.....	78 1/2	79 1/2	78	79 3/4	79 3/4
Corn—Oct.....	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2
Dec.....	25 1/2	25 1/2	25 1/2	25 1/2	25 1/2
May.....	28 1/2	29 1/2	28 1/2	29 1/2	29 1/2
Oats—Oct.....	18	18 1/2	18	18 1/2	18 1/2
Dec.....	18 1/2	19 1/2	18 1/2	19 1/2	19 1/2
May.....	21 1/2	22 1/2	21 1/2	22 1/2	22 1/2
Pork—Oct.....	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2
Dec.....	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2
Jan.....	8 05	8 0	7 97 1/2	8 02 1/2	8 02 1/2
Lard—Oct.....	4 25	4 25	4 22 1/2	4 25	4 25
Dec.....	4 30	4 30	4 27 1/2	4 27 1/2	4 27 1/2
Jan.....	4 52 1/2	4 52 1/2	4 47 1/2	4 50	4 50
Ribs—Oct.....	3 72 1/2	3 75	3 72 1/2	3 75	3 75
Dec.....	3 72 1/2	3 75	3 72 1/2	3 75	3 75
Jan.....	3 97 1/2	3 97 1/2	3 95	3 95	3 95

Kansas City Grain.

KANSAS CITY, Nov. 2.—There was not enough wheat offering on change to-day to interest buyers. Prices were nominally 1 to 2c higher. The very small receipts were attributed to the haste of shippers to get wheat to other markets before the change in rates. Some wheat was sold for export—No. 2 hard at 73c Galveston and No. 3 hard at 70c New Orleans.

Receipts of wheat here to-day, 25 cars; a year ago, 157 cars.

Sales were as follows on track: Hard, No. 2, nominally 65c; No. 3, 2 cars 63 1/2c, 2 cars 62 1/2c; No. 4, 1 car 60c, 1 car 59c, 2 cars 58c, 3 cars 57 1/2c; rejected, 2 cars 52 1/2c; no grade, nominally 40 @ 45c. Soft, No. 2 red, nominally 81 1/2c; No. 3 red, nominally 74 @ 77c; No. 4 red, nominally 62 @ 72c; rejected, nominally 50 @ 60c. Spring, No. 2, 1 car 64c; No. 3, 1 car 61c.

Corn sold at irregular prices. Some early sales of old mixed were at 21c. Later it sold at 19c and 5,000 bushels November corn sold at 19c. For the last half of November 5,000 bushels white corn sold at 19 1/2c. Most of the

BROOMCORN ESTABLISH'D 1873

ON CONSIGNMENT OR SOLD DIRECT. We carry the largest stock of Broom Manufacturers' Supplies in the United States. Correspondence solicited. J. P. GROSS & CO., 239-241 Kinzie St., Chicago, Ill.

BROOMCORN F. JELKE & SON

Established 1850. 53 Walnut St., Cincinnati, O. Commission Merchants and Dealers in Broomcorn and all kinds of Broom Materials and Machinery.

Ship Your Produce Direct TO MARKET.

It is the only way to get the true value of what you have to sell. It is no longer an experiment. Our shippers testify to it every day. We receive and sell: Butter, Eggs, Poultry, Veal, Game, Hay, Grain, Beans, Seeds, Potatoes, Broom Corn, Hides, Wool, Green and Dried Fruit, Vegetables, or any thing you may have to ship. We make prompt sales at the highest Market Price and send you returns. Write us for Prices, Shipping Tags, or any information you may want.

SUMMERS, MORRISON & CO. Commission Merchants, 174 South Water Street CHICAGO, ILL. References: Metropolitan National Bank, Chicago, and this paper.

The Kansas City Stock Yards

are the most complete and commodious in the West, and second largest in the world! The entire railroad system of the West and South-west centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts for 1895.....	1,689,652	2,457,697	864,713	52,607	103,368
Slaughtered in Kansas City.....	22,107	2,170,827	567,015		
Sold to feeders.....	392,269	1,876	111,445		
Sold to shippers.....	218,505	273,359	99,784		
Total Sold in Kansas City, 1895.....	1,533,234	2,446,302	748,244	41,588	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED. O. F. MORSE, E. E. RICHARDSON, H. P. CHILD, V. Pres. and Gen. Manager. Secretary and Treasurer. Assistant Gen. Manager. EUGENE RUST, Gen. Superintendent. W. S. TOUGH & SON, Managers HORSE AND MULE DEPARTMENT.

offerings this morning were new corn. Exporters bid 23 1/2c New Orleans for No. 2 corn. Receipts of corn to-day, 86 cars; a year ago 101 cars.

Sales by sample on track: No. 2 mixed, 2 cars old, special, 21c, 3 cars 19c; No. 3 mixed, 5 cars 18 1/2c, 5 cars 18c; No. 4, 4 cars 17c, 8 cars 18c; no grade, 2 cars 17c, 3 cars 16c; No. 2 white, 2 cars 22c; No. 3 white, nominally 21c; No. 4, 3 cars 19c.

Oats sold early at steady prices, but closed with lower bids and some samples unsold. Receipts of oats to-day, 25 cars; a year ago 29 cars.

