

KANSAS FARMER

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BREEDERS' DIRECTORY.

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

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Fifteen choice cockerels from high-scoring hens, mated to a 93½ score bird. Write us for prices. They will be low for the birds.
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Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, White Cochins, Buff Cochins, Light Brahmas, Silver Wyandottes, White Wyandottes, Black Javs, Brown Leghorns, White Leghorns, Buff Leghorns, Silver Spangled Hamburgs, Pekin Ducks and Pearl Guineas. Single Birds, Pairs, Trios and Breeding-Pens. Extra Fine Breeding and Exhibition Birds. Also, Pet Deer. Prices reasonable. Write me your wants.
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D. A. WISE, BREEDER OF BLACK LANGSHANS AND PERKIN DUCKS—
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Eggs in season, \$1.50 per sitting. Residence and yards south of Highland Park.

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Must sell to make room for breeding stock. Buff Cochins, Black Langshans, White P. Rocks, Barred P. Rocks and White Wyandottes. Prices from \$1.00 up, according to quality. Order quickly and get your choice.
C. B. TUTTLE, Proprietor, Topeka, Kas.

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Eight years experience in breeding Rocks exclusively. Have the best young stock this year I have ever raised. Perfect, high-scoring, prize-winning birds. Two hundred pullets and cockerels now ready for shipment. A few cockerels from E. B. Thompson eggs for sale. Write for descriptive circular and prices. Printed recipe for making and using Liquid Lice Killer, 25c. Address
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J. M. STONEBRAKER, Panola, Ill.

M. C. VANSSELL, Muscotah, Atchison, County, Kansas,
Breeder of Pure-bred Poland-China Swine and Short-horn Cattle of the most desirable strains.
For Ready Sale Thirty Poland-China Bred Sows

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

THE WILKES QUALITY HERD OF POLAND-CHINA SWINE.

Thos. Symms, Prop., Hutchinson, Kas.

Herds boars, Darkness Quality and Reno Wilkes. For ready sale 45 very choice pigs out of Besie Ideal 14060 S. Also sows bred to above boars or Dandy U. S. by Frazur's U. S. by Frazur's Black U. S., dam U. S. by Frazur's U. S. by Harrison, sire Charley F., Black Beauty by Ben Harrison, sire Charley F., brother to Look Me Over. Write for particulars. Address either
W. E. JOHNSON, E. A. BRICKER, Colony, Kas. Westphalia, Kas.

F. L. and C. R. OARD, Proprietors, HEDGEWOOD HERD OF POLAND-CHINAS VASSAR, KANSAS.

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

PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

For sale, King Perfection 4th 13744 S. and Lambing Ideal 14060 S. Also sows bred to above boars or Dandy U. S. by Frazur's U. S. by Frazur's Black U. S., dam U. S. by Frazur's U. S. by Harrison, sire Charley F., Black Beauty by Ben Harrison, sire Charley F., brother to Look Me Over. Write for particulars. Address either
W. E. JOHNSON, E. A. BRICKER, Colony, Kas. Westphalia, Kas.

CRESCENT HERD POLAND-CHINAS.

Boars and gilts for sale.
S. W. HILL, Hutchinson, Kas.

RIVERDALE HERD of 10 Chester White swine and Light Brahma poultry. J. T. LAWTON, BURTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

D. L. BUTTON, North Topeka, Kas., breeder of Improved Chester Whites. Stock for sale. Farm 2 miles northwest of Reform School.

Standard Herd of Poland-Chinas

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

H. W. CHENEY, North Topeka, Ks.

POLAND-CHINAS

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

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.

Wamego Herd Imp. Chester Whites and Poland-Chinas.

Mated for best results. Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER C. J. HUGGINS, Proprietor, Wamego, Kas.

THE SEDGWICK NURSERY CO.,

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

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

Stock for sale. Correspondence and inspection invited.

VERDIGRIS VALLEY HERD—Large-Boned Poland-Chinas.

Three hundred head, six good spring boars, good bone, large and growthy, very cheap. Six June boars, very heavy bone and fancy, four of them will make herd-heads. Twenty yearling sows and spring gilts, bred, good ones, at from \$12 to \$15. One hundred and fifty of the finest fall pigs we ever produced. For sale cheaper than you ever bought as good pigs be fore. WAIT & EAST, Altoona, Wilson Co., Kas.

Mains' Herd of Poland-Chinas.

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

Nation's Poland-Chinas.

Fifty boars and gilts for this season's trade. My herd boars consist of Darkness Quality 14361, Princeton Chief 14543, Col. Hildrestretcher 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited.
LAWRENCE NATION, Hutchinson, Kas.

RIDGEVIEW FARM HERD OF BERKSHIRES

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

SUNNYSIDE HERD PEDIGREED POLAND-CHINAS.

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

SWINE.

BERKSHIRE, Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey & Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue.
S. W. SMITH, Cochranville, Chester Co., Pa.

HIGHLAND HERD.

Five Poland-China boars for sale at prices lower than we have ever offered. Two by Highland Chief, he by C. T. 2d, one by Knox All Wilkes, two by Silver Chief 2d. Anybody wanting a boar write at once.
DIETRICH & SPAULDING, Richmond, Kas.

BLUE MOUND HERD BERKSHIRE SWINE.

Herd headed by Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also bred Shropshire sheep, M. B. turkeys and B. P. Book chickens. Write.
Allen Thomas, Blue Mound, Linn Co., Kas.

W. F. GOODE & SONS, Lenexa, Johnson Co., Kas.,

breeders of Pure-Bred Poland-Chinas. For sale now a grand lot of pigs by combination of F. 18009. He combines the "first families"—Chief Tecumseh 2d and Black U. S. We have the produce of the greatest Poland-China hogs in the world all ways on hand. Prices moderate.

CATTLE.

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

NORWOOD SHORT-HORNS—V. R. Ellis, Gardner, Kas. Rose of Sharons, Lady Elizabeths and Young Marys. Highest breeding and individual merit. Young bulls by Godwin 11567 (head of Linwood herd). Sir Charming 4th now in service.

MAPLE LAWN HEREFORDS.

E. A. Eagle & Son, Props., Rosemont, Osage Co., Kas. For sale, five yearling pure-bred bulls. Also one carload of high-grade cows and one ear bull calves. Will be in Kansas City with young bulls for sale February 28, 1899.

Geo. Groenmiller & Son,

Centropolis, Franklin Co., Kas., Breeders of Red Polled Cattle and Cotswold Sheep, Buff and Partridge Cochins, Light Brahmas, Brown S. C. Leghorns and Golden Wyandottes. A few seven-eighths Red Polled bulls for sale.

CLOVER CLIFF FARM.

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

SILVER CREEK HERD

SHORT-HORN CATTLE.

Scotch and Scotch-topped, with the richly-bred Cruickshank bulls, Champion's Best 114671 and Gwendoline's Prince 130913, in service. Also high-class DUROC-JERSEY SWINE. Can ship on Santa Fe, Frisco and Missouri Pacific railroads.
J. F. STODDER, Burden, Cowley Co., Kas.

D. P. NORTON,

Breeder of Registered Shorthorns,

COUNCIL GROVE, KANSAS.
Imp. British Lion 133602 and Imp. Lord Lieutenant 120019 in service. Sixty breeding cows in herd. Lord Lieutenant sired the second prize yearling bull at Texas State Fair, 1898, that also headed the second prize herd of bull and four females, any age, and first prize young herd of bull and four females.

RIVERSIDE STOCK FARM.

Percheron and Roan Horses and Shetland Ponies; also one Den. Saddle Stallion; also Shorthorn Cattle. Stock for sale. Address
O. L. THISLER, Clinton, Kas.

Agricultural Matters.

ADDRESS OF WELCOME

By Governor W. E. Stanley to the Late Annual Meeting of the Kansas State Board of Agriculture.

[Stenographic Report.]

Mr. President, Ladies and Gentlemen: I don't know when I have had such a delightful two days as I have had here in Topeka the last ones. I have not been permitted to get lonesome; I have had a delightful lot of people call upon me, and they have been very cordial in the way in which they have treated me, but I don't know of any meeting that has been quite so pleasant to me as this one, at the commencement of my term.

My wife often tells me, as I go digging around in my garden: "It is a great pity that you wasn't a farmer," and I have thought so, too. I expect that by the time I get through with my term that I will make up my mind that I am very much better fitted for a farmer than a governor.

I asked my good friend, Governor Glick, what I should welcome you to, and I also asked my friend, Secretary Coburn, the same question, but they left that to me. I can't welcome you to Kansas, because this is only a little part of Kansas; I can hardly welcome you to Topeka, because Topeka has a representative here. I might welcome you to this house, but why should I welcome you here? Why should I welcome you to this house that the agricultural interests of this State and agriculturists have builded? The farmers of this State have contributed more towards the laying of these foundations and the building of these massive walls and this magnificent State capitol than all the other interests combined, and if I should welcome you here, it would only be inviting you to your own. You have more interest in this place than any other class of people in the State of Kansas. Kansas must depend upon the farmer in the years to come.

You may talk about our other industries—and, I might say in this connection, that I was down at Galena a few weeks ago, and those people, in their exuberance of joy and enthusiasm over the splendid showing that they had made in the past year, talked a great deal about Galena and the industry they had there. They were proud of it, and they have every reason to be proud of it. I found that that splendid industry, the zinc industry, the pride of us all, put into the pockets of somebody last year two millions of dollars. And yet, the agricultural interests of Kansas, last year, were worth more than one hundred and fifty millions of dollars; and it would have taken seventy-five camps like that, the richest zinc mining camp in the world, to equal the great agricultural products of Kansas last year. The farmer of Kansas ought to be proud. He goes out in the spring time and everywhere, all over Kansas, is the green carpeting of a thousand wheat fields to gladden the eye. They stretch out before his eyes, bending in the wind like the gentle waves of a great ocean. And in the summer time he will see thousands and thousands of acres of corn, that wonderful product of Kansas, of which last year we raised some one hundred and thirty odd millions of bushels, and of which this year we have raised (addressing Mr. Coburn)—How much this year, Mr. Coburn? (Mr. Coburn shakes his head). Well, anyway, it is so great that even our secretary, the best secretary of agriculture that any board of agriculture in any State ever had, simply don't dare make a guess at it, and we can only imagine what it will be as we go out in the summer time and see the heavy tassels waving in the gentle breezes like the nodding plumes of a great army.

I was out in the western part of the State last year, and, as I was traveling along in the car, I looked out of the window and saw the great stretches of alfalfa fields. We did not know it a few years ago, but we have been making progress along that line; we have been making great strides in that direction. I saw the great purple alfalfa fields stretching out like a sea. They were beautiful to behold. Then, there is our cattle industry. I have seen the cattle on the Arkansas Valley hillsides, and have thought of that picture of cattle on a thousand hills, and have thought that instead of cattle on a thousand hills, we have a thousand cattle on every hill here in Kansas, which is better yet. Kansas wants to come more in touch with the great farming interests of the State. The farming interests are those which have built up Kansas, and I just that this adminis-

tration, if it can, will give a ready and willing hand to the great farming industries of Kansas. I trust that our fields will teem with more bountiful harvests, that our hills will be covered by larger herds, and I trust that to our homes will come prosperity, peace and plenty. With a little paraphrasing, we could take up the old English verse:

"The fair, free homes of Kansas,
Long, long in hut and hall,
May herds of youth be reared,
To guard each hallowed wall."

The Economy of Outting Corn and Feeding the Fodder.

Editor Kansas Farmer:—While the winter time is naturally the proper time for the progressive farmer to look back over the past and lay his plans for the future, yet there never was a time when farmers in the middle West did such serious thinking as right at the present time. The virgin fertility of the soil has in a great measure been spent, and the Western farmer forcibly realizes the necessity of a change in his farming methods. Less small grain must be raised and more clover and cattle, thus adding to the income of the farm and greatly increasing the manure made. Just at present cattle are a well-paying product of the farm, so are sheep and swine; and the outlook for horses is splendid; and the Western farmer realizes that he must in the future try to feed on the farm all the grain and roughness that is produced there. The intelligent and ambitious farmer has had this object in view for years, and is steadily working for that end, and his winter meditations are along this line of thought. Some of them have attained this object, but the great majority are still selling their surplus corn to others, who make a good profit by feeding it.

is necessary to abandon all wheat-growing and grow a root crop instead and a larger acreage of corn; and either a second crop of clover must be plowed under every year on one-fourth of the plowed land, or enough manure must be made and hauled out and spread over one-fourth of the tilled land to thoroughly fertilize it, each year. By this I mean that, if the clover crop is not grown, or is a failure, enough more crop should be raised in its place, and fed to enough more stock, to thoroughly manure the tilled soil once in four years, which can be easily done if all that the farm produces is fed on the farm. Clover can be sown with oats or millet and fed without threshing with hired threshers, as paying out money for threshing and other attendant expenses must be dispensed with if possible, and all work must be kept within the limits of the farm force, as completely as it can be, which is working on the same line as feeding on the farm all the farm produces. Of course all this will increase the labor on the farm, but labor-saving machinery is plenty and cheap, and it is in the labor and increased chores on the farm that the profit lies, as the more chores one has, the more profit he will have, as the chores prove that he has "many irons in the fire" and, of course, more stuff to turn off, and as a result, more money to handle.

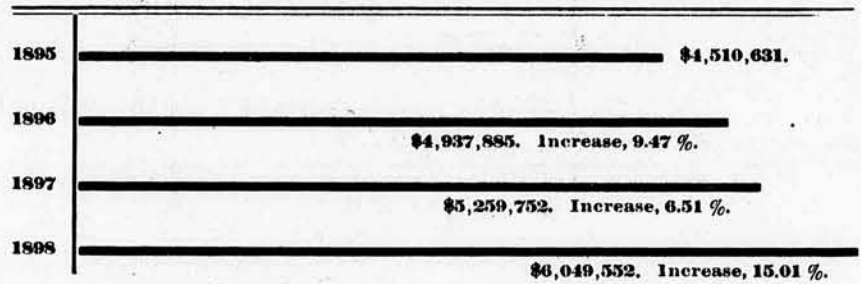
I consider a flock of sheep indispensable to the welfare of the farm, as there is a large profit in them, the money for wool and early lambs coming, as it does, at a time when it is so much needed, and the sheep are death to all noxious weeds; and they otherwise play an important part in the economy of the farm.

As clover, oats, millet, potatoes, turnips, and different varieties of corn, make quite a variety of crops to be

KANSAS COW PRODUCTS.

VALUES OF BUTTER, CHEESE AND MILK SOLD.
(Milk other than for butter and cheese.)

Diagram showing the comparative home values of dairy products annually for four years, beginning with 1895 and ending with 1898.



J. D. Coburn
Secretary State Board of Agriculture.

One of my neighbors remarked to me, the other day, that he could winter more stock than he could summer, and still have corn to sell. This is the case of a great many farmers, and it is how to change all this and successfully carry all the stock that the farm will support, both summer and winter, that is attracting the thoughts of thinking farmers of the middle West.

For several years I have kept all the stock on the farm that the farm would support and have not sold any corn or hay; and I can easily see that the farm is growing more fertile, and that the revenue is annually increasing. In the first place, the stock should be good stock, and it should be kept up to a high state of excellence, and not an effort made to increase the numbers at the expense of quality. Every cow and calf that I have is registered; some of the sheep are registered, and the rest have been sired by registered rams for eight generations; all the mares have been sired by registered Percheron stallions for five generations; and the Poland-Chinas and poultry are as pure-blooded as they can be bred. In the next place, all the wild grass land on the farm must be put into pasture and not kept for wild hay, as many now do, and, with the pasture doubled, nearly twice as many animals can be summered as before. I say "nearly" twice the number, for it is perhaps true that the pasture has heretofore been overstocked and is now very poor. This condition must be guarded against, and the pasture should be watched just as closely as any other part of the farm, and always protected from anything that would tend to injure it, such as tramping it up in the early spring when it is very muddy, and overstocking it, for in the judicious use of the pasture, and in the manure that is made on the farm, lays the foundation of future prosperity. In feeding upon the farm all the product of the farm, it

grown, so by the same rule a variety of stock should be kept on the farm, such as horses, cattle, sheep, hogs, and ducks, geese, turkeys and chickens.

CLARENCE J. NORTON.
Morantown, Kans.

Does Grinding Kaffir Corn Pay?

Editor Kansas Farmer:—Kaffir corn is a grain that must be ground if the best and most economical results in feeding it are to be obtained. In its natural state it is so small and hard that most animals masticate it with difficulty. Sheep and very young pigs and calves will masticate it pretty thoroughly if fed in limited quantities. On the other hand, with mature cattle or hogs a large per cent passes through the animal if the Kaffir corn is fed without grinding. Soaking is a detriment, as more will pass through than when fed in the dry state. Cattle and hogs make decidedly better gains, in most cases, on the meal than they do on the whole grain.

The following figures have just been obtained in an experiment at this station. The Kaffir corn was fed, as prepared in the following methods, to a steer, and the percentages show the amounts of grain that passed through him in a form that could be separated mechanically:

	Per cent.
Kaffir corn heads.....	30.82
Whole Kaffir corn.....	37.40
Cracked Kaffir corn.....	11.58
Coarse ground Kaffir corn.....	6.92
Fine ground Kaffir corn.....	6.25

According to these results, when Kaffir corn is fed whole more than one-third of it passes through the animal unmasticated to any considerable degree. This was when it was fed to a steer receiving about two-thirds of a full feed. It is true that this was not a total loss, as it can be utilized by hogs following, but it is poor economy to tax an animal's system so unnecessarily. We are carrying on similar experiments with corn for

TWO WAGONS AT ONE PRICE.

It is a matter of great convenience and saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn fodder, wood, stones, etc.



The man who already has a wagon may have one of these low handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments' time. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., Box 46, Quincy, Ill., for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.

comparison. From previous investigations in the same line where corn meal and Kaffir corn meal were fed to steers, it was found that more than twice as much of the Kaffir meal passed through the animal as did of the corn meal.

F. C. BURTIS.
Kansas Experiment Station.

English Sparrows.

Editor Kansas Farmer:—Please tell me, through your paper, whether the English sparrows that stay in outhouses during the winter do enough harm to justify the farmer in killing them. Do they breed lice and bedbugs, as some claim?

Haddam, Kans.
BIRD LOVER.

While the English sparrows may, and without doubt do, sometimes carry lice and bedbugs from one place to another, the farmer cannot stop the matter by killing the birds. There are too many. A better way would be to fix the outhouses so that the birds cannot get in.

W. L. HALL.
Kansas Experiment Station.

A New Book on Swine.

"Biggle Swine Book" contains 144 pages, handsomely printed on coated paper and artistically bound in cloth. Written by Judge Jacob Biggle, an old-time contributor of Farm Journal, its characteristics are conciseness and a presentation of experience denoting an intimate knowledge of the subject. There are 22 chapters in the book, covering "Feeding," "Breeding," "Market Points," "The Piggery," "Western Practices," etc. The chapter on hog cholera contains all that is new on this important subject; other pig ailments and their cure are also treated in full. In the preparation of these chapters Judge Biggle had the assistance of a Western breeder whose large herd of swine had gone successfully through a severe attack of cholera, and also of an experienced veterinary doctor.

One of the most difficult subjects to photograph is a hog, and many breeders decline to have their animals photographed, claiming a satisfactory picture can not be made, but the half-tone reproductions direct from photographs shown in "Biggle Swine Book" show that it is possible to make a successful picture of a hog direct from the animal.

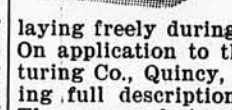
In no line of live stock breeding are breeders so apt to use illustrations with all the good points so greatly exaggerated as in picturing their hogs. All the leading breeds are shown in "Biggle Swine Book" true to life, most of the photographs being made from prize animals on exhibition at the shows. There are some 40 of these half-tone engravings and 40 other helpful illustrations.

"Biggle Swine Book" is No. 5 of the Bigle Farm Library and is fully up to the standard set by the preceding volumes on the "Horse," "Berries," "Poultry," and "Cows."

Price by mail, 50 cents. Kansas Farmer Company, Topeka, Kans.

Farmer's Handy Feed Cooker.

Reader's attention is called to this device, which is sold at \$12.50 for 50-gallon capacity. By feeding poultry and animals cooked food during winter at least one-third of the feed is saved; also having stock in a healthy condition, preventing hog cholera among our hogs and insuring the hens laying freely during the winter months. On application to the Empire Manufacturing Co., Quincy, Ill., a catalogue giving full description, may be obtained. They are made in all sizes.



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

The Stock Interest.

THOROUGH-BRED STOCK SALES.

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

MARCH 3—Grant Hornady Live Stock Co., Fort Scott Kas., Herefords, at Kansas City, Mo.

ECONOMY IN LIVE STOCK PRODUCTION.

Abstract of address of G. E. Morrow, President and Director of the Oklahoma Agricultural College and Experiment Station, Stillwater, Okla., prepared for the annual meeting of the Kansas Improved Stock Breeders' Association.

Stock breeders and feeders are to be congratulated on their improved condition and brighter prospects. Prices for most classes of stock are better; there is greater faith for the future; much more interest in securing well-bred stock. But we must expect future periods of depression. Even now I fear we may soon see somewhat troublesome times for sheep breeders and feeders. Given freedom from disease, the hog supply soon reaches or outruns the demand. We may not expect really high prices either for breeding stock or animals for general use for any considerable series of years. Economy in production is needed to be considered by all who have to do with farm animals or their products. Economy does not necessarily mean a small expenditure of money; it always means a wise expenditure of money and effort. I name a few lines along which wise economy is much needed.

1. In selecting the breeding or feeding stock it is rarely wise to start with inferior animals, and this is the most common mistake. On the other hand, it is easily possible to pay unnecessarily high prices, based upon fashion in pedigree or upon our sanguine expectation of the market for the feeding animals. Our thought would at once go to the "boom" in certain families of one of our best breeds of hogs. Extravagant prices paid did harm to individuals and to the general reputation of the breed. Like results may follow with other breeds. Thousands of feeders have learned that it is easily possible to pay too much for stock cattle or feeders. The same is true of lamb and sheep feeders just now. I believe there is need of careful thought as to the probable outcome before one pays high prices for any class of stock.

2. Providing the Plant.—All live stock should be well cared for, but when I see or read of barns costing many thousands of dollars, with costly contrivances supposed to add to the convenience, I feel like modifying the familiar saying and repeating: "It is magnificent but it is not practicable stock farming." The largest and most costly cattle barn I ever saw was the most inconvenient and illy suited for its purpose of any structure of the kind I have ever known. Even for high-class breeding stock over much of Kansas the simple sheds with low-priced contrivances for feeding and general care of the animals are usually more profitable than the elaborate stables and barns sometimes seen.

I would like to encourage the ingenious men who invent and manufacture multitudes of contrivances for cooking or steaming foods for farm animals and for those having mills with which to grind or cut or crush all possible kinds of feed, but I can not subscribe to many of their statements about the resultant profits. As I read these statements I am reminded of the Irish lady who, seeing the advertisements now so common, of stovepipe radiators guaranteed to save one-half the fuel, insisted that her husband should buy two of them and save it all. After all, the healthy farm animals in most cases are able to prepare their food more cheaply and quite as satisfactorily with the facilities nature has given them than man can do it for them. For some uses it pays abundantly to grind Indian corn. Certainly with the rapidly growing crop of Kaffir corn, grinding always adds greatly to its digestive abilities, but I would rarely grind corn for steers. I would never cook food in Kansas for healthy farm animals.

3. Choice of Food and Methods of Feeding.—In the large majority of cases, the Kansas stock feeder or breeder may produce on his own farm or buy in his immediate vicinity all the staple foods needed to be given to any class of animals. Sir John Lawes has said that, even on his high-priced land, near London, he can produce a pound of beef or milk most cheaply when the food of the cattle was mainly obtained by grazing in the pastures. With good native grasses, with alfalfa or the clovers, with corn or Kaffir corn or sorghum fodder or stover, with so much of our great fattening food, Indian corn, or its close rival,

Kaffir corn, with bran or shorts available in many cases at moderate cost, it is the exception rather than the rule that the Kansas stock breeder need buy any high-priced foods. I have a very high estimate of the value of either linseed or cotton-seed cake or meal, but rarely is it profitable to feed either except as small portions of the ration to Kansas farm stock. I have never been able to convince myself of the profitability of feeding regularly any patent stock foods. If they are valuable as medicines, call them such and feed them as such. It is folly to believe that any of them are worth from 5 to 50 cents a pound as food, and yet farmers buy them at even these enormous prices. As indicated above, I believe in simple methods of feeding. I would not put steers in stalls for feeding in Kansas. I would feed all rough forage in simple racks. Personally, I have not liked self-feeding devices from which grain is to be eaten, but many experienced feeders believe that these are more economical than regularly feeding twice or thrice a day.

4. Marketing the Stock or Its Products.—Here we meet with much difficulty. No one of us is wise enough to accurately predict future prices. There are certain principles which may reasonably be relied upon. Thus, it is always a poor time in which to market inferior or half-fattened hives from the farm when great supplies are coming in from the ranges. One year with another, I believe there are two seasons in the year when relatively high prices for hogs may be expected with some confidence. In general, it is wise economy to sell any live animal when it is ready for the market. Often there is serious loss in keeping a whole herd of cattle or hogs, for instance, in order that those that have not done well may become full fattened. In such cases the best animals are often fed at a loss in the latter stages of the feeding period.

5. There is often great waste in too frequent changes from stock to grain farming, or from one class of stock farming to another. The virtue of "sticking to it" is usually commendable, not only showing firmness of character, but because of good economy.

If they pay attention to wise economy in this and other directions, I look forward with reasonable confidence to a period of deserved prosperity to the intelligent and progressive stock breeders and feeders of Kansas. And we, in Oklahoma, have a selfish interest in your prosperity. We need to purchase of your improved stock and we want to send you more of our stock from certain portions of our Territory that you may fatten them from your abundant fields or cribs of America's greatest grain, Indian corn.

Experience With the Brood Sow and Her Pigs.

By G. W. Kelly, Abilene, Kans., read before the Kansas Improved Stock Breeders' Association, January 11, 1899.

I selected this subject in view of the fact that I consider it one of the most important in relation to swine breeding, also with the hope of drawing out the views of older and more experienced breeders.

It is considered by a great many almost invariably a fatal error to allow the sow to become too fat. While too great an amount of fat is to be avoided, it does not always follow that this will bring about a loss of pigs. Some very fat sows have produced and raised good, thrifty pigs.

Confining sows in close quarters (which are almost sure to become filthy, and thus make the germ center of disease) and giving no exercise, at the same time keeping them on a straight corn diet, will naturally tend to abnormal conditions.

I have found it better to allow brood sows (I might say especially through the winter months) almost unlimited range. I feed such foods as bran, shorts and a little ground corn and oats. These food-stuffs are made into a slop by wetting them with skim-milk fresh from the separator. It should always be fed warm, as frozen food in zero weather is not profitable. Where milk cannot be had kitchen slops may be substituted. By following this method they can always be kept in good condition and not necessarily fat.

Plenty of sunshine and outdoor exercise, good care and good judgment used in selecting the proper food, all combined, will keep them in good condition.

When the pigs first come we feed very little for the first few days. The first day there is nothing fed except a little bran with plenty of clear water to drink. The sow is kept as quiet as possible. Anyone who has ever tried feeding little pigs with a spoon will find it a great deal easier to use a bottle with a rubber

nipple attached. I always keep one on hand.

There is a great difference in the motherly conduct of sows. Some of them are very careful and they rarely if ever lie on a pig, while others are so careless as to be exasperating to the onlooker, who is powerless to prevent the accident; and it seems the more one tries to prevent it the more careless they become, and thereby a great many pigs are lost.

I believe one of the most frequent causes of the loss of pigs that are strong and hardy at birth but die shortly afterwards, is a wet bed. It will generally kill them. Many pigs, no doubt, have died for which the owner never could ascribe a cause, which might have been traced to this. I would rather have no bed than to have a pile of wet straw for them to lie upon. One of the best things I have ever found for bedding is dry straw or chaff, but this must be frequently changed or you will find dead pigs in the nest. I think the best way to prevent the disease among small pigs is to give them plenty of exercise and pure air; at the same time do not feed the mothers too high; it may cause the little pigs to become too fat.

I would feed on just a plain, simple diet. By so doing you will rarely be troubled with any disease. A box of charcoal, salt, lime, wood ashes and sulphur should always be kept on hand. Good care is the road to success.

Suggestions to Pork Producers.

By A. M. Jordan, Alma, Kans., read before the Kansas Improved Stock Breeders' Association, January 10, 1899.

Upon receiving notice from your secretary, some time since, that I had been chosen to read a paper before this association, my first impulse was to excuse myself, feeling sure that I was not old enough in improved stock breeding to represent a county so well advanced in that line. However, I was assured by a prominent member of this association, last year, upon being introduced to him as a breeder from Wabaunsee, that our county had never before, to his knowledge, been represented at their meetings. It was a matter of some surprise to me that a county whose blue hills can be seen from the capitol dome, only two or three hours' drive from this city, a county peculiarly fitted for stock breeding, should not be better attended by our stockmen, for we have breeders a-plenty, with herds ranking with the best.

I consented to read a paper before you, not from any burning desire to advance any new theories or champion any old ones with regard to raising improved swine, but rather from a desire to show my appreciation of the work being done here, and to represent my county at this time, hoping that she may be better represented here in the future. I have chosen to address you as pork producers rather than swine breeders. The term is more comprehensive and includes that vast army of Kansas farmers who have been struggling to make feeding swine pay during the past few years of low pork prices. Few of you here may be engaged in fattening for the market, yet the foundation of the breeder's, as well as the feeder's, business rests upon the market price of pork. The part of the State directly under my observation I take to be a fairly representative Kansas community, and when I use the word "struggling" in connection with our swine feeders I am sure I have used the word that exactly fits the case. As a rough estimate, I should say that about 1 in 10 of our farmers have made hog feeding pay during the past year. What is the matter with the other 9? A list of all the reasons for their failure, if it could be given, would be appalling. For fear of being tiresome, I will only touch upon a few reasons for failure that have come under my notice, namely, lack of adaptability to circumstances, lack of resource, lack of proper information, lack of attention to details, and lack of good stock.

Whenever the farmer can learn to adapt himself and his business to surrounding conditions he has made a good start on the road to success. Shall he breed and sell youngsters for breeders or feeders? Shall he breed for his own feeding? Shall he feed stock of others' breeding? Shall his pastures be large or small? Shall he pasture at all? These are some of the questions that each one must settle if he would adapt himself to surrounding conditions, questions that each should answer for himself after careful study.

The resources of the swine breeder are not necessarily expensive; enough corn or other grain saved from years of good crops to fall back on in time of crop failure; alfalfa, sorghum, artichokes or some other sure crop; pastures of some

No More Scrofula

Not a Symptom of the Affliction Since Cured by Hood's.

"When our daughter was two years old she broke out all over her face and head with scrofula sores. Nothing that we did for her seemed to do any good. We became discouraged, but one day saw Hood's Sarsaparilla so highly recommended that we decided to try it. The first bottle helped her, and after taking six bottles her face was smooth and we have not seen any signs of scrofula returning." SILAS VERNOOY, West Park, New York. Get only Hood's because

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

Hood's Pills cure nausea, indigestion, biliousness, constipation.

kind that can be either mowed or grazed, as need requires, are some of the resources for uniform success.

Information gained by one's own experience and observation is usually the most reliable, as we learn the exceptions with the rule. In information from the experience of others we often fail to find the exceptions given. No stockman is properly equipped without a good, live, up-to-date stock paper, the Kansas Farmer, for example. A few good reference books on the shelf are as necessary as fire insurance on our buildings. Meet with your brother stock breeders at convention or institute and exchange experiences.

Close attention to the details in pork producing is as necessary as in any other business. What business in our State would pay a profit if details were neglected, as in the ordinary way of handling swine?

Last, but no less important, is the selection of good stock. There seems to be a fallacy quite prevalent that "scrub stock" is more hardy than the improved breeds, and some farmers of considerable intelligence contend that the old scrub stock is the most profitable. Do not be in a hurry to condemn such men without a hearing. Possibly we breeders deserve a part of the blame.

Mr. A. has always raised scrubs. The first pen is built of "rock," 8 by 10, 2 feet high, and in the rainy season 2 feet deep. He didn't believe in wasting much time on hogs. A few brush across the corner with a little hay on top afforded all the shelter necessary. As soon as Mr. Scrub gets tall enough to see the surrounding country by standing on his hind feet with front ones on the wall, he realizes that his environments are not to his liking. Finally, after many days of development, mostly from the shoulders forward (development, Andrew Jackson would have called it), and longing for the green fields beyond, his weight in front of fore feet equals that of the rest of his frame, and he amuses himself in his leisure moments at seasaw across his prison wall. One feed of corn omitted, while Mr. A. is out "lectioneering," gives preponderance to the fore end of Mr. Scrub and he tips out and over the fence. When Mr. A. gets home he lays a few more "rocks" around the fence, but it is only a question of a few days until he scales it and is out again. The wall grows higher and Mr. Scrub grows "hardier." Finally, for want of time to build the pen higher, he gives Mr. Scrub his liberty and he forages on the neighboring fields until he is a first-class bacon hog, and as Mr. A. has no way of estimating cost of feed, no date to reckon from, he concludes that he has done well and decides to enlarge his hog business.

Mr. A.'s neighbor, Mr. B., raises improved swine, pedigrees and that sort of thing, regular mortgage-busters, and as Mr. A. has a mortgage that needs busting, he buys a pair and drops them into Mr. Scrub's pen, which resembles a Spanish fort more than an American pig's home.

Mr. B. has represented that the most important thing about a pig is a pedigree that runs back on both sides to the great Mortgage Buster, and as pedigrees furnished are O. K. in that respect Mr. A. concludes, after feeding his thoroughbreds about a year on corn, that they are too "fine bred" for common folks and not nearly as hardy as scrub stock. Their noses are not as long as scrubs', but they are afflicted with mange, scurvy and most of the ills hog flesh is heir to, and won't weigh much over a hundred pounds. The mortgage remains but the "busters" are gone, and Mr. A. is in the scrub business again. He thinks B. mis-

represented those pigs and they are not on speaking terms to this day.

My opinion is; had Mr. B. explained to him that his thoroughbreds needed different treatment than he had given his scrubs, helped him plan new quarters for them, gotten him to subscribe for a good stock paper, Mr. A. would have become a convert to the doctrine of improved stock and would have learned that under proper conditions the thoroughbred is harder and much more profitable than the scrub.

Let us gain the confidence of our patrons, remembering that the first essential is to merit that confidence. Sell nothing for breeding purposes that is not improved stock in every sense of the word, and our patrons will learn the true value of improved stock and will look upon the breeder of thoroughbreds as a benefactor.

Gossip About Stock.

The Percheron stallion, Attila 16842, that won third prize at the Illinois State Fair at Springfield, last fall, has been sold by M. W. Dunham, Oaklawn Farm, Wayne, Ill., to a company of representative farmers of Winnebago County, same State. Attila is a show horse of the highest type of his action is perfect—free, dashing and true.

H. A. Naber, of Wallula, Kans., reports that he has disposed of all of his grade and pure-bred Herefords, the grades going to Wyoming purchasers and the pure-breds going to Missouri, Nebraska, and Kansas buyers. Mr. Naber's herd numbers 150, and he may yet conclude to dispose of about twenty of last spring heifers.