Sales by sample on track, Kansas City: No. 2 mixed, nominally 16c; No. 3 mixed, nominally 14 @ 15c; No. 4 mixed, nominally 12 @ 13c; No. 2 white, old, nominally 20 1/2 @ 22c; new, nominally 18 @ 18c; No. 3, 5 cars 15 1/2c, 2 cars 15c; No. 4, 2 cars 13c.

Hay—Receipts, 51 cars; the market is steady. Choice timothy, \$8.00 @ 8.50; No. 1, \$7.00 @ 7.50; No. 2, \$5.50 @ 6.00; clover, mixed, No. 1, \$6.00 @ 6.50; No. 2, \$5.00 @ 5.50; choice prairie, \$5.00 @ 5.50; No. 1, \$4.50 @ 5.00; No. 2, \$4.00 @ 4.50; No. 3, \$2.00 @ 3.00.

St. Louis Grain.

ST. LOUIS, Nov. 2.—Receipts, wheat, 48,441 bu., last year, 118,000 bu.; corn, 337,189 bu., last year, 38,000 bu.; oats, 106,000 bu., last year, 42,000 bu.; shipments, wheat, 52,000 bu. corn, 17,000 bu.; oats, 18,193 bu. Closing prices: Wheat—Cash, 76c; December, 78 1/2c; May, 83 1/2c. Corn—Cash, 22 1/2 @ 23c; December, 23 1/2 @ 23 3/4c; May, 27c. Oats—Cash, 16 1/2c; December, 16 1/2c; May, 22 1/2c.

Kansas City Produce.

KANSAS CITY, Nov. 2.—Butter—Creamery, extra fancy separator, 15c; firsts, 15c; dairy, fancy, 12c; fair, 10c; store packed, fancy, 8c; packing stock, 6c; country roll, fancy, 12c; medium to common, 8 @ 10c.

Eggs—Strictly candled stock, 14 1/2c per doz. Poultry—Hens, 5c; roosters, 10c each; spring, 5c; coarse springs and roosters, 4 1/2c; broilers, from 1 1/2 to 2 lbs., 6c; turkeys, over 7 lbs., 7c; under 7 lbs. not wanted; spring and old ducks, 6c; spring geese, 5c; pigeons, 75c per doz.; squabs, 75c per doz.

Apples—Choice eating stock sells from 40 @ 55c a bu.; inferior, 30 @ 35c a bu.; cooking stock, 20 @ 35c; Ben Davis 2 @ 30c in a small way, according to quality; Huntsman's Favorite, 75c per bu. for fancy stock in a small way; shippers are paying for Northern Spy \$1.00 a bbl. in car lots; for fancy fall and winter varieties, \$1.00 @ 1.25 a bbl.; Jonathans, \$1.50 a bbl. for fancy and 75c @ \$1.00 for No. 2 stock; New York and Michigan stock, \$1.00 @ 1.50 per bbl. Grapes, Ohio, Pennsylvania and New York Concord, 9-lb. baskets, jobbing, choice stock, 9 @ 11c; inferior, 8c; leaking stock, 6c; small way, 10 @ 12 1/2c; Delaware, 4-lb baskets, 10c; Niagara, 9-lb., 15c a basket.

Potatoes—In a small way prices ruled 20c; in round lots, 18 @ 19c; in car lots, 17 1/2c. Sweet potatoes, new stock, 20 @ 25c per bu. in a small way.

HORSES SOLD AT AUCTION

on Tuesday, Wednesday and Thursday of each week. Private sales every day at the Kansas City Stock Yards Horse and Mule Department. The largest and finest institution in the United States. Write for free market reports.

W. S. TOUGH & SON, Managers, KANSAS CITY, MO.

When writing to advertisers please mention KANSAS FARMER.

Wm. A. Rogers. Robt. E. Cox. Fred W. Bishop.



Live Stock Commission Merchants. Rooms 265 and 266 Live Stock Exchange Building, Kansas City, Mo.



Will control the most vicious horse. Sales Greater Than Ever. Sample mailed XC for \$1.00. Stallion Bits 50 cts. extra. Nickel, \$1.50.

RACINE MALLEABLE IRON CO., RACINE, WIS.

INFORMATION WORTH ITS WEIGHT!

For your name and address on a postal card, we will tell you how to make the best wire fence on earth, horse-tight, bull-tight and pig-tight, at the actual wholesale cost of wire. Kitzelman Bros. Box B. Ridgeville, Ind.



The Latest Returns!

Though incomplete, show that every State has surely gone for the PAGE. Where it was well known there was practically no opposition, and as it is a "stayer," this settles the question for several terms.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



Soil, roots and plants taken up together, preventing stunting or injury. Vegetables, flowers, strawberries, tobacco, small nursery trees, etc., can be moved at all seasons. Invaluable for filling vacancies. Transplanter with blade 2 inches in diameter, \$1.25; same with 3-inch blade, \$1.50. SPECIAL PRICE with the manufacturers we are able to offer the Transplanter and KANSAS FARMER one year for price of Transplanter alone. Send \$1.25 and we will mail KANSAS FARMER to you and send you the Transplanter by express. Or call at FARMER office and get the Transplanter and save 25c. express charges. Address KANSAS FARMER CO., Topeka, Kas.