The eighth annual meeting of the Dorset Horn Sheep Breeders' Association of America was held at Pittsburg, Pa. The registration fees were made uniform to all members, and the membership fee for the coming year was reduced from \$10 to \$5. The executive committee selected Toronto, Can.—and the time the last week of exposition in 1899—for place of next annual meeting.

G. G. Burton, of Topeka, received cash prizes at the late State Poultry Show amounting to \$24.25, taking about all of the first and second and special prizes offered on Toulouse geese and Indian Games—16 birds winning 15 prizes. Mr. Burton also advertises this week for sale at a great sacrifice his noted gaited saddle stallion, Eagleite 1132. He is sired by the old Black Squirrel. Note his advertisement in another column.

D. L. Button, breeder of Improved Chester White swine, North Topeka, writes: "I am still doing a splendid business with my favorite breed of swine. My fall trade was excellent, all young boars of serviceable age sold but one, but I have several nice young sows, most of them bred to Fritz 10441, a son of King Eclipse 2d. These young sows are from aged dams that have proven excellent breeders, and will be sold at very reasonable prices to first callers."

The annual meeting of the Missouri and Kansas Shorthorn Breeders' Association will be held at the Midland Hotel Club Room in Kansas City, Mo., February 15 and 16, the meeting to be called to order Wednesday, February 15, at 2 p. m. John C. McCoy, president of the Kansas City Live Stock Exchange, will deliver the address of welcome, and the response will be by ex-Governor George W. Glick, of Atchison, Kans. The program was published in full last week.

Evidently the time is propitious for Shorthorn breeders who have stock for sale to advertise. Mr. Theodore Saxon, of Topeka, who has been running a seven-line card in the Kansas Farmer for several weeks, and has made frequent individual sales, now reports the banner sale of the season, having sold 23 head of Shorthorns to Geo. D. McLean, Mount Vernon, Wash., who purchased 20 cows and heifers and 3 bulls. Mr. Saxon still has a number of both sexes for sale.

One of the most encouraging signs of the return of better times in the horse business is the demand at all the great horse markets for smooth farm chunks weighing from 1,200 to 1,400 pounds each. These horses are being bought in great numbers and at improved prices, showing that the farmers in many localities are "out of horses" and must buy to get power to do their spring work. Old Dan and Bill lasted a good while but they would not work forever, and the farmer who quit breeding altogether in 1893 has now to pay the penalty of his short-sighted policy.

An important Poland-China combination sow sale will be held at Slater, Mo., on Thursday, February 9, by W. M. Winn & Son, of Kansas City, and J. A. Hull, of Slater, Mo. It will be remembered that both of these herds have notable sires, the get of which may be had at

this sale—Hawkeye Chief, owned by Mr. Hull, and Perfect I Know, owned by Winn & Son. The latter is the greatest show boar of his age now living and was the champion of the breed at the Trans-Mississippi Exposition last fall. Get catalogue, and if you cannot attend the sale bids can be sent by mail and will be properly cared for. Kansas buyers will do well not to overlook this sale.

A number of the leading sheep raisers of the State met last week and organized the Missouri Sheep Breeders' Association. Norman J. Colman, of St. Louis, was elected president; J. B. Bothwell, of Breckinridge, vice president; M. M. Matthews, of Brookfield, secretary, and Hopson Glascock, of Rennsalaer, treasurer. The next meeting will be held in connection with the Live Stock Breeders. A resolution was passed instructing the president to go before the committee on agriculture and urge the passage of a law taxing the owner of a dog \$1 and for each additional dog \$2. It is proposed that this revenue go into a fund to pay the owners of sheep for sheep killed by dogs belonging to unknown parties.

At the special sale of high-acting carriage and other good sorts of horses held on Thursday last in Indianapolis, the top price was \$975, paid for a handsome carriage gelding. High-acting coach horses, taken for export, brought \$500 each and another \$550, and a bay coach mare went at \$430 to Robert Miller, for export to Glasgow. Hector Vervache, exporting to London, paid some of the best prices of the sale. He paid the top price of \$975, mentioned above. There was the most active demand for all high-class offerings, and such prices as \$200, \$225, \$250, \$275, \$300, \$350 and \$375 were common, none of the buyers seemingly getting enough high-class horses to meet their wants. Nate Lee, Casey, Ill., sold a bay gelding, not at the special sale, but in the regular auction, for \$370. This was a high-acting full-bodied, upstanding horse with substance and quality and standing 16 hands at the shoulder.

A notable Hereford sale will be held at Kansas City, March 1, 2, and 3, by Messrs. Sotham, Nave and Hornaday. Of the three herds sending representatives into this sale, Mr. Sotham's is the oldest, dating back to 1839. No herd in this country since the early eighties has achieved more victories in the competitive annual beef cattle exhibits than has the Weavergrace herd. This also includes a long list of prizes won at Omaha last year, where the largest, strongest and doubtless best Hereford exhibit ever marshalled in the history of the breed met and competed for honors. The reader may, if he consults a copy of Mr. Sotham's sale catalogue, obtain a better idea of the 4,000 premiums won by the Weavergrace herd, especially those of recent years. Among those that will go into the sale is the first prize 3-year-old bull at Omaha, Sir Bredwell 63685. Such is the type, character and promise of Sir Bredwell and his get that seeing them is sure to stimulate the ambition of all Hereford breeders in endeavoring to have better ones in their herds. When asked by the writer why so many of the extra good ones were going in the sale, Mr. Sotham replied: "We have the sires and dams all here in the herd and can now afford to send those catalogued out, not only for the benefit of Weavergrace but for the still higher estimation of the Herefords generally."... Mr. F. A. Nave, who will offer 50 head on Thursday, March 2, is the owner and founder of the 700-acre Fairview Stock Farm, situated near Attica, Ind., on the main line of the Wabash railway. Mr. Nave has been from his youth up engaged in feeding and finishing beef cattle, and concluded to found, if possible, a Hereford herd second to none in this country. The visitor now at the farm finds 150 head whose individual and collective character at once confirms the idea that the ambition of Mr. Nave has been indeed very successful. Last year the Fairview herd went out for honors, beginning at the New York State Fair as the champion



A robust, manly son and a cooing baby-girl nestling in her bosom—what more can any womanly woman ask? It is a boon that Heaven intended should be granted to every woman.

Thousands fail of this because they have neglected to look after their health in a womanly way. The health of a woman's babies is dependent upon her own health during the period of prospective maternity. The prospective mother cannot be too particular about her physical condition. If she suffers from local weakness, nervousness or loss of vigor and virility, her children will be weak, puny and sickly. Dr. Pierce's Favorite Prescription is the only unfailing cure for all weakness and disease of the delicate and important organs that bear the brunt of maternity. It makes these organs strong, healthy, vigorous, virile and elastic. It makes the prospective mother strong and cheerful. It robs maternity of its perils. It insures a baby constitutionally strong. It is the invention of an eminent and skillful specialist, who has had thirty years' training in this particular branch, during which time he and his staff of physicians have prescribed for many thousands of women. Medicines dealers sell it and an honest dealer will not urge upon you an inferior substitute merely for the little added profit he may make thereon.

"I am the mother of a nice baby four and a half months old," writes Mrs. J. B. Clough, (Box 203) of Lisbon, Grafton Co., N. H. "I cannot give too much praise to Dr. Pierce's Favorite Prescription."

Dr. Pierce's Pleasant Pellets cure constipation. Constipation is the cause of many diseases. Cure the cause and you cure the disease. One "Pellet" is a gentle laxative, and two a mild cathartic. Druggists sell them, and nothing is "just as good."

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Silks to Be Sold.

With such a growing silk business, and such large stocks as are necessary, the need of room for the new goods of the new season, and ready money to buy them with (always buy for cash) is a stern fact, or we wouldn't be sacrificing such choice, rich, handsome Silks as we are.

Odd and broken lots—but get samples—and see what's to be had for 50c, 65c, 75c yard—let the styles and qualities at these shelf-emptying prices show whether we're doing something extraordinary.

75c to \$1.00 Silks in the 50c lot.
\$1.25 to \$1.50 Silks in the 75c lot.
Chance for dressy waist Silks.
Lots of beautiful evening Silks included.
Shelves being emptied of Dress Goods just as determinedly—values at 25c, 35c, 50c that will show this is a great time to buy—and save.
The new 1899 Wash Goods are ready—10c to \$1.25. Want samples?

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A QUEER DILEMMA,

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The popular editor of The Housekeeper. This book is just what you want to read aloud in the family circle. In paper covers it will cost you

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Free Samples of WRIGHT'S CONDENSED SMOKE.

Send us 10 cents in stamps (to pay postage) and the names of ten or twenty of your neighbors that cure their own meats and we will send you a sample of WRIGHT'S CONDENSED SMOKE, the great meat preservative, the great time, money and labor saver. Address, E. H. Wright & Co., 915 Mulberry street, Kansas City, Mo. In writing, mention KANSAS FARMER.



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50 fine Thoroughbred Pigs, any breed, 50 will be awarded our club agents for February work. Two sows (bred) as sweep-stake prize for largest clubs. A fine pig to the subscriber who makes the nearest guess how many subscriptions we receive in February. A total of \$610 for February work. As a rule we can supply the premium pigs from breeders located near you. Doctors, Preachers, School-teachers, Ladies, Farmers and Breeders among our winners for December. Our plans make it easy to win a fine pig. Sample copies and full particulars free.

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To give all breeders and feeders of swine a chance to try our up-to-date Swine Journal we will send the December, January and February numbers free to all who ask for them.

SWINE ADVOCATE, Salem, Ohio.

Cows' Teats Sore?

Advice Free. **MOORE BROS., V. S., Albany, N. Y.**

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The easiest-working, closest-cutting, simplest, strongest and handiest dehorner is the latest

IMPROVED CONVEX DEHORNER

Never crushes the horn nor pulls it apart. Made on an entirely new principle. Catalogue free.

WEBSTER & DICKINSON, Box 60 Christiansburg, Va.
Western trade supplied from Chicago salesroom.

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BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

SOMEHOW AND SOMEWHERE
AMONG THE MUSCLES AND JOINTS

The Pains and Aches of

RHEUMATISM

CREEP IN.
Right on its track

St. Jacobs Oil

CREEPS IN.
It Penetrates, Searches, Drives Out.

herd. From there to the Indiana, Illinois, and finally to the Trans-Mississippi Exposition, Omaha, Neb., where it maintained its champion honors at all of these exhibitions, the most successful record of any Hereford herd in recent years. At the Indiana State Fair it won the highest cash prize offered in this country in 1898. The 50 head, 19 bulls and 31 cows and heifers, that will go in the sale will include the two very excellent herd bulls, Gold Dollar 73652, the best living son of Earl of Shadeland 22d. The other one, Lamplighter Jr. 69251, bred by Gudgell & Simpson. A major portion of the females will have been bred and safe in calf to either the champion, Dale 66481, Gold Dollar 73652, or Lamplighter Jr. 69251. The Hornaday Live Stock Company will sell 50 head on the 3d day of the sale, Friday, March 3. This offering of bulls, cows and heifers is from the foundation stock of females laid in 1896 by a draft from the Gudgell & Simpson herd that were either sired by the sons or grandsons of the great bull Anxiety 4th. Here one finds Don Carlos, Lamplighter and Beau Brummell daughters, whose sires, as above mentioned, were all World's Fair winners. These females were in expectancy by Gudgell & Simpson bulls. Following this was a draft from the Weavergrace herd of Sotham's, and included in this lot was the young son of Corrector Sir Comewell 63776 that after a very spirited contest in the sale ring was secured by Mr. Grant Hornaday at \$840, thus making Sir Comewell the highest priced yearling bull in the year 1897. His calves are extra good individuals, proving him a great sire. The sale catalogue gives full and complete particulars concerning the sale offerings and will be sent free to all asking for it.

February Notes.

Sow grass and clover if possible. Have everything in readiness to sow oats at the first favorable opportunity. Plan to grow as far as possible all of the feed needed for the stock. Manure is the ground-work of good farming. Save all of it possible. So far as is possible get all the manure hauled out before spring work begins. If the manure is hauled out and scattered as fast as made there will be but little loss. The advantage with mixed pasture grasses is that they give a longer season of good pasturage. Having the plows, harrows, and cultivators sharp is a great saving of horse-flesh. A good timothy meadow may be easily ruined by allowing the stock to tramp over it when wet. If not done before, the necessary pruning of the grape vines should be done now at the first opportunity. Producing at the lowest cost and selling the products to the best advantage make up the best and most profitable farming. In sowing grass and clover seed, be sure to sow sufficient seed to secure a good, even stand of plants. When the average farmer buys a thing that he can produce as cheaply himself he is running opposition to his own business. With the majority of crops the secret of large yields is a rich soil, good seed, and thorough tillage given in good season. Use all reasonable care to grow good crops. Five hundred bushels of corn grown on 10 acres costs less per bushel and pays a better profit than the same number of bushels grown on 20 acres. Eldon, Mo. N. J. SHEPHERD.

LIVE STOCK AUCTIONEERS.

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

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J. N. HARSHBERGER, LIVE STOCK AUCTIONEER, LAWRENCE, KAS. 17 Years of experience. Sales made anywhere in the United States. Terms the lowest. Write before claiming date.

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

BROWN'S BRONCHIAL TROCHES

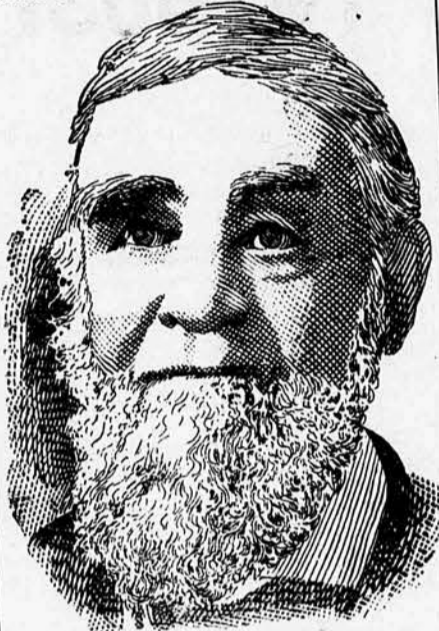
TRY THEM FOR
**Coughs, Colds,
Asthma, Bronchitis,
Hoarseness
and Sore Throat.**

Fac-Simile Signature of *John Brown* on every box.

Ruptured 20 Years.

Wonderful Cure of a Well Known Citizen of Wisconsin.
R. M. Wilsie's Good Fortune in Overcoming His Affliction.

It is a piece of good fortune to relate the fact that there is a cure for Rupture. Some people contend that only a surgeon with a knife and a needle can bind the broken place together, but



MR. R. M. WILSIE, Brandon, Wis.

the experience of R. M. Wilsie, of Brandon, Wis., completely upsets this theory.

There is a doctor in Adams, N. Y., who has discovered a marvelous system of treatment that not only retains any kind of a rupture but also causes the muscles to grow together. Mr. Wilsie heard of it and gave it a test. The results were astonishing.

Although 61 years of age and badly ruptured for more than twenty years, Mr. Wilsie began to mend at once and was perfectly cured in a remarkably short time. To-day he is hale and hearty, a fine looking gentleman and completely restored from the slightest trace of rupture. He naturally recommends the system highly. His cure excited considerable interest among his neighbors, many of whom were also ruptured and who have since been cured.

The system of cure is the discovery of Dr. W. S. Rice, one of the best known rupture specialists in the country. He has recently issued an illustrated book on the subject of rupture and sends it free to every one; his object being to disabuse the public mind that rupture cannot be cured. The beauty of his system is the absence of all pain; absolute immunity from danger; no operation of any kind; and not the loss of a minute's time from work. This is a subject well worth inquiring into. Thousands of people have friends who are ruptured and they will do them a life-long service to tell them of this new and marvelous home cure. Send for the book. It is free to all. It fully explains the system of cure and is immensely valuable to all who are ruptured. Write at once to Dr. W. S. Rice, 359 L. Main St., Adams, N. Y.

THE STRAY LIST.

FOR WEEK ENDING JANUARY 19, 1899.

Crawford County—F. Cunningham, Clerk.
COW—Taken up by J. G. Walters, in McCune Osage tp., November 15, 1898, one pale red cow, 2 years old, white face, slit in under side left ear, crumpled horns, poor in flesh; valued at \$15.

Nemaha County—A. G. Sanborn, Clerk.
STEER—Taken up by Clarence Howard, in Centralia, Home tp., November 10, 1898, one red yearling steer, medium size, little white on tail and belly, dehorned; valued at \$20.

Wilson County—C. W. Isham, Clerk.
STEER—Taken up by J. L. Lewis, in Fall River tp. (P. O. Fredonia), December 17, 1898, one red and white spotted steer, 3 years old, dehorned, no marks or brands; valued at \$25.

FOR WEEK ENDING JANUARY 26, 1899.

Chase County—M. C. Newton, Clerk.
COW—Taken up by John Man, in Elk, Diamond Creek tp., January 7, 1899, one red cow, figure 2 brand, both ears cropped; valued at \$15.

Lyon County—H. E. Peach, Clerk.
STEER—Taken up by W. H. Phillips, in Reading tp. (P. O. Emporia), one red steer, 2 years old, notch in left ear; valued at \$25.

FOR WEEK ENDING FEBRUARY 2, 1899.

Greenwood County—Perry Clemans, Clerk.
STEER—Taken up by M. R. Bolinger in Fall River tp. (P. O. Eureka), December 26, 1898, one steer, branded W. H. on right side, crop out of both ears, dehorned; valued at \$20.

Nasal CATARRH

In all its stages there should be cleanliness. Ely's Cream Balm cleanses, soothes and heals the diseased membrane. It cures catarrh and drives away a cold in the head quickly.

Cream Balm is placed into the nostrils, spreads over the membrane and is absorbed. Relief is immediate and a cure follows. It is not drying—does not produce sneezing. Large Size, 50 cents at Drug-gists or by mail; Trial Size, 10 cents by mail. ELY BROTHERS, 56 Warren Street, New York.



SUMMARY OF THE 17th ANNUAL STATEMENT

...OF THE...

**..Kansas..
Mutual Life Insurance
..Company..**

ASSETS.

Bonds, mortgages (first liens) on improved real estate, and policy loans	\$254,620.30
Cash in banks and office	47,605.05
Premiums in transit (reserve thereon charged in liabilities)	49,376.03
Interest accrued	5,209.07
Premium notes on policies in force	4,063.95
All other assets	10,088.10
Total	\$370,962.53

Total (Net gain in assets during 1898, \$32,569.35.)

LIABILITIES.

Policy reserve (actuaries, 4 per cent.)	\$192,632.35
All other liabilities	24,004.84
Surplus	153,325.34
Total	\$370,962.53

Total (Gain in surplus during 1898, \$4,386.33.)

INCOME.

Premium receipts	\$266,624.42
Interest	18,581.55
Premium notes restored	51.96
Total	\$285,257.93

Total (Gain in income during 1898, \$35,838.40.)

DISBURSEMENTS.

Death claims paid	\$103,710.99
Dividends and surrender values	46,070.12
Total paid to policy-holders	\$150,381.11

Commissions and expense of agents	\$2,415.67
Medical examiners' fees and inspection of risks	5,955.30
Taxes and departmental fees	5,722.50
Home and branch office expenses, advertising, printing, equipment account, postage, cost of collection, and all other disbursements	43,823.32
Total disbursements	\$58,917.79

Total (Excess of income over disbursements, \$26,920.00.)

Total insurance in force	\$9,893,091.00
Net gain in insurance in force	509,055.00
Total paid to policy-holders since organization in death claims, dividends and surrender values	1,158,038.00

J. P. DAVIS, President, Topeka, Kans.

DROUTH BEATING CORN.

A recent writer in this paper asked: "Why don't Kansas farmers raise more early sorts of corn? The early varieties made twenty-five to thirty bushels per acre in Kansas in 1898, along side native corn that made less than five bushels." This is so in Kansas, as a rule. One-hundred-day well-bred corn from Illinois matures its ears fifteen to twenty-five days before drouth or hot winds catches and ruins Kansas native corn. I have many testimonials affirming this. One below. Mr. J. D. Cowan, Austin, Kans., writes: "Your C. W. Pearl Corn made forty-two bushels fine corn per acre three weeks before drouth caught my native corn, which made very light yield of poor quality." C. W. Pearl Corn has made big yields in Kansas for fifteen years. It is very white No. 1 milling corn. Matures in 100 days. Price: Three pounds, postpaid, 75 cents; by fast freight, one-half bushel, 75 cents; one bushel, \$1.40; two bushels, \$2.55; five bushels, \$5.00; ten bushels, \$11.50. Freight charges on lots of two bushels or over will be prepaid to any Kansas point for 25 cents per bushel extra. New bags 15 cents each.

My special treatise on how to raise big crops from Illinois-grown seed corn in Kansas in drouthy years, abundant proof of it, and my new catalogue of corn and other field seeds sent free if you cut out and send this advertisement and three addresses of wide-awake land owners. I refer to editor of this paper. Or send money to First National Bank, Bement, Ill., to be paid over to me if they know me to be reliable.



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

J. S. CRAWFORD,
214 West Ninth St., Kansas City, Mo.,
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Gluten Feeds.

The cheapest source of Protein for a Balanced Ration. Will produce richer milk and more of it; a more rapid growth and development of Cattle and Hogs, and better meat for market purposes than any other feed on the market. Highly recommended by Prof. H. M. Cottrell of Manhattan Agricultural College. For information and prices address

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PATENT secured or money all returned. Search free. Collamer & Co. 124 E. St., Wash. D. C.

ITALIAN BEES.

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

A. H. DUFF, Larned, Kas.

JACKS FOR SALE.



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

S. O. HINGSTON, Richmond, Okla.

IT WON'T



Jump the track nor bind when door is warped or wall is crooked. T-rail track pivottally hung to brackets. Hangers on both sides of door. Nothing like it. Rapidly replacing all others. Gold Medal at Omaha. Write for circular. Also catalogue of our up-to-date Hay Tools.

LOUDEN MACHINERY CO., Fairfield, Ia.

When writing our advertisers please mention Kansas Farmer.

The Home Circle.

SWEETHEARTS,

I know of a lad and a lassie
And sweethearts they are, forsooth,
Though he has n'er spoke of his worship,
Nor she of her fancy, in truth.

He simply stands near her and gazes
Down into her fairy blue eyes,
That look up to his with such pleading,
Their longing suggestive of sighs.

He cannot but know that she loves him,
So long has he been by her side,
While she—bless her heart—I am positive
Would fain be the cavalier's bride.

You ask why they never have married—
To his love why he never doth yield,
He would, could he ask for her hand, but
The lips of the gallant are sealed.

So only a pair of true lovers
My lad and my lassie shall be,
Just living the one for the other—
The two of them living for me.

And I their companionship always
Shall seek me when ever I sup,
For she's on an old Dresden saucer,
And he's on an old Dresden cup.
—Detroit Free Press.

IN BALLAST.

I have often wondered whether it would not be possible to tell a tale of marine adventure in fairly intelligible language. All the sea stories that I have ever read have been written in a kind of nautical jargon. So far as I know, it may be correct enough, though upon this point I confess I have my doubts. Of course, we are all aware that every Englishman is a born sailor—a circumstance which is conclusively proved by the fact, so well established on the Channel boats, that no Englishman is ever sea-sick. But I question very much if even Britons can thoroughly understand nautical terms, unless they have enjoyed the benefit of a special education; and I have, therefore, determined to tell my little sea stories in plain, homely English.

I am quite aware that to some of my readers this may come as a disappointment. Only last night I told a lady, a great friend of mine, that I was going to make the attempt. Her face fell.

"Oh," she said, "won't there be anything about a belaying-pin?"

"Certainly not," I replied.

"I'm sorry for that," she said. "I always attach so much importance to a belaying-pin."

"What is a belaying-pin?" I asked.

"I'm not quite sure," she answered, with a little hesitation; "but I rather think that the captain uses it to stick in his necktie."

I don't pretend to know whether she was right in her conjecture or not. But I shall not make use of the term. And I shall also avoid such expressions as "Avast!" and "Ahoy!" which always strike me as being particularly offensive. I don't object to plain, common-sense words, such as mast and deck; and this, I think, should be accepted as a guarantee that the method which I propose to adopt is not the outcome of mere priggishness but an honest endeavor to make myself understood.

George Williams is a captain in the merchant service. I know him well. At the time of which I am writing he was a young officer, full of courage and resource, and, in spite of this, a great favorite with his employers, Messrs. Evans & Harrison. He had lately been given the command of a ship called the "Crocodile," and he, therefore, went to see the owners, at their office in the city, in order that he might receive his instructions.

"Morning, Williams," said Mr. Harrison.

"Morning, sir," said Williams.

"The 'Crocodile' is to go to Naples with a cargo of—." Well, it really doesn't matter what the cargo was; it is quite sufficient for my story that it was a cargo of something. George Williams was quite satisfied, so we need not trouble about it any further. Why should we be bothered about matters that do not concern us? Mr. Harrison continued:

"I don't think that you will be able to find a cargo for the return journey at Naples; so you will have to come away from there in ballast."

I am obliged to use this term because I know of no other that exactly conveys the meaning that I wish to express. But it is a most ridiculous and misleading phrase. When a ship is without a cargo, it has to carry some dead weight to prevent it from being too high out of the water, and this dead weight is called ballast. And then the sailors tell you that the ship is in ballast. Of course, what they really mean is that the ballast is in the ship, not the ship in the ballast. This I believe to be the true explanation, though I know it is dreadfully confusing.

Mr. Harrison went on to say that Wil-

liams would have to look in at one or two ports on his way home on the chance of picking up a cargo. And he named the places at which he was to call.

Then it was that a brilliant idea struck George Williams. Coal would be much more expensive out at the foreign stations than it was in London. Why not take out sufficient for the whole journey, and use it as ballast before consuming it? I cannot say that I think very highly of the notion myself. It seems to me that the ship would be continually rising imperceptibly out of the water, squeezed up like an orange pip between one's finger and thumb. But, then, I know nothing whatever about such matters; so possibly my opinion is not entitled to much respect. Anyhow, the suggestion commended itself to Mr. Harrison, and, between them, they determined to adopt it.

"There is one thing," said Williams. "We shall not be able to put all the coal into the coal cellars." "Coal cellars" was not the expression which George actually used. He said "bunkers." But such a word as that would convey nothing to people who had been carefully brought up, and I should not think of employing it myself.

"We shall have to put some of it into the hold," continued Williams. I am sorry to say you can only have little slices of this conversation at a time. It requires so much comment and explanation.

The hold is that part of the ship in which the cargo is put. It does not seem to me to have been quite the proper place for coals. I only hope that George was careful to have the hold washed before the next cargo went in. It may have been fruit, you know, or ladies' hats. However, I have no wish to find any fault. No doubt George Williams knew his own business best.

The "Crocodile" made a successful journey to Naples, and the cargo was landed there. As Mr. Harrison had foreseen, the Neapolitans had nothing which they wanted to send back, and so George Williams began the return journey with his ship in ballast. According to his instructions, he called at Cartagena, a Spanish port, in the hope of finding a stray cargo there. As soon as he arrived, he went to the custom house, and explained that, as he had not brought any merchandise with him, there could not be any duty for him to pay. I think that this showed great politeness and good feeling on George's part, but, I am sorry to say, the custom house officials did not meet him in anything like a friendly spirit. They were not content to accept his word, but asked him to produce his papers. Fortunately, George happened to have these with him, and so he very kindly allowed the chief custom house officer to look at them. A ship's papers give a number of statistics as to cargo, destination, and so forth, calculated to satisfy even the most inquisitive mind. In the case of the "Crocodile" the papers contained nothing that George Williams did not know by heart. So, after all, they might have taken his word. As it was, however, the chief custom house officer examined the papers with an eye keen to detect the slightest irregularity. Among the first things to attract his attention were those unlucky coals. The quantity carried was evidently far more than the cleverest captain could have squeezed into the ship's coal cellars.

"Oho!" he exclaimed, in excellent Spanish.

Many writers, in recounting a conversation of this sort, would endeavor to heighten the description by putting in a number of Spanish words, and assuming that their unfortunate readers understood the meaning of them. In my opinion this is bad art. I never assume that my readers understand anything. It is safer not to do so. Therefore, although the custom house officer spoke in Spanish because he knew no other language, and George Williams got as near to it as he could, I shall not give the conversation as it was spoken, but shall carefully translate every word.

"Oho!" said the custom house officer.

"What is this?"

"Coals," said George.

"You have large coal cellars."

"Yes," said George.

"But not large enough for all this coal."

"No," said George.

"Where, then, have you put it?"

"In the hold," said George.

"In the hold! Ah! Then it is merchandise. You are going to sell it. It is being smuggled. You must pay a fine."

"A fine!" shouted George. "What for?"

"You have endeavored to deceive the custom house. You are a smuggler! You will have to pay three times the value of the coal!"

"I shall do nothing of the kind," said George.

"Then I shall put your ship under ar-

rest," said the custom house officer. And, sure enough, when George went back to luncheon, he found two Spanish officials in charge of the vessel. The "Crocodile" was a prisoner until the fine should be paid.

George Williams was annoyed. It was bad enough to be fined when you were guilty, but to be fined when you were innocent was simply disgusting. Besides, the fine was a heavy one, and if the owners had to pay it, their feelings toward him might undergo a change. This would be unpleasant. To pay the fine himself would be more unpleasant still. What was to be done? There was a Spanish man-of-war lying in the harbor, and George knew that any appeal for help on the part of the custom house officials would receive immediate attention in that quarter. So he determined to proceed with the utmost caution. He sent for the engineer, and asked him how soon he could get up steam. The engineer replied that he could be ready in about an hour's time. You see this was really a most important matter. If a ship's boilers are once allowed to become cold, it takes, as a rule, a good four and twenty hours to get up steam again. But the "Crocodile's" fires had been banked up, so the engines could be made ready to start again at comparatively short notice. Having given his instructions to the engineer and the mate, George turned to the custom house officials and commenced a fluent conversation with them in his best Spanish. He began by observing that he thought he had been foolish; that it was useless to struggle against properly constituted authority, and so he had made up his mind to pay the fine. He then remarked that the engineer had discovered a leak in one of the boilers and had been busy repairing it. He now wished to give the ship a short run just to see if everything was all right again. Probably they would not object to this. And he finished up by inviting them to step downstairs into his private sitting room and drink a bottle of wine with him.

Whether it was that these poor Spaniards were guileless souls, or that the offer of a drink was one that could not be declined, I know not, but the invitation was accepted with avidity. Hospitality is one of George's strong points, and it is needless to say that he spent a delightful time with his two new friends. After a while the steady, regular throb of the engines began to make itself felt, but this in no way interrupted the harmony of the proceedings. Presently, however, the merry little party was startled by the boom of a gun. They all rushed upstairs on to the deck.

The "Crocodile" was steaming as fast as she could toward the mouth of the harbor. George turned and looked at the Spanish warship. An angry puff of white smoke appeared on her side, and the screeching of the shot as it passed overhead told him that she was really in earnest this time. One of the unhappy custom house officers gave a yell and leaped into the sea, where he was presently rescued by a friendly boat. The other, having a distaste for cold water, ran downstairs again and hid!

George Williams at once made his way on to the bridge. This is another of those perplexing nautical terms. It means a sort of perch near the middle of the ship, from which the captain is accustomed to give his orders. Another gun from the warship, and this time the shot fell into the sea quite close to them.

"Steward," said George, "fetch me my glasses. You will find them on the table in my sitting room."

It was the binocular glasses that he meant, not the other ones. But there was no time to explain. Fortunately, the steward was a clever man and understood perfectly. He ran downstairs,

found the glasses and came back with them as quickly as he could. While he was making his way up on to the bridge the warship fired again. The shot just whisked off the steward's cap, and passed on without doing any further damage.

A friend of mine has asked me to suppress this fact on the ground that in story of this kind some such incident invariably occurs. There is a great deal of force in this criticism, but I cannot comply with my friend's request. I feel bound to tell the story as George Williams told it. And he assured me that it was true.

The "Crocodile" had by this time got clear of the harbor and, though the man-of-war continued firing for some little time longer, none of the shots took effect. But George Williams knew very well that as yet he was by no means out of his difficulty. He had seen that the Spanish battle ship was getting up steam as fast as she could, and he was quite aware that once started she would gain upon him steadily. So he steamed away westward as fast as his ship would carry him. It was all in vain. Far away in the distance a black smudge of smoke on the horizon told him that his enemy was in hot pursuit. Hour after hour passed, while the Spanish warship came gradually nearer and nearer, and George Williams was enabled to experience those delightful sensations which all true sportsmen declare that the fox so thoroughly enjoys when he hears the hounds in full cry. At length Gibraltar appeared in sight. George, in his playful way, told me that he "made the Rock." But, of course, this was only his humorous exaggeration. George is a high-minded gentleman, and in his more serious moments I have never known him to deviate from the truth—except when he was talking Spanish. And that is a language which lends itself to allegory.

When he was within a mile or two of Gibraltar, George suddenly stopped and allowed all his steam to blow off through something which, I believe, is called the exhaust pipe. I have not an idea what this is, but I do know that the noise was simply hideous. The captain of the Spanish battle ship very naturally concluded that the "Crocodile's" engines had broken down and prepared, in triumph, to seize upon his helpless victim.

Meanwhile, George was making signs to the lookout station at Gibraltar. He asked for no sort of help. All he said was: "Please make a note of the exact position of this ship, the 'Crocodile.'" And the officer in command of the lookout station very kindly signalled back to say that he had done so.

Then the Spanish man-of-war came up in all her majesty, and immediately took possession of the "Crocodile." There was nothing for George but to submit, and so he and his ship were taken back to Cartagena.

But, directly they arrived there, George telegraphed to the British ambassador at Madrid to say that the "Crocodile" had been illegally arrested by a Spanish man-of-war. For the sea within three miles of the coast is held, by international law,

MAKE YOUR IRONING EASY

By using a Waxine Pad. Saves 20 per cent. of your time and labor in ironing anything, especially starched goods. Keeps iron bright and clean, prevents starch from sticking to the iron. One pad will last from one to four months; used in steam laundries. Will be mailed to you upon receipt of 10 cents, three pads for 25 cents. Money back if you are not satisfied. Agents wanted. Address J. W. Hardt, 112 West Eighth Street, Topeka, Kans.

Mothers! Mothers!! Mothers!!!

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

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No soap, no soda, no borax, no ammonia—nothing but water is needed to make things white and bright and beautifully clean with

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to belong to the nation which owns that coast; and, as George had been within three miles of Gibraltar at the time when he was caught, his ship had been seized in British waters. He also sent a similar one to Messrs. Evans & Harrison in London.

In matters of this kind the British foreign office acts with great promptitude and firmness. They communicated at once with the authorities at Gibraltar, who confirmed George's statements in every particular, and in less than forty-eight hours the "Crocodile" was released. In addition to this the Spanish government had the pleasure of paying £5,000 damages for illegal capture and detention.

And, strange to say, George Williams is still a great favorite with his employers, Messrs. Evans & Harrison.—Geo. P. Hawtrey, in Today.

The Spanish-American War.