PENNYROYAL PILLS

Chichester's English Diamond Brand. Original and Only Genuine. SAFE, always reliable. LADIES ask Druggist for Chichester's English Diamond Brand in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Refuse dangerous substitutions and imitations. At Druggists, or send 4c. in stamps for particulars, testimonials and "Relief for Ladies." in letter, by return Mail, 10,000 Testimonials. Name Paper. Chichester Chemical Co., Madison Square, Philada., Pa. Sold by all Local Druggists.

The Poultry Yard

THE POULTRY STANDARD.

The Explanation of How the "Judging" of Fowls Is Done.

The "American Standard of Perfection" is a book containing a list of every recognized breed of poultry, and of the varieties of the several breeds. It describes in detail the proper color and shape of an ideal fowl, and gives a certain value to the shape and plumage in every part of the body of this ideal fowl. The body of the fowl is arbitrarily divided into parts, called sections, and each section is given such value that if all of them were perfect in shape and color the total would be 100 points, which is perfection. As no fowl is ideally perfect, the sections are given so high a value that it is altogether improbable that any fowl will ever be perfect in every part, and therefore no fowl will ever reach perfection. Expert judges are employed to examine poultry that is exhibited at poultry shows and a good many of the fairs, and they pick out the defects and mark them against the fowls under examination, section after section, and when this is finished, the value of the defects is added up and the total deducted from perfection (100), and the remainder is the score of the bird. When a bird scores less than 85 it is called disqualified, and cannot be considered in the awarding of prizes.

The description used in the "Standard" are copyrighted, and we cannot use them, but to give you an idea of how the judging of poultry is done, we will imagine that there is a breed called American Beauties, with the following values fixed on the sections:

Symmetry	7
Weight	7
Condition	8
Head—shape 3, color 3	8
Comb	8
Wattles and ear-lobs	8
Neck—shape 4, color 6	10
Back—shape 4, color 4	8
Breast—shape 5, color 5	10
Body and fluff—shape 5 color 3	8
Wings—shape 4, color 4	8
Tail—shape 4, color 4	8
Legs and toes	8
Total	100

A given fowl may be perfect in most sections, but not one has ever been found that was perfect in all of them. The nearest to a perfect fowl that has ever been scored was 99½ points, if I remember correctly, and the fowl was sold for \$200.

It may be asked what all this has to do with practical qualities. It must be confessed that the "Standard" does not encourage any breeder to breed with a view to anything but color of feather and weight, and that it does not put any premium on egg production. This is the weak point in it, and will be until that is remedied and encouragement is given to the breeders to look to egg production.

As matters now stand, the breeder of pure-bred fowls is compelled to regard shape and color before anything else, and it requires the sacrifice of "Standard" points sometimes in order to keep the best layers. As long as this state of affairs lasts the "fancier" will be handicapped in his work of improving fowls and producing egg-laying strains. The pure breeds come into favor because they are good layers in the first place, and keep in front because they transmit this tendency to their progeny, but improvement will not go on as rapidly under the present system as it would if some inducement was made to produce egg-laying strains first and beauty afterward.—Farm and Fireside.

Lime for the Poultry Yard.

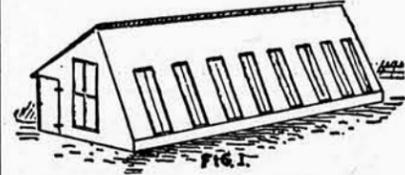
Air-slacked lime scattered about the house or yards will prevent disease, in many instances, and always prove of benefit in any case. Vermin is destroyed by the dusting of roosts, walls and floors with this penetrating, purifying powder; while in the outer runs the earth is cleansed of much of the poisonous quality by use of lime. No harm comes from the lime habit, but on the contrary a great deal of good may be effected by contracting it. Cleanliness is the key-note, and the employment of agents of this sort is the right thing.

All scraps from the table can be used to advantage by giving them to the chickens. Even potato parings boiled are relished by fowls, and are one of the best foods for them.

HOUSE FOR POULTRY.

Description of a Structure That Has Proved Very Satisfactory.

The illustrations show a perspective and end view of a house that has proven very satisfactory—warm, well lighted, convenient and cheap. Sills, plates and posts are four by four, the rest of the



PERSPECTIVE AND END VIEW.

frame two by four scantling. Matched lumber or siding for outside. Line inside with building paper and ceiling, or lath and plaster. The latter is most easily kept free from vermin. In the sectional view, a ceiling is shown overhead. The space above may be used as a means of ventilation. A few apertures through the ceiling will remove foul air into this space, and it can be carried out

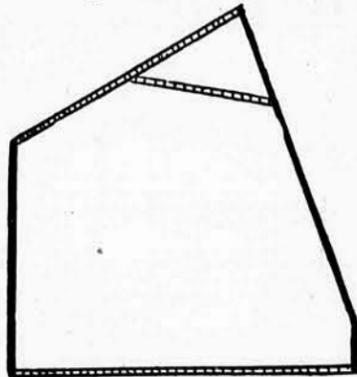


Fig. 2.

SECTIONAL VIEW.

through ventilators or gable windows. This avoids all drafts.

The windows are in the south or sloping side. A convenient size for a sash is one containing two rows of eight by ten glass, five in a row, each overlapping the one below in the style of hot-house sashes. One window to five feet in length of building will give good light.

Of course the interior arrangement depends largely upon the fancy of the owner. The floor may be either cement or earth. The former is preferred by the man who cares for the flock, the latter by the hens. A width of 13 feet is recommended. This will admit of an alley three feet wide along the north side, the remainder to be divided into pens of the size desired.—Ohio Farmer.

Sure Indications of Disease.

If chickens trail their wings or become droopy, look for lice; in nine cases out of ten they are the cause. If your little chicks get troubled with lice, dip your finger in kerosene oil and rub it on the top of their heads. Tobacco leaves or tobacco in most any form placed in the bottom of the nest of a sitting hen keeps the lice away. A remedy for a lice-infested hen house is burning sulphur in it. The house must be tight and ventilators closed; then put a pound of sulphur on some live coals and close the door tightly and leave it closed for an hour or more. When whitewashing the hen house, if lice are troublesome add a little carbolic acid to the whitewash.—Farmers' Voice.

How's This!

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

F. J. CHENEY & CO., Props., Toledo, 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, O. WARDING, KINMAN & MARVIN, Wholesale Druggists, Toledo, O.

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

Five Little Books.

All interesting and profitable reading. Books about "Texas," "Homes in the Southwest," "Glimpses of Arkansas," "Truth About Arkansas" and "Lands for Sale Along the Cotton Belt Route." If you are seeking to better your location, send 10 cents to pay postage on any or all of these books, to E. W. La Beaume, Gen. Pass. Agent, Cotton Belt Route, St. Louis, Mo.

Young men or old should not fail to read Thos. Slater's advertisement on page 15.

- ARMSTRONG & McKELVY Pittsburgh.
- BEYMER-BAUMAN Pittsburgh.
- DAVIS-CHAMBERS Pittsburgh.
- FAHNESTOCK Pittsburgh.
- ANCHOR Cincinnati.
- ECKSTEIN Cincinnati.
- ATLANTIC New York.
- BRADLEY New York.
- BROOKLYN New York.
- JEWETT New York.
- ULSTER New York.
- UNION New York.
- SOUTHERN Chicago.
- SHIPMAN Chicago.
- COLLIER Chicago.
- MISSOURI St. Louis.
- RED SEAL St. Louis.
- SOUTHERN St. Louis.
- JOHN T. LEWIS & BROS. CO Philadelphia.
- MORLEY Cleveland.
- SALEM Salem, Mass.
- CORNELL Buffalo.
- KENTUCKY Louisville.

IT IS JUST AS EASY, and a heap more sensible, to use a little care in the selection of materials when having painting done and secure the best result as it is to take chances and use mixtures of which you know nothing. To be sure of getting

Pure White Lead

examine the brand (see list genuine brands). Any shade or color desired can be easily obtained by using NATIONAL LEAD Co.'s brands of Pure White Lead and Tinting Colors.

Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

NATIONAL LEAD CO.,
1 Broadway, New York.

INVALUABLE TO HORSE OWNERS.

Because it is always reliable. It is a speedy, safe and positive cure for Colic, Curb, Splints, Bruises, Shoe Bolts, Calks of all kinds, Contracted and Knotted Cords, etc. Used and highly recommended by prominent horsemen.

TUTTLE'S ELIXIR

Is a sure specific for lameness. It never produces any scars or blemishes. Warranted to satisfy.

Readville Trotting Park, Mass., March 23, 1893.

Dr. S. A. Tuttle, V. S.—Dear Sir: I have used your Elixir for the past ten years, in the diluted form, for a leg and body wash. I consider it the best wash for keeping horses from soiling up. Horses done up with this wash are much less liable to take cold than when done up with witch hazel or any other wash I ever used.

Tuttle's Family Elixir cures Rheumatism, Sprains, Sore Throat and all joint affections.

Sample of either Elixir sent free for three 2-cent stamps to pay postage. 50 cents buys either Elixir of any druggist, or sent direct on receipt of price.

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



Used and endorsed by Adams Express Co.

A SMALL THRESHING MACHINE:

Something new for the farmer, who can now do his own threshing, with less help and power than ever before. We also make a full line of Sweep Powers, Tread Powers, etc.



THE COLUMBIA THRESHER has great capacity, and can be run by light power. Send for illustrated Catalogue, giving testimonials.

THOMPSON'S



GRASS SEEDER

Sows all kinds of Clover, Timothy, Alfalfa, Red Top, Flax and all Grass Seeds, any quantity, evenly, accurately, 20 to 40 acres a day. In wet, dry or windy weather. Weight 40 lbs. HOPPER FOR OATS, WHEAT, etc.

Catalogue O. E. THOMPSON & SONS FREE, 23 River Street, YPSILANTI, MICH. TRUMBULL SEED CO., Gen. Agts., KANSAS CITY, MO.

DEAD • EASY!

The Great Disinfectant Insecticide KILLS HEN LICE

By simply painting roosts and dropping-boards. Kills Mites and Lice, cures Colds and Cholera, also kills Hog Cholera germs. If your grocer or druggist does not keep it, have them send for it.

THOS. W. SOUTHWARD, Gen. Agent, 528 Delaware St., Kansas City, Mo.

INCUBATION

is the first step in the poultry business and much of future success depends upon its completeness. There is no failure where RELIABLE INCUBATOR is used. It is fully warranted and is the product of twelve years of experience. It has never been beaten in a show. It is not like its competitors—it is better.

Send for new book on poultry. Send 10c for it. RELIABLE INCUBATOR AND BROODER CO. QUINCY, ILL.