The last vestige of Spain's western empire has disappeared. The final expulsion of Spain from America and from the Philippines is the fit conclusion of the long strife between the people who stood for civil and religious freedom and those who stood for bigotry and tyranny as hideous in their action as any which have ever cursed humanity. The work has been a long one, but Spain at last is confined practically to her peninsula, where her people can do as they please with one another, but whence they can trouble the world no more. Spain has ceased to rule. Her once vast empire has gone, because she has proved herself unfit to govern, and for the unfit among nations there is no pity in the relentless world-forces which shape the destinies of mankind.

We are prone to assign as the chief reasons for the war with Spain the cruel treatment of the Cubans and the destruction of our battleship in Havana harbor. At least the greater number of magazine and newspaper articles called forth by the war have discussed these causes as if they were alone responsible. It is natural that they should be most prominent, because they were the immediate causes and affected the United States directly. But the underlying causes of the war are as old as the United States itself, and have been steadily working towards the results achieved in the battles of Manila and Santiago for several centuries. In the February issue of Harper's Magazine appears the first installment of a calm and unprejudiced history of the late war, written by Senator Henry Cabot Lodge. Senator Lodge is eminently fitted to write the best contemporary history of this war, not alone because of his ability as a writer of American history, but because of the position he has held as a member of the Committee on Foreign Relations during the time which led up to the immediate causes of the war, and during the progress of the war itself.

Senator Lodge discusses in a concise and comprehensive manner the original causes of the war and the relations of Spain to the Anglo-Saxon race in the New World from the earliest colonial days. The conflict is not a new one. It began in Europe when England and Holland were allied against Spain, and, after the latter had been crippled in Europe, was transferred to the Western hemisphere.

In the first installment of his notable history Senator Lodge discusses "The Unsettled Question," which is the question of Cuba and her influence in United States politics and diplomacy during the last century. With a dispassionateness that is truly historical he presents the history of Cuba from the first insurrection of the natives to the time the Maine steamed into Havana harbor, to meet her fate a few days later at the hands of the treacherous Spaniards. Senator Lodge states concisely the long account we have had to settle with Spain, and shows remarkable power as a historian. It is a relief after all the hasty newspaper accounts to read a calm and unprejudiced history of the exciting events of the summer of 1898 while the memory of them is yet strong.

A strong nation is made up of strong men and healthy women, and health and strength are given by Hood's Sarsaparilla, America's Greatest Medicine. Get only Hood's.

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

The Young Folks.

THE FOUR WINDS.

Wind of the North,
Wind of the Norland snows,
Wind of the winnowed skies and sharp,
clear stars—
Blow cold and keen across the naked hills,
And crisp the lowland pools with crystal
films,
And blur the casement squares with glittering
ice.
But go not near my love.

Wind of the West,
Wind of the few, far clouds,
Wind of the gold and crimson sunset
lands—
Blow fresh and pure across the peaks and
plains,
And broaden the blue spaces of the heavens,
And sway the grasses and the mountain
pines,
And let my dear one rest.

Wind of the East,
Wind of the sunrise seas,
Wind of the clinging mists and gray, harsh
rains—
Blow moist and cool across the wastes of
brine,
And shut the sun out, and the moon and
stars,
And lash the boughs against the dripping
eaves,
Yet keep thou from my love.

But thou, sweet wind!
Wind of the fragrant South,
Wind from the bowers of jasmine and of
rose—
Over magnolia booms and lilled lakes
And flowering forests come with dewy
wings,
And stir the petals at her feet and kiss
The low mound where she lies.
—Charles Henry Luders.

FISH THAT USE PARASOLS.

"Fish are a good deal like men and women, after all," observed an old, retired Cape Cod fish dealer the other even-

themselves to rooting along the reefs and ledges for their daily provender and dodging hooks and lines. Whether it's because they like to lie near the top in shoal water and the heat of the sun hurts them or whether the reflections bother them no man may say, but every man who uses his eyes will tell you that on sunny days the harbors and inlets are alive with young pollock fry, all swimming around under the shade of the most gorgeous jelly-fish umbrellas imaginable.

"The cape waters are famous for the variety and splendor of these radiant creatures, which certainly resemble dainty glass parasols. There are pale green, yellow, pink, orange, white, red and purple ones, fringed, embroidered, scalloped, and notched, with knob handles, carved handles and silver and gold handles. Under nearly every one of these, according to size, will be from one to ten young pollocks, all blinking their fins idly and moving just enough to keep under their fancy shade. When one considers that most of these gay-colored things are armed to the teeth with a formidable sting and a sac of poison, it seems as if there may be other protection than that against the sun's rays. At all events, nobody meddles with the small fry, and they drift boldly past weakfish, bluefish, mackerel, or sea bass, all hereditary enemies, without a single attack.

"The sight is very beautiful, and I am surprised so few city people appear even to have seen it. As a spectacle, the jelly fish themselves, when an inshore wind has driven thousands of them shoreward, are wonderful, and often so thick that it is hard to row a boat through them. At night they are brilliantly phosphorescent and by day the most marvelous and artistic parasols in



After a photograph in Harper's Magazine

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THE "MAINE" ENTERING HAVANA HARBOR

ing, recounting some odd things he had seen down East. "There are busy fish and idlers, plain ones and others rigged out in more colors than a Frenchman's smock new painted. I've always thought they picked up a good many tricks from us human beings. Here some twenty years ago no one down our way ever dreamed of a fish carrying a sunshade, or of people doing it either, unless it was an old lady's plain, black umbrella affair, but nowadays—well, say! the fish in Cape Cod Bay protect their delicate complexions from the summer sun with the most gorgeous rainbow tinted parasols you ever saw. You folks needn't raise your eye brows, for this is solemn, every-day truth."

The old gentleman refilled his pipe, and continued by way of explanation:

"It's all owing to the summer girls from the big towns, who have been waving their pink, green and yellow sunshades around our shores these last fifteen years. They've broke the men folks all up, from Buzzard's Bay plum over to Provincetown, and what wonder if the fish get their heads turned. I am not going to disgrace the whole finny society of the coast, however, for it's only one branch of a very sensible and hard-working family that puts on such airs. The pollock are the chaps I have in mind, second cousins to our well-beloved cod of Sunday morning fish balls fame. They are coarser and poorer as food fish than the latter, less palatable even than the haddock, another cousin with whom they render good service by substituting it for cod (which costs more) in much of the boneless codfish sold in big cities. Lively, quick biters, and good runners for a short time, they offer sport to the line fishermen, particularly when a school strikes in.

"This parasol craze is a childhood affliction, too, I ought to add, and most likely it's the young women of the tribe which affect it, and when they grow older they drop all such nonsense and confine

the world. If some of you girls take a good look at the pollocks in their iridescent luxury down at the cape next summer, you will have a streak of envy that will turn the color of a sea-cucumber, and," the old fellow concluded, with a sly twinkle of the eye, "when you come home and try to make parasols to imitate those elaborate ones the fish carry, I don't want to pay the bills."—New York Sun.

North Dakota's Deserted Village.

A city large enough to house a population of 5,000, yet absolutely tenantless; a place with substantial brick blocks, well-laid streets and walks, handsome residences, costly store buildings—in fact, a metropolitan city—but without a resident, not even a cock to crow by day or a dog to howl by night! Such a place exists, although even in North Dakota, which State claims this tenantless metropolis, West Lynne long ago passed from the memory of most men and women.

The history of the place is one of the romances of the "boom" period from 1878 to 1881. West Lynne was a "boom town," and the most noted of them all. It was platted by schemers with more fertility than scruples, at a point on the Red River, where, they claimed, the Great Northern Railroad was to cross when built through to the Pacific coast. The possibilities of the place were exploited in the East; capitalists became interested and money was plentiful.

There was no sham about the actual construction of West Lynne. It was not another Arizona-desert farce, except in the minds and on the plats of its projectors, but a substantial reality. James H. Murray, a Chicago man, was the agent. He sold lots at auction in Chicago for thousands of dollars each. While he was selling a telegram would come notifying him of the disposal of a certain plat, and it would be withdrawn. Then



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he sold adjoining lots at top-notch prices.

In the meantime building was progressing. There were no board shanties, sod walks, or canvas shells. Handsome structures of brick or lumber, finished in modern style, sprang up as fast as material could be transported and contractors do the work. And to-day there the "city" stands, a handsome but useless monument to the credulity of some and the hardihood of others. Not one of its magnificent buildings has ever been occupied.

Several years have elapsed since the writer last visited West Lynne. No one loitered on the grass-grown streets; the handsome and costly blocks of brick, with plate-glass windows or ornate facades and massive doors cracking on rusty hinges or lying where they had been tumbled by Time's rude hand, gave back hollow echoes to the voice of the visitor. Mansions costing thousands of dollars—tasteful and spacious, with every indication that persons of wealth and refinement had at some time intended to occupy them—were scattered in clusters in this or that "addition." Around them trees and shrubbery, once reared with care, grew rank and unkempt. The fences were falling to pieces, and grass and weeds encroached upon pavements and approaches. Not a human being was to be seen; not even a stray cat was found warming itself in some stray nook on that fine September day. And the "city" had never had a permanent resident.

But all is not yet told of the waste of wealth that created this prairie haven of bats and foul birds of the night. Across the Red river is a steel bridge, built for railroad and wagon traffic, which no engine or train ever crossed or ever will. The wagon track is used. The structure must have cost \$200,000, as there is a great deal of piling and trestles in the approaches.

West Lynne stands on a flat, sandy stretch, where the overflow from the river is so extensive and long continued that crops can not be grown. Across the river, in Emerson, is the custom house, and the business of the district is conducted there. That is all the life there is to Emerson, which in the "boom days" was but a suburb of West Lynne. Even in Emerson there is a brick block, three stories high, 375 by 150 feet in dimensions, with a basement under the whole. It contains 14 spacious store rooms, with plate-glass fronts, and all the accessories of a stylish business block. But not a single individual inhabits the great structure, and it is slowly going to ruin. Eighty-five thousand dollars was the cost of this building.

This is but one illustration of the manner in which towns arose and fell in the Dakotas during the memorable "boom." West Lynne was by far the largest of the mushroom cities, but there are many others in the two States which contain enormous buildings, erected when money was plentiful and investors looked upon the Northwest as the American land of Canaan, but which have never been tenanted since the contractors and their men left them.—San Francisco Call.

\$100 Reward. \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address

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The Agricultural College bill introduced by Senator Hessin provides, wisely, for a new building for three leading departments, namely, agriculture, chemistry, and physics. Among the institutions of the State this one is pre-eminent for returning full value for every dollar expended upon it. It is the farmers' college, and, with the agricultural experiment station, is doing a great deal to promote the interest of those engaged in the leading productive industry of the State.

The Kansas apple has now a book devoted to it. Secretary Barnes, of the State Horticultural Society, has just issued a report, covering 229 pages, in which he has compiled the newest and best information extant on apple-growing in Kansas. It is composed almost entirely of reports of experiences in this State. Growers in every section have been consulted and their views are given in their own words. A copious and classified index enables the reader to find readily what he wants. The book should be in the hands of every apple grower and everyone who wants to be an apple grower in Kansas.

Wheat prices went up beautifully for a few days, attracting buyers of the speculative article from all parts of the country. These poured their money into the hands of Chicago brokers with orders to buy. As soon as this movement from outsiders was well under way the professionals sold options so rapidly that prices came down considerably below the highest figures reached. Of course, the country buyer found that his wheat had been purchased at a higher figure than he could realize for it. He must, therefore, put up additional margins or have his holdings sold out and his purchase payment forfeited. Generally he lets it go. In this way the professional crowd gets his money. While the statistical position of wheat indicates advancing prices, it still remains within the power of the professional dealers in wheat options to temporarily depress the market and take in most of what the outside buyers invest in chances for the rise.

The secretary of the National Association of Wool Manufacturers has completed his estimates of the world's production of wool in 1897 and 1898. An increase is shown in the aggregate production from 2,625,039,191 pounds in 1897 to 2,689,614,124 pounds in 1898. Europe produces more than one-third of all the wool and made nearly one-third of the gain. The United States produces nearly one-tenth of the wool and is credited with a little more than one-tenth of the gain. South America produces nearly one-fifth of the wool of the world and made a gain nearly equal to the entire gain of the world. Asia produces a little more than one-tenth of the wool of the world and made a very slight gain. Australasia produces about one-fifth of the wool of the world and lost more than one-third as much as all the world gained. Africa produces about one-twentieth of the wool of the world—i. e., sheep's wool—and is credited with a little more than one-twentieth of the gain. The decrease noted in wool production in Australasia is a continuation of a like decrease reported a year ago.

NATIONAL LIVE STOCK CONVENTION.

The second annual meeting of the National Live Stock Association was held at Denver, Colo., last week and was largely attended by representative cattlemen of the entire country, but more particularly of the trans-Mississippi country. All the large cattle dealers of Texas and the Northwest were strongly represented, as well as the live stock exchanges of Chicago, Kansas City, St. Louis, Omaha, and St. Joseph. Questions relating to live stock industry in general received special attention, as well as the matters of railroad traffic and the live stock markets.

The cattlemen of the Northwest insisted that the Texas men must reduce their prices if they expected them to buy as liberally as in years past, to which the Texas men responded that it was not necessary to do so, as their trade was greatly increased with the feeders of Kansas and other agricultural States.

Denver presented an additional attraction this year by the offering of 12 cash prizes, aggregating \$2,000, for exhibits of range cattle. There were 23 entries, consisting of one or more cars of stock, the largest entry including 200 animals.

"This exhibition in Denver," said H. E. Seguin, a Kansas cattleman, "will show visitors the kind of cattle that the Western ranges can produce. This alone is a very large item, as there are few people aside from Western stockmen who know what great progress has been made in this business in the past five years. Much stock has been introduced simply as samples of great herds of similar cattle which must be sold during the coming year, and this will make the first effort in history to sell cattle by sample. This is a novel idea and will be watched with much interest."

On the call for reports from different sections of the country Col. McCoy reported for Kansas as follows:

"I am always glad to speak for the State that will allow me to live in it. (Laughter.) Kansas is in the geographical center of the United States, not to mention the Philippine Islands. (Laughter.) Kansas has 2,500,000 cattle. They marketed in Kansas City 1,500,000 head of cattle and bought back 3,000,000 head. Kansas is in it. (Applause.) Kansas has built the second live stock market of the world. This last year the aggregate sales in that market was \$116,000,000. We have every evidence of improvement. Kansas claims that market and is proud of it."

The speaker grew eloquent over the magnificent womanhood of his State, and declared that the women of Kansas are superior to those of any other State. To the surprise of delegates he quoted Scripture and reminded his listeners that the ancient Hebrews did not choose for important missions the young man with the foot-ball head and base-ball brains. (Applause.) The prophet went out on the plains to the household of Jesse and there poured the anointing oil upon a shepherd boy. The speaker could not tell of all the good things that have come to the world through stockmen. "Stockmen honored all along the line." (Great laughter and applause.) "Stockmen have been from the earliest history the best of citizens, nature's noblemen, the most ardent lovers."

Delegate Barnes, of Arizona, was in favor of being liberal with the sheepmen, as was J. E. Law, of Weld County, Colorado. They reviewed the battles with cattlemen. Mr. Mackay spoke in support of his position and the debate closed. The resolution as adopted, with its amendment, reads:

"Resolved that the policy of the Government in protecting the forests in the forest reserves from destruction by fires and depredations be approved and that so long as it shall appear that the grazing of sheep on such forest reserves is destructive of the forests and seriously diminishes the water supply, the regulation of the Interior Department prohibiting the grazing of sheep on forest reservations should not be abrogated.

"That all live stock shall be allowed to graze thereon, subject to such restrictions and regulations as may be found by the Department of Agriculture to be wise and necessary."

The resolution adopted by the executive committee requesting the Secretary of Agriculture to arrange for the collection and publication monthly of the number of sheep and cattle moving from different ranges to feed lots, character of feed, etc., was adopted with very little discussion.

The resolution favoring the passage of the bill in the United States Congress providing for an extension of the transit limit for transportation of live stock in cars from 28 to 40 hours was agreed to.

The resolution requesting a thorough revision of the interstate commerce law

was adopted, as was one asking that a committee of three be appointed to wait on the governors of Utah, Wyoming and Colorado to ascertain the best method of affording protection to cattlemen.

Resolutions were adopted indorsing the work of the Agricultural Department in the grass and forage investigation, and urging that \$10,000 be appropriated by the Government to carry on the work; instructing President Springer to ask President McKinley to issue an executive order giving the cattle of the United States preference in the Cuban trade, as a benefit no less to the Cubans than to the Americans; and to urge Congress to take similar action when laws are made for the government of Cuba.

The following resolutions, which had been referred to the committee and reported favorably, were also adopted by the convention:

"Resolved, That the railroads be asked to restore from all points where they do not already apply the system of assessing freight charges on the basis of the length of the car instead of the weight of contents.

"Resolved, That the railroads from all points east of the Missouri River grant the same privileges of stopping in transit for feeding live stock as are granted by the railroads west of the Missouri River.

"Resolved, That this convention hereby expresses its appreciation of the persistent, scientific and successful efforts of the Secretary of Agriculture in behalf of the live stock and farming interests of the country."

A meeting will be arranged between the executive committee and the managers of the Union Stock Yards Company of Chicago within sixty days, when an effort will be made to secure the abolition of the \$2 terminal charge.

The final resolution called for the appointment of a committee of three to confer with the Secretary of Agriculture with the view of having a complete exhibit at the Paris Exposition of 1900 of American-bred cattle, sheep, horses and swine.

The executive committee member from Kansas is G. W. Melville, of Topeka, with H. W. McAfee, of Topeka, as alternate. All the old officers were re-elected, as follows:

President—Hon. John W. Springer, of Denver.

Secretary—Charles F. Martin, of Denver.

Treasurer—George L. Goulding, of Denver.

Board of Control—The president and secretary and D. N. Stickney, of Wyoming, Peter Jansen, of Nebraska, and G. F. Patrick, of Colorado.

Official Organ—Denver Daily Stockman.

Headquarters—Denver Union Stock Yards, Denver, Colo.

Next Place of Meeting—Fort Worth, in January, 1900.

SUGAR CONSUMPTION IN 1898.

The indicated consumption of sugar in the United States in 1898 shows a slight decrease as compared with 1897. As reported by Willet & Gray's Statistical, the total consumption of sugar, foreign and domestic, in the entire country, including the Pacific Coast, was 2,047,344 tons, against 2,071,413 tons in 1897, a decrease of 24,069 tons, or, say, 1.16 per cent decrease. The consumption of 1898 consisted of 317,447 tons domestic cane sugar, 33,960 tons domestic beet sugar, 5,000 tons maple, 300 tons sorghum, 1,700 tons molasses sugar—a total of 358,407 domestic production; and 1,432,847 tons of foreign cane sugar, 179,465 tons of foreign raw beet sugar, 26,625 tons of foreign refined—a total of 1,638,937 tons of foreign production. The amount of refined sugar which went into consumption in 1898 was 1,855,533 tons, of which the American Sugar Refining Company manufactured 1,260,248 tons, or 67.2 per cent; the independent refiners, 540,700 tons, or 29.2 per cent; the beet sugar factories which make refined sugars, 27,960 tons, or 1.8 per cent, and foreign refiners 26,625 tons, 1.8 per cent; 141,811 tons were consumed in the raw or plantation condition.

These statistics answer in a few words several inquiries frequently made about sugar. Even with the Cuban sugar industry prostrate cane sugar has constituted the much larger part of our supply. When the Cuban sugar plantations shall have assumed the prosperous activity which is sure to come with stable conditions of peace it is doubtful whether either bounties or tariffs will enable beet sugar producers of Germany or this country to compete with the product of the tropical cane.

Dr. Bull's Cough Syrup has saved the life of many a child. This wonderful remedy always cures croup, whooping-cough and measles' cough. It has never failed. Price 25 cents.

REDUCTIONS IN EXPORT FREIGHT RATES.

It is reported that with the first day of the present month 1½ cents was to be slashed from the export grain rate from Chicago to all Atlantic seaboard points. This will make the rate from Chicago to New York 18½ cents and that to Philadelphia and Newport News 17½ cents. On the same day the dressed beef rate was to be reduced 5 cents per hundred-weight. Formerly it was 45 cents. On the same date 1½ cents was to be cut from the corn rate from Mississippi River crossings to Atlantic seaboard points. This makes the carrying charge 13½ cents. Packinghouse product rates were to be cut from 30 cents to 25 cents on the same day. Live stock rates were slated to go down to 25 cents at the same time. The old rate on cattle and sheep was 28 cents and on hogs 30 cents.

All these changes were agreed upon at a meeting of the Central Freight Association last week. There was some talk, too, of making reductions on flour and corn products. Flour usually takes the grain rate, but as the Eastern lines now receive but 16 cents as their proportion of the 25-cent rate in effect from St. Paul to the seaboard, it was not thought advisable to make a further reduction.

The reductions on grain and dressed beef came as a great surprise. The others were expected. Grain and dressed beef make up a very large proportion of the eastern shipments from Chicago and reductions in these rates are of unusual importance. Chicago traffic men have worked for lower grain rates for more than two years, but as long as the Joint Traffic Association was in existence the board of managers could permit of no decrease.

New York is said to be responsible for this cut in rates, particularly on grain. Since the Southern ports began to assume such importance as export centers New York has declined, and this move is simply to gain lost prestige.

AGRICULTURAL EDUCATION IN RUSSIA.

The Government of Russia is planning for the establishment of a quite extensive system of agricultural education. At a recent meeting of the agricultural council, an advisory body of which the minister of agriculture is chairman, an outline presented by the minister was considered at length and a general plan of agricultural education was elaborated. The introductory to this document states that notwithstanding the fundamental importance of agriculture to Russia and the great fertility of some of the Russian soils, "the crops obtained even on the chernozem (black soil) are only one-third to one-half as large as those harvested from the incomparably inferior soils of western Europe. Almost everywhere in Russia the primitive processes of farming are persistently followed by the farmers, while the number of persons who are fitted by education and training to disseminate information on the rational methods of agriculture is comparatively insignificant." The scheme outlined for (1) higher education, furnished by independent agricultural institutes located in the chief agricultural zones of Russia, and by chairs of agricultural and allied sciences in the universities; (2) agricultural high schools, which are in the nature of technical schools and schools with courses in agriculture; (3) lower agricultural schools; and (4) the diffusion of general agricultural information. The schools for the so-called lower education include (a) secondary agricultural schools, (b) primary agricultural schools, (c) agricultural classes, and (d) practical agricultural courses. These lower schools are to be under the jurisdiction of the minister of agriculture and imperial domains. They are to be maintained at the expense of municipalities, local communities, associations, etc., but may receive a part of their support from the Government. They are to have the franking privilege for official mail matter and packages not exceeding 36 pounds in weight. The secondary schools are to be established on government land or land donated for that purpose. The other lower agricultural schools may be established on private estates. The secondary schools are open to young men of all conditions who have completed the course in the primary public schools. The course of instruction covers four years, and includes in addition to the general studies the elements of the natural sciences, agricultural and rural economy, cattle raising, veterinary, agricultural law, horticulture, gardening, etc., together with carpentry and blacksmithing in their application to agricultural machinery. The primary agricultural schools are open to all who can read and write and have a knowledge of

arithmetic as far as fractions. The courses last from one to three years. They include, aside from general studies, instruction in the elements of agriculture, with practical exercises. The classes in agriculture are intended for the instruction of young men of the peasant class. The course does not last longer than two years, and consists in the study of the rudimentary principles of agriculture and their application to the local conditions. The successful completion of the course in these three grades of the lower agricultural schools carries with it certain reductions in the military requirement, dependent upon the grade. The practical agricultural courses are designed to impart popular information in particular branches of agriculture. The instruction does not continue for more than a year, and consists in demonstrations, talks, and practical exercises in different branches of agriculture in their application to local conditions, and especially to the conditions of the peasants. The diffusion of general agricultural information is to be provided for by (1) the organization of public readings or lectures on agricultural questions for the benefit of different classes of the population, (2) instruction of the teachers in the public schools in agriculture, horticulture, gardening, apiculture, etc., and providing the public schools with small plots of land and means for cultivating the same, (3) the teaching of agriculture in the normal schools, and (4) the introduction of supplementary courses in agriculture in the village schools. There are now in Russia 3 schools for higher agricultural instruction, 9 agricultural high schools, 83 lower schools, and 59 special courses. Steps have been taken for the establishment of about 50 additional agricultural schools.

STOCK IN THE UNITED STATES.

The Department of Agriculture has issued the following:

"The returns of the number of live stock on farms in the United States January 1, 1899, show there to have been 13,665,307 horses, 2,134,213 mules, 15,990,115 milch cows, 27,994,225 oxen and other cattle, 39,114,453 sheep and 38,651,631 swine. These figures show a decrease of 295,604 in the number of horses, 56,069 in that of mules, 1,269,972 in that of oxen and other cattle, and 1,108,362 in that of sheep. On the other hand, there is an increase of 149,229 milch cows and 1,457,493 sheep.

"The average farm value of every description of live stock is higher than on the 1st of January, 1898."

The Oat Crop.

These pleasant spring-like days will have a tendency to make many think of oat seeding, so a few remarks along this line may not be out of order at this time.

For the best development of the oat crop a cool, moist climate is needed, so Kansas does not rank very high as an oat-producing State. While Canada is raising 50 to 60 bushels per acre on an average that weigh 35 to 45 pounds to the bushel, Kansas' average falls below 30 bushels and in many years below 20, and the grain is seldom of good enough quality to reach the standard weight of 32 pounds without grading.

Many farmers discard the crop on this account, and it is well for the man to do so who is farming just to rob the soil of what he can, and sell it off in the form of grain, for when handled this way the oat crop is not a money getter. But to the man who is trying to keep up the fertility of his farm by a judicious system of rotation of crops, and consequently keeps stock to convert the crops into valuable products, the oat crop in Kansas, even if its poor yields could not be bettered, has a great value. It is one of the crops that is fairly rich in the compound, protein, that has such great value in stock feeding and is attracting so much attention from the farmers today. The shrewd feeder values oats for all classes of stock, but feeds it judiciously, uses it to give variety and help make the balanced ration from the feeds raised on the farm. He goes to the expense of threshing but little of his crop, for it is harvested while in the dough stage and the straw is worth as much as prairie hay, and for many classes of stock it is a very economical way to feed the grain in the sheaf.

If the oat crop is seeded in proper season it can be removed in time to make room for many catch crops—as sorghum, fodder corn, soy beans, cow peas, rape, and wheat or oats for fall pasture. If the ground has been plowed in the spring, a good disking will put the stubble in shape to receive most of these crops. When properly handled and utilized it will pay and pay well to raise oats in Kansas and the progressive farmer should not be without a small

patch in his list of crops the coming year. He should not be discouraged because he cannot obtain the yields of Scotland, Belgium, or Canada, but go about to better the present results, which I believe can be done in many cases.

During past years this station has carried on quite extensive experiments with the oat crop as to varieties, time of seeding, preparation of the seed bed, amount of seed per acre, selection of seed, treatment of diseases, etc. The results would indicate that no variety or method of treatment will prevent an almost total failure at times, but that there is much to be gained by proper selection of varieties, seed, and treatments in most cases.

I will comment on these results very briefly and any one wishing details may obtain them by writing to our secretary for bulletins Nos. 63 and 74.

VARIETIES.

Nearly two hundred varieties have been under trial, and some of them for seven years. We find that no one variety is superior to all others one year with another, but that there is quite a number of good varieties and that they are very superior to a large number of other varieties in our list. The cardinal point in our best varieties is that they are early maturing. Color cuts no figure, for all colors are found in our best list and in our poorest list. Our good varieties do not seem to run out if the seed is selected with care from year to year, and the fine heavy seed from the North generally gives us poor results the first year, and is not superior to our well established varieties. No variety is rust-proof, but the earlier the variety the less it will be damaged by this pest. The following are some of our best varieties and longest tested: Belgian, Brown Winter, Board of Trade, Red Georgia, Pedigree Red Rust Proof, South Carolina Black.

The phenomenal yields claimed by seedmen for any variety will not materialize in Kansas. Steer clear of such advertised varieties. It will pay well to give a good round price for a start in good seed oats, but this can often be found among your neighbors, and when you once obtain it you can keep it with proper selection and grading of seed, and importations of seed will not be necessary often.

TIME OF SEEDING.

This is the most important point, as there is more loss due to late seeding than any other cause. In this locality, for each succeeding week after the middle of March that oats are put in the ground, the yield will be two to four bushels less per acre. Seedings made as late as the middle of April will yield only half as much as those made before the middle of March. The early seedings generally escape the damaging effects of rust, while the late ones, as a rule, are almost destroyed by it. Very seldom do oats damage by freezing if not seeded earlier than the first of March. With the best varieties and the soil in perfect condition the yields will be poor as a rule if early seeding is not practiced.

PLOWED OR UNPLOWED LAND.

It is a very common practice in this State to seed oats in corn fields without plowing. On our soil here, which is a heavy clay loam, it makes but very little difference in the yields whether the ground is fall or spring plowed, or the seed is broadcasted in the corn stubble and disked or cultivated in, or the seed drilled in on the stubble. In all our trials the stalks had been removed and the field was clear of all other trash, and had not been tramped by stock. As a rule the yield has been one or two bushels more on the plowed ground, and the stand has been more even, and the ripening uniform, and the method seemed not subject to so much chance. Where the ground was plowed it was much easier put in shape for the succeeding crop. The method that will enable the most reasonable seeding should be the one chosen.

AMOUNT OF SEED PER ACRE.

There can be a great variation made in the amount of seed used per acre without materially changing the yield. From 1½ to 4 bushels per acre has given very little variation in yields in our experiments. We find the happy medium to be about 3 bushels. This amount of seed will make plants enough without much tillering, which often fails to take place if a drought comes at the wrong time, and for this reason a less amount of seed often fails to produce the proper number of plants. Where much tillering is required the ripening is irregular and later. A good, liberal seeding keeps down all weeds, and, contrary to the opinion of many, does not lodge as readily as thin seeding. Broadcasting will require more seed than drilling, and if

the seed is not all good more will be required.

EFFECTS OF QUALITY OF SEED.

If our experiments have solved anything they have demonstrated that it pays to select and grade up the seed. But they also show that light seed may produce an excellent crop if the seed be of a good variety. If for some such cause as rust the whole crop is made light weight it is not necessary to discard it, but use it after fanning out the lightest. This does not happen often with a good variety if it has been seeded at the proper time.

OAT SMUT.

Our experiments show that by utilizing the Jensen hot-water treatment, we can completely destroy this disease on the oat that takes from 5 to 15 per cent of the crop in most cases. We find it a very inexpensive method and that by applying the treatment every two or three years the disease can be kept in check.

F. C. BURTIS.

Kansas Experiment Station.

Publishers' Paragraphs.

SEED CORN.—J. B. Armstrong, Shenandoah, Iowa, has advertised with us regularly each season for five years his celebrated and widely known Early Rose seed corn. It has been tried from Michigan and Minnesota in the North, to Texas in the South, and has proven a wonderful yielder, a great drought-resister and a very profitable kind of corn to raise. He reports to us that testimonials are coming in, some of which surprise him because of the great success that the raiser had met with in using his seed corn. We do not believe any corn grower has given more thought to the best methods of meeting with success in growing corn than has Mr. Armstrong; it is his great study and he takes pride in the results. He reports a grand lot of seed corn carefully picked and sorted and of splendid germinating vitality, ready to be sent out to farmers this season.

The Kansas Mutual Life Insurance Company is a financial institution of Kansas and it has the proud record of conducting its business in such a way as to be untouched by the most rigid construction of the insurance laws of the State, laws whose administration has made many foreign companies wish they could withdraw from the State. But the most rigid enforcement of these laws has found the Kansas Mutual with large margins to the good. The Kansas Mutual has paid to its policyholders since its organization the princely sum of \$1,158,038. It has now in force, according to the statement on another page, insurance amounting to \$9,893,091, being a gain of \$509,055 for the year. The business of the company is economically administered; its funds are safely invested, largely in farm mortgages in Kansas; and its system of conducting its affairs is in such fidelity to the trust imposed by its policyholders that it is at once the safest and most economical life insurance available.

Calcium Carbide.

Superintendent Murray of the Bureau of Combustibles, has made regulations governing the transportation, storage and sale of calcium carbide, which the firemen declare to be a source of danger in a burning building, because when water reaches it acetylene gas is given off. A number of stores keep it for use in bicycle lamps. Hereafter, in transit or in storage, it must be inclosed in hermetically sealed iron receptacles marked "Dangerous, if not kept dry." No package may contain more than 100 pounds. It must be stored in isolated buildings that are fireproof and waterproof. No artificial light or heat will be permitted in the building where it is stored. Not more than 20 pounds, in bulk or in cart-ridges, may be kept in any store or factory, and this must be in a fireproof safe or vault above the street and it must be 6 inches above the floor.

The manufacture, transportation, storage, sale or use of liquefied acetylene is absolutely prohibited within the limits of this city.—N. Y. Sun.

Push the plowing if there is a thaw-out.

Dr. Bull's Cough Syrup is the best remedy for relieving and curing that asthmatic cough. Physicians recommend it. Buy only the genuine, Dr. John W. Bull's Cough Syrup.

The Berryton Farmers' Institute, which is always a good one, will be held February 2 and 3.

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

Pleasant Money-Earning

A little booklet with pictures of successful workers for THE LADIES' HOME JOURNAL, and extracts from their letters showing just how they succeeded. It will be sent free to any one. Address

The Curtis Publishing Company
Philadelphia, Pa.

Paint Talks—XIII.

PAINT AS AN INVESTMENT.

In the whole field of domestic economy there is nothing that yields better returns to the property owner than paint. Paint costs less than repairs and paint avoids the necessity of making repairs.

All of the wood work of the house, including the roof, should be protected by paint, obviating the necessity of constant repairs and making the material covered practically indestructible by the ordinary action of the elements, while increasing the renting or selling value of the house by making it attractive.

The sanitary value of good paint is also very great, as it preserves a smooth and impervious surface on which disease-breeding microbes can find no lodgment. This is an important reason why the walls of living and sleeping rooms should be covered with paint instead of paper. Besides, a painted surface remains cleaner and more wholesome than paper, as it can be washed and disinfected without injuring it.

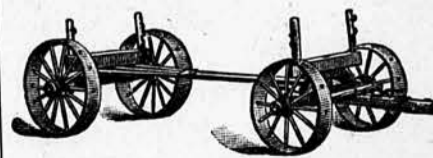
Paint and plenty of it is always a profitable investment, particularly if the paint be a durable one. The combination paints based on zinc white are the most durable, and as they usually contain a larger bulk of paint and cost less per pound than pure white lead paints, there is double economy in their use. A properly compounded zinc combination containing only pure linseed oil and the necessary driers, will usually stand in excellent condition for eight to twelve years without requiring renewal, and one coat at the end of that time will put it in its original condition. A pure lead and oil paint will have deteriorated after standing a year; it will need renewal within three years, and if let stand five or eight years without renewal, will require two coats to put it in good condition.

The addition of 20 per cent of zinc to the last coat of the original work will retard this deterioration to some extent; but a good combination paint containing a fair proportion of zinc white thoroughly incorporated with lead or barytes or both in pure linseed oil is preferable and will prove the best investment the owner can put into his property.

STANTON DUDLEY.

Farm Wagon for Only \$19.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tires.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application to the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

Horticulture.

GARDEN IRRIGATION IN KANSAS.

By Edwin Taylor, Edwardsville, Kans., read before the Kansas State Horticultural Society, December 28, 1898.