THE IMPROVED VICTOR INCUBATOR

Hatches Chickens by Steam Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars free.

GEO. ERTEL CO., Quincy, Ill.

BED-WETTING Cured. Box FREE.

Dr. F. E. MAY, Arrowsmith, Ill.

To Cripple Creek

VIA COLORADO SPRINGS

The Chicago, Rock Island & Pacific Railway is

4 hours quicker

To Cripple Creek than any other line.

Full particulars by addressing JOHN SEBASTIAN, G. P. A., Chicago.

CRIPPLE CREEK

The Santa Fe Route is the most direct and only through broad-gauge line from Chicago and Kansas City to the celebrated Cripple Creek gold mining district. Luxurious Pullmans, free chair cars, fastest time, and low rates.

GOLD! GOLD!!

Address G. T. Nicholson, G.P.A., A., T. & S. F. Ry., Monadnock Blk., Chicago, or W. J. Black, A. G. P. A., Topeka, Kas., and ask for free copy of profusely illustrated book descriptive of Cripple Creek. It is well worth reading.

SANTA FE ROUTE

\$4.00 DO YOU WANT A JOB SEND PER DAY 25c EASILY MADE STAR HOME FASTENER CO. CHICAGO, ILL.

"JONES HE PAYS THE FREIGHT."
Farm and Wagon SCALES.
 United States Standard. All Sizes and All Kinds.
 Not made by a trust or controlled by a combination.
 For Free Book and Price List, address
JONES OF BINGHAMTON,
 Binghamton, N. Y., U.S.A.

This is the **QUAKER CITY GRINDING MILL**
 For CORN and COBS, FEED, and TABLE MEAL, improved for '96-'97.
 Send for all mills advertised. Keep the best—return all others.
A.W. STRAUB & CO.
 Philada., Pa., and 41 S. Jefferson St., Chicago, Ill.

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

LIGHTNING WELL MACH'Y
 PUMPS, AIR LIFTS, GASOLINE ENGINES.
 CIRCULARS FREE.
 THE AMERICAN WELL WORKS.
 AURORA, ILL. - CHICAGO, - DALLAS, TEX.

Portable Well Drilling MACHINERY
 Established 1867. Covered by patents. Machines drill any depth both by steam and horse power. We challenge competition. Send for free illustrated catalogue.
 Address, **KELLY & TANEYHILL,** WATERLOO, IOWA.
 When you write mention Kansas Farmer.

"Eli" Baling Presses
 38 Styles & Sizes for Horse and Steam Power
 48 Inch Feed Opening
 Power Leverage 64 to 1
 Send for 64 page illustrated catalogue.
COLLINS PLOW CO., 1120 Hampshire St., Quincy, Ill.
KANSAS CITY PLOW CO.,
 Gen. Southwestern Agts., Kansas City, Mo.

RUSSELL'S STAPLE PULLER AND WIRE SPLICER
 A combination tool used in repairing and removing wire fences. Price \$1.25. Drives and pulls staples, cuts and splices wire. Its special use is in building and repairing wire fences, but may be used for many different purposes about a farm. Saves its cost in one day's work. You can't afford to be without it.
 Ask your hardware merchant for it, or address
Russell Hardware & Implement Manuf'g Co., Kansas City, Mo.

THE OLD RELIABLE PEERLESS FEED GRINDERS
 Grinds more grain to any degree of fineness than any other mill. Grinds ear-corn, oat, etc., fine enough for any purpose. Warranted not to choke. We warrant the Peerless to be **THE BEST AND CHEAPEST MILL ON EARTH.**
 Write us at once for prices and agency. There is money in this mill. Made only by the **STEVENS MANUFACTURING CO.,** Joliet, Ill.
 Jobbers and Manufacturers of **WAGONS, FARM MACHINERY, WINDMILLS** &c. Prices lowest. Quality best.
 When you write mention Kansas Farmer.

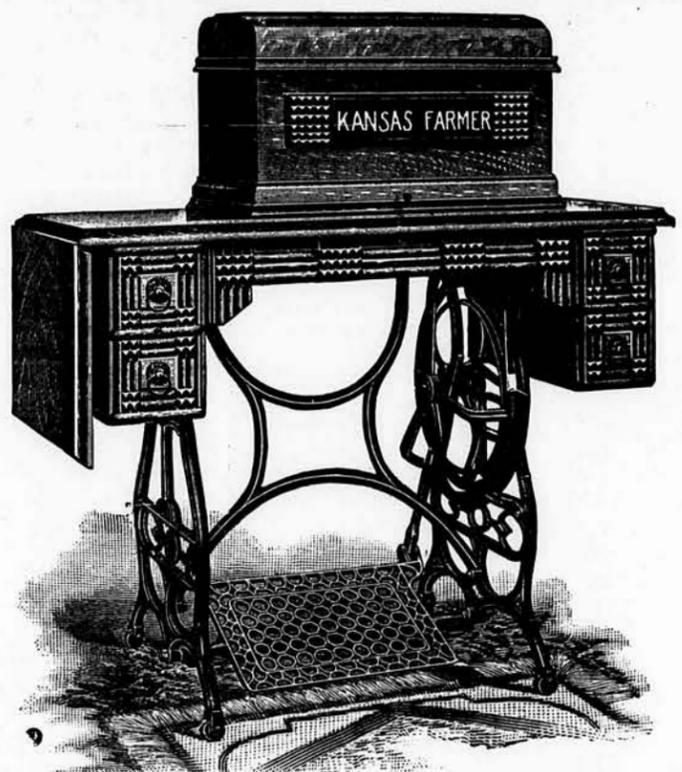
16 oz. to 1 lb. U. S. Standard
 Gold, Silver or Currency buys the best Scales made at lowest prices. Don't be humbugged by Agents of a Trust, Buy of the Manufacturers.
 Hundreds of specialties at less than wholesale prices, viz: Sewing Machines, Organs, Pianos, Elder Mills, Carriages, Carts, Buggies, Harness, Saws, Bone Mills, Letter Presses, Jack Screws, Trucks, Anvils, Hay Cutters, Press Stands, Feed Mills, Stoves, Drills, Road Plows, Lawn Mowers, Coffee Mills, Forges, Lathes, Dump Carts, Corn Shellers, Hand Carts, Engines, Tools, Wire Fence, Fanning Mills, Crow Bars, Rollers, Watches, Clothing & Hay, Stock, Elevator, Railroad, Platform and Counter SCALES, Hay, Send for free Catalogue and see how to Save Money. 151 S. Jefferson St. **CHICAGO SCALE CO.,** Chicago, Ill.
 When you write mention Kansas Farmer.