It may be set down as an established fact that under usual Kansas conditions it will not pay to extend artificial water upon grain crops or grass. Wherever grain or grass can be produced profitably by irrigation it must be the case that water is easy to get, or that labor is cheap, or that products are dear. Kansas has no mountain streams like Colorado or California, neither is it graded by nature with that two-way slope requisite for applying such streams to crops. In our State water in most instances has to be elevated by machinery from river beds, from wells or from artificial ponds. The initial cost of water thus produced, varying in its expensiveness according to the height and other incidents of its elevation, always reaches a point where corn at 25 and wheat at 50 cents will not pay the bill. In India and Egypt grain is economically produced where water is dipped upon it by hand or pumped up with rude buffalo-propelled treadmills. But the labor cost per man per day in those countries is in round numbers only one-tenth as much as we must pay.

WESTERN KANSAS.

Four years ago the legislature was overrun with people who seemed positive that western Kansas would be taken by the bow-wows unless those animals were fenced out by ditch water, and it appropriated \$30,000 to be expended by a commission for the purpose of ascertaining the truth of that matter. The report of that commission convinced the legislature, first, that there are no bow-wows in western Kansas; and, second, that if there were they can be guarded against easier and better with the nutritious herbage of the plains, supplemented by sorghum, Kaffir corn, and alfalfa than by any system of public works whatever. But it was worth all it cost, for the future tranquility of that section, to have shown up the unreality of an irrigation mirage which includes within its misty illusions alluring but deceptive appearances of practicability in all branches of agriculture. The mistake which the legislature made was that, having satisfied itself about the futility of forcing grain and forage in the short-grass end of the State, it did not then continue its investigations by spending \$30,000 to determine to what extent and under what circumstances the gardens and orchards of the east end of the State may be irrigated with profit.

THE EAST END.

I particularize the east end because in a country where its horticultural products only can be irrigated nothing can be more obvious than that the place to begin experimenting upon such garden irrigation is the place where the orchards are the largest and the "mostest" and the water most plentiful and the "lift" the least. I count that a garden where any fruits, but orchard fruits, and any vegetables are raised, whether the extent of the culture is measured by the size of a cotter's onion bed or the hundred-acre field of some potato man or cabbage grower. But when it comes to applying water to such cultures it makes an enormous difference in proportional expense, whether our estimate is based on a small tract or a large one. In fact, the expense of planting and cultivating a kitchen garden is so much greater per capita (cabbage "capita," for instance) than a market garden that not half our Kansas farmers within the rain belt even feel able to afford the luxury of plentiful supplies of vegetables and fruits for their own families. It is not that the farmers of Kansas are more indifferent to the flavor of garden "sass" than their fellow craftsmen of other States, but that from one end of the country to the other the table of the average farmer is conspicuously less furnished forth with fruits and vegetables than the table of the average townsman. This is so because it costs the farmer more to raise his vegetables than it costs the townsman to buy them. If now to the excessive cost of diminutive cultivation be added the proportionally excessive cost of diminutive irrigation, the combined expenditure reaches proportions that most farmers will not stand. It remains that, excepting among people who put a value upon nature's beauties not measured in current funds, irrigation in horticulture will be confined to those gardens where stuff is raised to sell. Irrigation, if left to itself, will begin where the conditions as to soil, climate, water, transportation, and markets are the most favorable and will thence spread through increasing difficulties to the limit beyond which it will not pay as a business-venture. But

when once the methods of applying water are generally understood, and the difficulties in the way of elevating it are worked out and familiarized, and we come to appreciate the prodigious increase in yield and certainty; when drought is eliminated and the scorching, unclouded sun is converted into an adjunct of growth—when all these are accomplished, thousands who are not exacting as to the outlay for the gustatory, arboreal, or floral embellishments of their homes will continue the work begun for profit and carry it on as a labor of love and adornment till Kansas shall blossom as the rose.

MOSTLY WATER.

The argument in favor of irrigation for gardens rests at last upon the fact that fruits and vegetables are mostly water. Potatoes are 70 to 80 per cent water; strawberries, 85 per cent water; turnips, 90 per cent; apples, 84 per cent; peaches, 84 per cent; and watermelons something over 100 per cent water. There is no kind of culture that can compare with horticulture in this particular of appropriating water, except cow culture.

Milk is also mainly water, but, wet as milk is it contains more dry matter than any equal weight of plums, gooseberries or turnips. And there is this difference between milk and fruits—the more water milk has in it the poorer the milk is; the more water you can get into the fruits the better they are. Nobody wants a dry apple, for instance, however fond he may be of dried apples. Some people have turned up the nose at the Ben Davis, even, on the ground that it was dry and punky. The more water you can get into fruit the better color it will have; while the more you put into milk the worse it will appear. With fruits the first point of excellence is juiciness; that is, you want your fruit gorged with water. We say of such fruits that they melt in your mouth. In fact, no fruit but watery, juicy fruit makes your mouth water. Then, again, there is no draft on the fertility of the soil for the water that goes into your berries. For instance, a crate of fine, large, juicy strawberries does not take as much "strength," as we gardeners say, out of the soil as a crate of strawberries that are all skin and bones. It is mainly the skin and seeds of berries that cost. That is where the nitrogen, the phosphoric acid and potash are stored. And then consider the effect of the two on the market. Seedy berries soon satisfy demand; big, juicy berries create demand. Little, knurly, prongy, ornery potatoes stop people from eating potatoes. Nothing hurts the peach market like cull peaches. When it comes to potatoes it would seem at first thought that the rule as to water would fall down, but it don't. The driest potatoes come from the irrigated districts; and yet one of those Utah Rurals, for all it cooks so mealy, will have in it as much more water than one of our Kansas potatoes as it is bigger than our specimen. Potatoes have the faculty of discrimination. They will take up the right proportion of everything to make 'em taste good but salt. That has to be added.

IRRIGATION FERTILIZES.

Irrigation does much more than supply needed moisture to plants. It fertilizes them, as well. Take it one year with another it beats commercial fertilizers. It doesn't take the place of barnyard manure because it does nothing to supply fiber and humus to the soil. The essential elements of fertility, potash, phosphoric acid and nitrogen are now locked up in the soil in such abundance that the only concern the cultivator needs to feel is how to unlock them. These elements are unlocked by moisture, heat, and cultivation. Our summer season furnishes plenty of heat; we can supply the cultivation; if the one thing now lacking, moisture, be sufficiently furnished, the fertilizer man will place no mortgages on our fields for generations to come.

THE AGENT.

A farmer's dearest enemy is the agent—the tree agent, the book agent, the lightning-rod agent, the insurance agent, the creamery-construction agent, and the agent for chemical manures. I have observed that the farmer seems to cope with the agent fairly well till the latter begins to figure. As soon as he draws his notebook and pencil the farmer begins to waver on both wings and in the center. The only defense is for the farmer to outfigure the agent. Let us figure. The essentials of fertility which I have named can be supplied from within the soil or from without. From within by heat, cultivation, and moisture; from without by fertilizers. An acre of garden, where the fertilizer route is adopted, should receive, each season, from a half ton to a ton and a half of fertilizer. It will cost from \$30 to \$40 per ton. Suppose we use only one-half ton of the cheaper grade—\$15 at the factory. In seven years the cost of that fer-

tilizer will be \$105 per acre—more than the value of the land in most parts of Kansas. Better results with half the money in any of our river valleys can be produced with water, and leave on hand a water plant fully paid for and not more than half worn out. The commercial gardens in Kansas are mostly on bottom land within easy reach of water lying directly below them, from 10 to 30 feet away. All that is required for their irrigation is a perforated point, a practical pump, some pieces of pipe and plenty of power. Points are cheap, pipe is cheap, pumps are cheap, power is cheap. We have envied our sister States with their mountain system of irrigation without reason. We can deliver water on our bottom gardens cheaper than many Californians or Coloradoans get their water delivered at their flood gates; and in ten thousand locations in Kansas, outside of river bottoms, running water is at hand or artificial ponds are feasible.

AN ISLAND IN THE MISSISSIPPI.

The most extensive use of the point and pump for irrigating purposes that I know of is to be found on Muscatine Island, Iowa. Its advent there dates back about ten years. Its development has been continuous. There are now about 30 irrigation plants on the island. I am told that none have ever been abandoned. These people are north and east of us. They have less sun and wind to contend with than we do. They also have more rainfall. They don't need irrigation as badly as we do. If their necessities are less than ours, their facilities are somewhat greater. They are only 20 feet from water, whereas on river bottoms we are about 30. They apply the water they pump in precisely the same manner that a Coloradoan applies the water of his ditch.

One of the most extensive irrigators on the island is Mr. T. B. Holcomb. He has been irrigating for five years. He intends to put in a second outfit next spring. His present equipment is simple and inexpensive. It consists of 4 4-inch points driven equidistant from each other and each 5 feet from a common center. Here they are all connected up and a rotary pump attached to the connection. The pump is run by a 20-horsepower portable engine. The cost, outside of the engine, was about \$500. The discharge is sufficient, theoretically, to give 10 acres 1 inch of water in ten hours. This plant, all portable but the points, is located on the highest ground in a 40-acre corner of Mr. Holcomb's garden. The pump and engine could easily serve a second battery of points in another similar field, giving another 40 acres a wetting while the first was drying out and being cultivated. The water is carried from the pump in 2 ditches over this "forty" running substantially parallel with each other across the field. When I was there the crops were cabbage, the harvesting of which had just been concluded, and tomatoes, which had followed early peas. The rows of cabbage and tomatoes ran clear across the "forty" and intersected both ditches. The ditch banks were thrown up with lister and plow entirely. They required reconstruction previous to every application of water. The force required to operate this system was an engine, and a man and a boy in the field to handle the water. The mode of application was to begin at the lower end of one of the ditches; there the ditch bank was opened for four rows on each side of the ditch and the water allowed to run sufficiently, when a sheet-iron dam was forced into the soft dirt of the ditch banks and four more openings, opposite the next four rows, were made in the ditch bank, and so on. In practice 6 acres per day were all that such an outfit got over, at the following cost:

Table with 2 columns: Item and Cost. Coal, Engineer, Man, Buy, Total. Or 75 cents per acre.

The cabbages were irrigated 3 times;

Best Seeds that Grow!

Thousands of Dollars in CASH PRIZES for 1899

and many other New Features, of particular interest, presented in

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Leading American Seed Catalogue Mailed FREE to all.

A handsome new book of 176 pages,—tells the plain truth about Seeds, including rare Novelties which cannot be had elsewhere. Beautiful colored plates and hundreds of illustrations from nature. Gives practical information of real value to all who would raise the choicest Vegetables and most beautiful Flowers. Write a postal card TO-DAY!

W. ATLEE BURPEE & CO., Philadelphia

We PAY CASH each week if you sell Stark Fruit Trees. Outfit absolutely free.

HIGH GRADE FRUIT TREES. THEY COST NO MORE than the other kind. They yield better and more fruit. My trees were examined by our State Entomologist and are free from disease. One-year cherry, \$12 per 100; apple, 3 to 4 ft, \$6 per 100; Concord grapes, \$2 per 100. I pay the freight. Send for catalogue. CARL SONDEREGGER, Fairbury, Nebraska.

BARGAINS IN SEEDS! Choice kinds of Vegetable and Flower Seeds at 2c per packet. Flower Plants, 5c each. Many choice novelties. Don't buy until you have seen our new catalogue. Mailed FREE if you mention this paper. IOWA SEED CO., DES MOINES, IOWA.

700,000 BERRY PLANTS 700,000 FOR SALE.

My stock of old and the cream of the new Strawberries for 1899 is first-class. Also Rasp berries, Blackberries, Gooseberries and Pear Trees. B. F. SMITH, Box 6, Lawrence, Kans.

1000 Rus. M erry \$1. Black Locust, Ash and Osage Hedge. ABOUT SAME PRICE. 100 Apple, 3 to 4 ft. \$6. Cherry, 3 to 4 ft. \$14. Freestone Peach, \$2. Concord Grapes, \$2. WE PAY THE FREIGHT. Complete Catalogue free. Jansen Nursery, Jansen, Jeff Co., Neb.

EVERGREENS. 100, 6 to 8 in. \$1; 12 to 18 in. \$2.50. 100, 2 ft. \$10 prepaid. 100, 4 to 6 ft. \$20. Varieties, \$15. Choice Fruit Trees, 20 varieties, \$10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted. D. HILL, Evergreen Specialist, Dundee, Ill.

GRAIN GAINS. The saving in grain, time and labor, the increase in the crop and its profits makes the CAHOON Broadcast SEED SOWER of incalculable value to the man who sows one acre or a hundred. Sows from 4 to 8 acres an hour of Wheat, Barley, Oats, Buckwheat, Rye, Hemp, Rice, Grass Seed. Saves its cost the first season. Lasts all lifetime. Known wherever seed is grown for over 30 years. Be sure and get the genuine. Circular free. Goodell Company, Antrim, N. H.

Free Sample.

Of Vegetable Seed and Catalogue of the A. A. BERRY SEED CO., Clarinda, Iowa. Send 2 one-cent stamps to pay postage you selecting the variety of Vegetable Seeds. Catalogue tells all about Farm and Garden Seeds, and where you can get the best at the most reasonable prices. Leading varieties Corn, Oats, Wheat, Barley, and all kinds of Farm, Garden and Flower Seeds. Send to-day. CATALOGUE IS FREE. We want to do some business with you this year. We only ask a trial, and know that we can satisfy you. Address, A. A. BERRY SEED CO., Clarinda, Iowa.



In answering above, please mention FARMER.

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GET THE BEST. Buy your Strawberry Plants of W. F. Allen, Jr., who undoubtedly has the largest stock and finest selection of vigorous, healthy plants in the world. This stock is of his own growing and he knows that it is pure. HE GROWS ALL THE PLANTS THAT HE SELLS and they are all fresh dug at the time of shipment. No cellar-stored, reshipped and repacked stock. 22-page illustrated and descriptive catalogue free. Address W. F. ALLEN, JR., BOX 31, SALISBURY, MD.

the peas twice and the tomatoes twice. The yield of early cabbages was, last season, 14 tons per acre.

OTHER INSTANCES.

In the neighborhood of large towns hydrant water has long been used for hotbeds and intensive gardening. The new celery culture contemplates a perforated pipe for every row. I have seen it in far-away Florida. Thirteen cars of celery were received by one Kansas City commission house in one week this fall, and every stalk of that celery crossed Kansas the long way. It seems to me that that celery ought to be headed off by us.

Mr. J. H. Hale, the famous nurseryman, irrigates his nursery and small-fruit plantations in far-away Connecticut on the Atlantic coast, with all its fogs and drizzling rains, and he says it pays. If it pays a gardener to irrigate there, where the moist breath of the ocean is in the air, what would it not do for a country like Kansas, where a summer sun and thirsty winds conspire together to dissipate the soil moisture?

ANTIDOTE FOR PLANT DISEASES.

Not only is ditch water in effect a manufactory of fertilizer, as it flows along, and a substitute for, if not an improvement upon, the early and late rains, but it is also more nearly a specific for the diseases that threaten the welfare of garden and orchard growths than all the nostrums that were ever unloaded upon the unwary horticulturist. Nature abhors a weakling in the plant world. Once let the development of a plant suffer from lack of cultivation, or nourishment, or moisture, or from wounds or other causes, and you will find nature loosing upon it all the troop of plant woes locked up in that Pandora box of hers. If there is a feeble tree in the orchard that is the one sure to be infested with borers, both round and flat-headed, the codling moths, the gougers, and curculio, the bacteria, and fungi, and microbes, and woolly aphids, and straight-haired aphids, and myriads of spores, and various other things. For fortifying against this swarm the application of water is cheaper and better than "powder guns" or pomological vermifuge; cheaper, because in thousands of Kansas gardens it would cost less to supply, and, then, being applied, is also the most efficacious. It is efficacious because water is life; and whenever the life of tree or plant is kept unchecked and bounding, from start to finish, there is no foothold for enemies of the plant. It is not an unusual feature of fertilizer advertising to urge the prospective user of the same to give his crop, where the fertilizer is applied, double the usual cultivation. Nothing is said about double the usual cultivation where the fertilizer is not applied. But when you irrigate you've got to give more than ordinary cultivation to keep the soil from baking. That extra tillage must be given, also, at a time when the ground is in that condition of moisture when cultivating seems to do so much good. Many of us need a spur to get proper movement on our cultivators and tools. Nothing insures action in this regard with the horticulturist more certainly than garden irrigation.

INSURANCE.

Finally, brethren, I suggest that most of us keep our buildings insured against fire, which seldom comes more than once or twice in a lifetime, to most men never; others of us are insured against accidents which hardly ever come to our assistance after we've arranged for a hundred dollars a week while the hurt lasts; still others have our lives insured, a doubtful sort of investment wherein we have but one solitary chance, and it postponed to the very end of our careers, to win back our purchased money. But when it comes to insuring our garden crops against disaster by the application of water there is no part of America, not even the most favorable, where you couldn't get some return from your irrigation insurance, and in half the summers there are dry spells that cause many of us more loss in three or four rainless weeks than we have lost by fire in twenty years.

J. Max Clark told me once that, though he was sent by the Greek colony to Europe to study Italian and other systems of irrigation, yet the conditions in Colorado were so different from any he found abroad that they had to develop plans of their own. It will be so with us. And if I have not been able to give you such definite information on this subject as I desired, I am comforted by the reflection that whatever we do in this way in Kansas must be done tentatively, and proceed slowly as we learn how.

That Cremona-loving resident of Arkansas freely acknowledged to the fiddling traveler that he realized the porous condition of his roof, but he pleaded in extenuation of his neglect that in dry weather the necessity for repairs was gone, while in wet weather the ability to

repair was lacking. Has it not been somewhat so with us? When we have had rain in plenty, water to burn, as we might say, we have felt independent of artificial moisture; and then, afterward, when the plants "drooped and died in stillness of noon" it was plainly too late to save that crop. And so we have allowed one precarious season after another "to slip into the silent hollows of the past" without any other effort than that which is found in dreaming. To avail ourselves of the way out in many cases we have only 30 feet to go.