WE MAKE WHEELS, TOO!

We make them easy-running, durable, satisfactory, and the finish is far beyond any other you have ever seen.
 Our Catalogue gives you a full description. If you want one we will send it, if you will drop us a line.
National Sewing Machine Co., Belvidere, Ill.

LIGHTNING HAY PRESS
STEEL
 Special prices.
Kansas City Hay Press Co., 129 Mill St. Kans. City Mo

\$20 This Machine and Kansas Farmer one year **\$20**
THE
Kansas Farmer Sewing Machine



Finished in Either Oak or Walnut. Freight Charges Prepaid to All Points East of the Rocky Mountains.

High Arm Sewing Machine. This machine is of the same high grade that is usually sold by agents and dealers for from \$45 to \$50.
We Claim for It That it has all the good points found in all other machines of whatever make; that it is as light running a machine as any made; that every part is adjustable and all lost motion can be readily taken up; that it has the simplest and most easily threaded shuttle made; that all the wearing parts are of the best case-hardened steel.
The Attachments supplied without extra charge are of the latest design, interchangeable, and constructed to slip on the presser-bar. They are made throughout of the best steel, polished and nickel-plated, and there is not a particle of brass or other soft metal or a single soldered joint about them. They consist of Ruffler, Tucker, Binder, Braider Foot, Under Braider Slide Plate, Shirring Side Plate, Four Hemmers of assorted widths, Quilter, Thread-Cutter, Foot Hemmer and Feller.
The Accessories include twelve Needles, six Bobbins, Oil Can filled with oil, large and small Screwdrivers, Sewing Guide, Guide Screw, Certificate of Warranty good for five years, and elaborately illustrated Instruction Book.
Guarantee: We give with it the manufacturers' guarantee, who agree to replace at any time in **TEN YEARS** any part that proves defective.

\$20 This Machine and Kansas Farmer one year **\$20**
 —ADDRESS—
KANSAS FARMER CO., TOPEKA, KAS.

TO THE EAST
CHICAGO, ROCK ISLAND & PACIFIC RAILWAY.

The Rock Island is foremost in adopting any plan calculated to improve speed and give that luxury, safety and comfort that the popular patronage demands.
 Its equipment is thoroughly complete with Vestibuled Trains,
BEST DINING CAR SERVICE IN THE WORLD,
 Pullman Sleepers, Chair Cars, all the most elegant and of recently improved patterns. Its specialties are
FAST TIME, COURTEOUS EMPLOYEES, FIRST-CLASS EQUIPMENT and FIRST-CLASS SERVICE GIVEN.
 For full particulars as to Tickets, Maps, Rates, apply to any Coupon Ticket Agent in the United States, Canada or Mexico or address
JOHN SEBASTIAN, G. P. A., CHICAGO, ILL.

Burlington Route
SOLID THROUGH VESTIBULED TRAINS
 Kansas City, St. Joseph, Leavenworth, Atchison, TO ST. LOUIS, CHICAGO, OMAHA, PEORIA, ST. PAUL & MINNEAPOLIS. WITH Dining Cars, Sleepers and Chair Cars (Seats Free).
 CONNECTIONS MADE AT St. Louis, Chicago and Peoria FOR All Points East, South and Southeast.
 L. W. Wakeley, G. P. A., ST. LOUIS, MO.
 Howard Elliott, Gen. Mgr., ST. JOSEPH, MO.
 H. D. Dutton, T. P. A., ST. JOSEPH, MO.
 H. C. Orr, A. C. P. A., KANSAS CITY, MO.

SPECIALTY! Private Diseases and Diseases of the Rectum. Correspondence solicited. **DR. WM. H. RIGHTER,** 503 Kansas Ave., Topeka, Kas.



Vitality Men Restored.
 Falling Sexual Strength in old or young men can be quickly and permanently cured by me to a healthy vigorous state. Sufferers from.....
NERVOUS DEBILITY, WEAKNESS, VARICOCELE,
AND ALL WASTING DISEASES should write to me for advice. I have been a close student for many years of the subject of weakness in men, the fact is, I was a sufferer myself. Too bashful to seek the aid of older men or reputable physicians I investigated the subject deeply and discovered a simple but most remarkably successful remedy that completely cured me. I want every young or old man to know about it. I take a personal interest in such cases and no one need hesitate to write me as all communications are held strictly confidential. I send the recipe of this remedy absolutely free of cost. Do not put it off but write me fully at once, you will always bless the day you did so. Address
THOMAS SLATER, Box 960, Shipper of Famous Kalamazoo Celery, KALAMAZOO, MICH.
HENRY W. ROBY, M. D., SURGEON.
 Office: 730 Kansas Ave., TOPEKA, KAS.

Special Want Column.

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

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

MEADOW BROOK HERD SHORT-HORNS.—Registered bulls, calves and yearlings for sale. Address F. C. Kingsley, Dover, Kas.

FOR SALE.—Twenty thousand apple seedlings. No. 1, \$2 per 1,000, extra fine; No. 2, \$1.25 per 1,000. Douglas County Nursery, Lawrence, Kas. Wm. Plasket & Son.

FOR SALE.—One hundred and sixty acre farm, one and a half miles from Bushong station, Lyon county, Kansas. Good spring. Price \$8 per acre. J. B. McAfee, Topeka, Kas.

EXCHANGE.—Lands in southwest Missouri for young horses. C. S. Calhoun, Pratt, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka

WANTED.—Buyers for Large English Berkshires gilts, bred or ready to breed to son of imported boar. Bargains! O. P. Updegraff, North Topeka, Kas.

SHAWNEE COUNTY CIDER MILL.—Bring your apples to my cider mill, three miles west of Kansas Ave., on Sixth street road. My mill will be in operation every Tuesday, Thursday and Saturday till November. Henry McAfee Topeka.

WANTED.—Buyers for Large English Berkshires and improved types of Poland-Chinas, from prize-winners, at farmers' prices. Riverside Stock Farm, North Topeka, Kas.

NEW CROPS OF ALFALFA, BLUE GRASS, TIMOTHY, clovers, rye and other grains and seeds bought and sold. Correspondence solicited. Kansas Seed House—F. Barteldes & Co., Lawrence, Kas.

FOR SALE AT SPECIAL PRICES.—Hay outfits, carriers, forks, etc. Inquire at the store of F. W. Griggs & Co., 208 W. Sixth St., Topeka, Kas.

TREES AND PLANTS.—The Vinland Nursery will make low prices for fall and spring trade. Address W. E. Barnes, Vinland, Douglas Co., Kas.

SHORT-HORN BULLS.—Cruickshank-topped, for sale. Choice animals of splendid breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

EGGS FOR HATCHING.—See advertisement elsewhere. Belmont Stock Farm.

FOR SALE OR TRADE.—One hundred and sixty acre farm in Graham county, Kansas. Nice, smooth land. No incumbrance. Also 160 acre farm in Scott county, Kansas. Smooth land. No incumbrance. I will sell cheap. Address Thomas Brown, Box 55, Palmer, Kas.

ALFALFA SEED.—Crop of 1896. Pure and fresh. Write for prices. McBeth & Kinnison, Garden City, Kas.

MOESER ICE AND COLD STORAGE CO.—Topeka, have just completed their new cold storage building, on the latest modern plan, and now have the best facilities for storing all kinds of fruits, butter, eggs, etc. Railroad switch to storage building. Car-load lots unloaded free of charge. Write for prices.

WANTED.—Sale bills, horse bills, catalogues and other printing. A specialty at the Mail job printing rooms, 900 North Kansas Ave., North Topeka.

SPECIAL WANT COLUMN--CONTINUED.

FOR SALE.—A complete retail dairy business in Topeka. W. J. Rickenbocker, Seabrook, Kas.

WANTED.—Salesmen for oils and specialties. Refinery, 975 Giddings Ave., Cleveland, Ohio.

FOR SALE.—Eighty-eight acres of the best bottom land in Missouri and in the best stock range; well improved; about fifty acres in cultivation, balance in good timber. Price \$1,350. Address John O'Toole, Fisk, Stoddard Co., Mo.

THOROUGHBRED POLAND-CHINAS.—For sale, twenty young males, Black U. S., Corwin, Wilkes and King Butler strains. Wm. Maguire, Haven, Kas.

FOR SALE.—One hundred high-grade Shropshire ewes, choice ones. Also some choice high-grade Jersey cows. E. W. Melville, Eudora, Kas.

FOR SALE.—Farms in Morris, Osage, Lyon, Bourbon, Cherokee, Labette, Neosho, Anderson, Montgomery, Coffey, Woodson and many other counties for sale on eight years' time. No interest asked or added in. Write for new circulars with descriptions and prices. Hal W. Nelswanger & Co., Topeka, Kas.

THOS. B. SHILLINGLAW, Real Estate and Rental Agency, 116 East Fifth St., Topeka, Kas. Established in 1884. Calls and correspondence invited

Commercial Collections a Specialty. H. C. ROOT, Attorney at Law, 104 Sixth Ave. East, Topeka, Kas. Practices in all State and federal courts.

GRASS AND FIELD SEEDS MITCHELLHILL & RAMSEY, St. Joseph, Mo.

ADAM'S HARD-WOOD CRIBS.



The only cribs endorsed by Kansas State Board of Agriculture. Cheap as fencing and made of hard-wood and best galvanized steel wire with patent door.

Made in four sizes, of light weight and take fourth class freight. Send for descriptive circular and special prices for first fifteen days in November.

W. E. CAMPE SUPPLY CO., General Agents and Distributors for Kansas, 606 Broadway, Kansas City, Mo.

J. G. Peppard MILLET CANE SEEDS CLOVERS TIMOTHY CRASS SEEDS. 1400-2 Union Avenue, KANSAS CITY, MO.

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

The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 2844, Black Joe 2863, World Beater and King Hadley. For sale an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly bred sows. Inspection or correspondence invited.

ELM BEACH FARM POLAND-CHINA SWINE

The home of the great breeding boar, SIR CHARLES CORWIN 33095. Our 1896 crop of pigs are by six different boars and out of fashionably bred sows, including such grand individuals as the prize-winning \$500 Lady Longfellow 34099 (S.), that has eight pigs by the prize boar, King Hadley. STOCK FOR SALE at all times and at very reasonable prices. We also breed Short-horn cattle. Write or come and see us. IRWIN & DUNCAN, Wichita, Sedgwick Co., Kas.

PUBLIC SALE OF FIFTY HEAD OF POLAND-CHINAS! TO BE HELD AT FARM PEARL, KAS., THURSDAY, NOVEMBER 12, 1896.

The offering consists of seven yearling boars, twelve bred sows, and balance spring pigs, both sexes, good individuals and breeding. Send for catalogue. J. H. TAYLOR, Pearl, Dickinson Co., Kansas. COL. S. A. SAWYER, Auctioneer.

WE CAN MAKE YOU ANYTHING IN CAST-IRON, MODELS, PATTERNS, GEARS, ETC. TOPEKA: FOUNDRY, TOPEKA, KANSAS.

Please mention "Kansas Farmer" when writing to our advertisers!

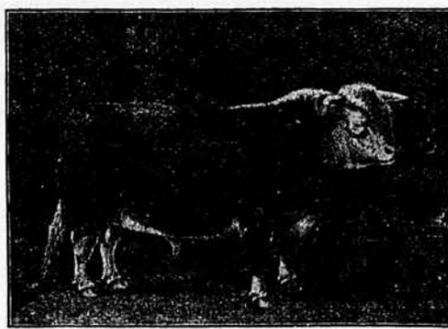
FIRST ANNUAL COMBINATION PUBLIC SALE OF 75 POLAND-CHINAS! FORT SCOTT, KANSAS, THURSDAY, NOVEMBER 19, 1896.

In making this draft sale of seventy-five head of thoroughbred Poland-Chinas, we shall offer nothing but top stuff, consisting of bred sows, fall and spring pigs, both boars and gilts, selected from the VERNON COUNTY, TOWER HILL and CLOVER LEAF HERDS. The bred sows offered will be safe in pig by such sires as King Hadley 16766 S., Black Stop 10550 S., J. H. Sanders Jr. 14953 S., Silver Dick 14180 S., and Gold Bar Sanders 16000 S., while the young things offered will be the get of these elegantly bred sires and of Hadley Jr. 13314 S., Sir Charles Corwin 14520 S., Clay Dee 14676 S., and U. S. Butler 13388 S. Everything offered will go under the hammer. Positively no by-bidding or jobs. Certified pedigree furnished with each animal free of charge. All stock will be properly crated and delivered to express or railroad company free of charge.

TERMS.—All sums under \$20 cash; on all sums over that a credit of four months without interest if paid when due, or eight months with 8 per cent. interest will be given parties making a bankable note. Sale begins at 10 o'clock sharp. Lunch at noon. Write for catalogue.

B. R. ADAMSON, Owner Tower Hill Herd, Fort Scott, Kas. G. HORNADAY & CO., Owners Clover Leaf Herd, Fort Scott, Kas. J. M. TURLEY, Owner Vernon County Herd, Stotesbury, Mo.

SUNNY SLOPE FARM EMPORIA, KANSAS, Hereford Cattle Headquarters Sunny Slope Farm is one of the largest breeding establishments in the United States. Three sweepstakes bulls in service—Wild Tom 51592, Climax 60942, Archibald VI. 60921, also the great breeding bull, Archibald V. 54433, who was the sire of two sweepstakes animals (Archibald VI., sweepstakes under one year of age, and Miss Wellington 5th, sweepstakes heifer over all beef breeds when twelve months and twenty days old. We have thirteen serviceable bulls for sale, ranging from eight to twenty months old. We also have forty bulls for sale, ranging from five to eight months old. Also a choice lot of heifers and cows. We combine the blood of Anxiety, Lord Wilton and Grove 3d. Breeders are invited to inspect our herd. C. S. CROSS, H. L. LEIBFRIED, Manager. EMPORIA, KANSAS.



WILD TOM 51592. Sweepstakes bull Wild Tom 51592. Weight when thirty-four months old 2,205 pounds in show condition. He is the best living son of Beau Real 11055. Dam Wild Mary 21235. Winnings:—Iowa State Fair, 1895, first in class, first in special, first in sweepstakes, and Silver Medal; Kansas State Fair, first in class, first and special at head of herd, first bull and four of his got.