Planting Peach Stones.

Anyone who will be in need of young peach trees, two years hence, will do well to procure pits at once from some nursery supply company. Fall is the proper time for stratifying the pits in the sand, but if done now there may still be enough freezing weather to loosen the shells so that they will germinate readily in the spring. Plant the seeds in straight narrow furrows, three feet apart, covering them about two inches deep. Keep the seedlings well cultivated during summer and by August they will be half an inch in diameter and ready to be budded. If unacquainted with this operation you may be able to make arrangements with the horticultural department of the Kansas State Agricultural College to furnish you with an experienced budder. By this means a large number of trees may be obtained at slight cost.

A Note on the Hardiness of Trees.

Editor Kansas Farmer:—The department of horticulture at Kansas State Agricultural College has for several years been cooperating with the Division of Forestry of the Department of Agriculture to test the hardiness of trees produced from seeds from various sections of the country, north and south, east and west. The seeds were planted in plats having the same soil and exposure and have been subjected to the same conditions. On March 7, 1898, notes were made on the effects of the winter upon the trees and some striking facts were revealed.

As a rule, no injury was to be noted from the winter on trees grown from seed sent from States either north or west of this point. On the other hand, trees from seed sent from points southeast of this were very generally injured from the cold. The injury varied with both the species of trees and the location. Black walnut showed the greatest injury of any species and was most affected when the seed had come from the southeastern coast region, Georgia and Alabama.

This point, besides being of scientific interest in showing the decided effect of climate on the constitutionality of plants, has also a practical value for the tree planter. It shows that trees from seed grown at southeastern points must suffer more or less when subjected to this climate, and suggests that young trees transplanted from the same regions would be even more seriously affected. Further experiments along the same line are in progress under the direction of the department.

W. L. HALL.

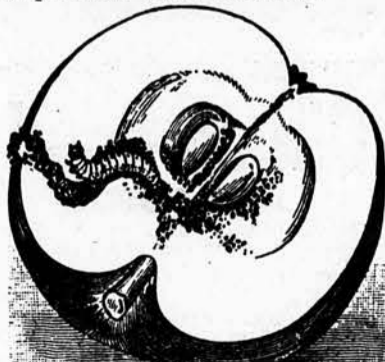
Kansas Experiment Station.

Shawnee Horticulturists.

The regular monthly meeting of the Shawnee County Horticultural Society is to be held at the rooms of the State Horticultural Society in the State house, Thursday afternoon, February 2. The following is the program: "Plant Physiology," B. B. Smyth; "Pruning," a discussion led by J. S. Jordan, A. E. Dickinson, S. H. Howe; "Training of Our Girls for Home-making," Mrs. J. G. Otis. B. B. SMYTH, Secretary.

Spraying Fruit Trees.

The question of spraying fruit trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

In the Dairy.

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

LOW PRICE OF BUTTER.

By A. Jensen, Manhattan, Kans., in circular to creamery patrons.

By comparing the price paid this year with last year, I am sorry to state it is lower, and I want to give the cause, as best I know. I have heard remarks that competition is needed, the same as last year when the Manhattan Cheese Factory was running, but I want to say that I am paying as much in proportion for butter now as I was when I had competition, and I am paying as much for butter fat as the rest of the creameries, which you will find by investigation.

The main cause for low prices this time of the year is the oleomargarine fraud. It is sold in violation of several State laws for pure butter, and whenever pure butter goes up the oleo manufacturers get busy, and whenever they get a chance they sell their stuff for pure butter. You all remember, years ago, when you never got below 20 cents for home-made butter, and at times 30 cents, and it is not very long since, either. People then did not complain at paying 30 to 40 cents for butter, and all who made butter made some little profit besides. That was the time when the manufacture of oleomargarine was invented, and you know if one man holds a pound of butter at 25 cents and another a pound of oleo for 12 cents (but sells it for butter), that the fraud gets the trade and the pure butter and the farmer lose. But that is not all; the man who bought the oleo for butter gets disgusted with butter and swears he will never buy another pound.

It certainly must be interesting to state the methods the oleo manufacturers use in pushing their trade. In 1897 the legislature of Illinois passed a law prohibiting the sale of oleomargarine for pure butter, and while all dairy interested people rejoiced over the victory, the good results only lasted a short time. Several retailers were caught selling oleo for finest creamery butter in the city of Chicago, and proceedings were at once begun to have them prosecuted, but the matter rested with the proceedings. Some members of the supreme court being (supposedly) interested with the oleo manufacturer, the matter rests to-day where it started, no action being taken as yet. In other instances, where a dealer has been fined the oleo manufacturers paid all the costs, thus encouraging all dealers to violate the law. If the profit of oleo was not as enormous as it is, the matter would soon be settled. The following figures, copied from the Chicago Dairy Produce, will show you what an enormous injury the oleo does to pure butter:

"With nothing to check the manufacturers and retailers of oleomargarine in their disregard of the State anti-color law, their business continues to show large increases in the number of licenses issued and in the output of the factories, as figured from the amount paid to the internal revenue office here for stamps.

"During November the number of licenses issued to retailers was 385, carrying the total of those in this district engaged in the business of retailing oleomargarine to 1,276. During November last year 296 licenses to retailers were issued, and the total December engaged in the business was 721.

"Collections for stamps last month amounted to \$81,399.70, which represents an output of 4,069,985 pounds. Collections for November last year aggregated \$49,103.44, which shows an output of 2,455,172 pounds. Thus the output last month was 65 per cent greater than that of November last year.

"The following table shows the output, expressed in 50-pound tubs, for five

CREAM SEPARATORS

De Laval "Alpha" and "Baby" Separators. First—Best—Cheapest. All Styles—Sizes. PRICES \$50 TO \$800.

Save \$10 per cow per year. Send or Catalogue THE DE LAVAL SEPARATOR CO. Randolph & Canal Sts., CHICAGO. 74 Cortlandt Street, NEW YORK.

months of this year, and for the corresponding months last year:

	1898.	1897.
July.....	29,058	13,902
August.....	48,052	18,454
September.....	55,885	22,555
October.....	78,530	40,255
November.....	81,379	49,103
Totals.....	292,902	144,279

Is it not time for all butter producers and butter consumers to take steps toward protection for pure food, and if anybody favors adulterated stuff to fatten on, and to swell the pocketbook of the manufacturer of same, there is nothing to hinder him in the least from obtaining it. I almost feel like boiling over when I think of all the frauds going on unpunished, and as long as it goes on we certainly are the losers in one way or another. I will give below some articles and their composition, sold on the market for pure food with no restrictions to check it:

Butter—Tallow, lard, dirt, cotton seed oil.

Honey—Poor sugar, gelatine, dextrine. Flour—Terra alba, corn, and other cheap grain matter.

Cheese—Lard, cotton seed oil and other cheap greases.

Extract—Drugs of some unnamable kind.

Sugar—Glucose and low-grade sugar. Sirup—Glucose and dextrine.

Jellies—Gelatine, turnips, and other vegetables.

Coffee—Chicory, paper, bread, rye, and other grain stuff.

Tea—Cherry leaves, and vegetables other than the original.

Lard—Cheap vegetable oil.

Baking powder—Ammonia, salts, alum, poor flour.

And scores of other food products are equally as badly adulterated. Yes, even an invention is on foot for manufacturing eggs.

You all see that the detriment from the sale of adulterated food products strikes at home, and discourages the pure food producer, because unable to compete with the fraud manufacturer. In Canada, Denmark, Sweden, Germany, England and all civilized countries there exist laws under supervision of the national governments prohibiting adulterated food, and commissioners under the revenue departments have the right to search any place where adulterated product is kept or sold, and no one escapes punishment for violating the laws. And to speak of the results in my native country, Denmark, creamery patrons there to-day receive not less than 18 cents for butter fat in summer and as high as 25 cents in winter. Hogs, live weight, never bring less than 7 cents per pound, and I remember 13 cents being paid. All this is obtained by the strictest enforcement of the pure food laws. In this country the same price or nearly so could be obtained if honest restrictions were observed everywhere, not just covering one line, but everything.

Let Others Do Likewise.

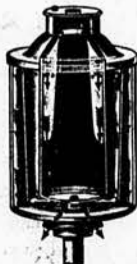
The following communication has been received by the Dairy editor of the Kansas Farmer:

"Dear Sir:—What can I do towards giving the oleo or butterine fraud a kick? I am engaged in dairying and am milking 20 cows. If you have blanks, forward one to me and I will get my neighbors to sign it. Tell me how to proceed. Respectfully, I. B., Burden, Kans."

This communication has the right kind of a ring, and it is to be hoped that many other dairy farmers throughout the State will follow his commendable example

WHAT IS THE BEST SEPARATOR?

THE IMPROVED UNITED STATES.



Why—Because it has the Triple Current Bowl which recovers all the cream in the milk.

Skims Perfectly Clean; Is Very Easy to Operate.

WILLIAMSBURG, IOWA, July 28, 1898. The Improved U. S. Separator is giving splendid satisfaction. It skims perfectly clean and is very easy to operate. We would not think of handling any milk without the Improved U. S., which I consider the best separator on the market.

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

Write for catalogues and further information to VERMONT FARM MACHINE CO., - Bellows Falls, Vt.

Sharples Quality.

Every farmer who keeps five or more cows can afford a hand separator. In fact, he cannot afford to be without one. A void all mistakes and useless expenditure by buying a Safety Hand Separator. They not only represent highest quality in such machines, but stand for highest quality in product as well. They skim clean, turn easy, last long and cost nothing for repairs. Send for circulars.



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

and do all in their power to secure a law against the fraudulent sale of oleomargarine as creamery butter. Now is the time to act; "strike while the iron is hot." Lobbyists, with plenty of money to back them, are hard at work in our legislative halls this very moment. Why are they there? Is it to defend a legitimate business? No one is opposing the sale of oleomargarine as such, but the dairy interests of this State are demanding that it shall not be sold as, or in the semblance of, creamery butter. Right here comes the rub. Oleo can be produced cheaper than butter, and when sold to the unsuspecting public at or a little below the price of butter there is an immense profit, and not only that, but the demand for genuine butter is decreased, and, consequently, those engaged in producing a pure article of butter must suffer from low prices.

Every dairy farmer or creamery patron in the State of Kansas should realize the loss he sustains from the oleo fraud, and then with "might and main" set about, as I. B. is ready to do, to check this fraudulent traffic. Talk it over with your neighbors, write and get them to write personal letters to your representatives in the legislature. Then write to J. E. Nissley, Topeka, Kans., secretary of the legislative committee of the State Dairy Association, to look after this matter, and tell him that you are ready to circulate a petition or to do anything else in your power to help them in this fight. It may put you to a little inconvenience, but it will pay in the end. Whatever you do, do quickly.

D. H. O.

Missouri State Dairy Association.

It was the privilege of the Dairy editor of the Kansas Farmer to attend the ninth annual meeting of the Missouri State Dairy Association, Brookfield, Mo. The first impression of the meeting came soon after arrival, when it was found that there were so many people in attendance that the hotels were full and lodging would have to be secured at a private house. Intense interest was manifested in the program from beginning to end. A striking feature of the meeting was the presence, not of creamerymen, but of a large number of creamery patrons and private dairymen, men who feed, milk, and care for the cow, and who handle her product until it reaches the weigh can. This is as it should be; not that creamerymen and butter-makers should not attend—they should all be there—but the percentage of creamery patrons should be largely increased. The dairy conventions of the future are the ones where the creamery patrons will be considered an important and indispensable factor, being, as they are, at the very basis of profitable dairying. Another feature of the meeting was the presence of a goodly number of women, who added very materially to the success of the program.

The subjects on the program were well chosen to meet the needs of those present. Many questions were asked and great interest taken in the subject of feeds and how they should be handled and fed to get the largest profit from them. The farmers of Missouri are hungry for information along these lines and are ready to improve by the experiences of others. With such men as the foundation upon which to build the superstructure of dairy prosperity, and with the abundant natural resources Missouri is destined to become one of the foremost dairy States of the Union. She may even stand next to Kansas.

President Norman J. Colman and Secretary Levi Chubbuck deserve much credit for their untiring efforts in making the ninth annual meeting of the Missouri State Dairy Association a grand success.

D. H. O.

When writing our advertisers please mention Kansas Farmer.

Rules to Be Observed in the Care and Keeping of Milk.

Prepared by the Cawker Creamery Company for their patrons.

1. The milk should be drawn from the cow in the most cleanly manner and well strained.
2. The milk should be thoroughly cooled immediately after it is drawn from the cow, and should be stirred occasionally until the animal heat is expelled.
3. The morning's milk should be cool before it is mixed with cold milk, or it will sour. After straining the milk into the cans the covers should be left off until the animal heat is out of the milk.
4. Great care should be taken to keep the cans and milk free from dirt and impurities of every kind. The cans should be thoroughly scalded in boiling hot water and every particle of sour milk and dirt removed. The cans of milk should not be set on the ground but placed on a board platform, as during a thunder storm the milk is more liable to sour.
5. The pails and strainers used should be thoroughly cleaned, scalded in boiling water, and dried.



WE NO LONGER SUPPLY SEEDS TO DEALERS. PURCHASE FROM US DIRECT.

Everything FOR THE Garden

"Everything for the Garden" is the title of our Catalogue for 1899, and it really is a 190-page book, 9 x 11 inches, containing over 700 engravings and 6 superb colored plates of Seeds and Plants. And as all are drawn from nature, we show, as in a looking-glass, the best of the old and the latest of the new.

To trace advertising, and give our Catalogue the largest possible distribution, we make the following unusually liberal offer:

Every Empty Envelope Counts as Cash.

To every one who will state where this advertisement was seen, and who encloses us 10 cents (in stamps), we will mail the Catalogue, and also send, free of charge, our famous 40-cent "Empire State" Collection of Seeds, containing one packet each of New Large-flowering Sweet Peas, New Butterfly Pansy, New Jubilee Asters, New Golden Rose Celery, New York Lettuce, and Ponderosa Tomato, in a red envelope, which, when emptied and returned, will be accepted as a 25-cent cash payment on any order of goods selected from Catalogue to the amount of \$1.00 and upward.

PETER HENDERSON & Co.
 35 & 37 CORTLANDT ST. NEW YORK

The yield of Southern native corn is cut short by drouth about every other year as a rule. A Texas customer informs me that my corn matured a big crop for him 20 days before drouth caught up with him and ruined his harvest. I can do as well for you. Positive proof, and my new catalogue free, if you mention this paper. Address, J. C. SUFFERN, Seed Grower, VOORHIES, ILLS.

This also applies to Kansas.—Editor.

PURE-BRED SEEDS

Of all kinds at WHOLESALE PRICES ... to farmers...

VEGETABLE SEEDS,
 Well-filled packets, at 4 cents each of very best Seeds. Low price of Seeds in bulk. Send 2-cent stamp for postage for free sample packet of any VEGETABLE SEED you may select, and our prices and catalogue.

CHOICE IOWA SEEDS LEAD THE WORLD.
 We can save you money in buying, and make you money by planting our Seeds. Address

A. A. BERRY SEED CO.,
 Drawer L. CLARINDA, IOWA.



SUCCESS BEARDLESS BARLEY. Early, productive, strong grower, will not lodge. Sure crop on heavy soil. Per bu. \$1.25; 2 bu. or more at \$1.00 per bu. Bags free.
 Spring Wheat—Saskatchewan Flax and Blue Stem, \$1.25 per bu. Bags free. Seed and Plant Catalogue free.
I. N. KEAMER & SON, Cedar Rapids, Ia.

SWEET POTATOES Sent out to be Sprouted on Shares

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

T. J. SKINNER, Columbus, Kas.

Our NEW SEED CATALOGUE of Garden, Grass, Field, Flower and Tree Seeds is now ready. You can have it for the asking. Don't delay. Send for one now. We also buy Sorghum, Millet, Alfalfa, Kaffir Corn, Jerusalem Corn and all other kinds of grass seeds and seed grains. If any to offer, please correspond with us.

KANSAS SEED HOUSE.

F. BARTELDES & CO. LAWRENCE, KANSAS.

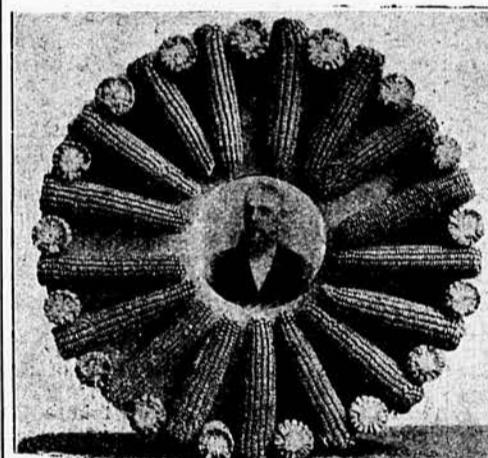
WESTERN SEED AND AGRICULTURAL HOUSE.

One of the Best Equipped Seed Houses in the West.

- RECLEANED FIELD AND GRASS SEEDS, TESTED GARDEN AND FLOWER SEEDS, POTATOES AND ONION SETS, GREENHOUSE PLANTS, SHRUBBERY, ETC.
- HAND GARDEN CULTIVATORS, HAND SEED DRILLS, SPRAYING PUMPS, GARDEN TOOLS, BONE MILLS, ETC.

Our 1899 SEED CATALOGUE is now ready. Write for it. PLANT CATALOGUE will be issued March 1st.

MANGELSDORF BROS. COMPANY, ATCHISON...KANSAS.



SEED CORN

Early Yellow Rose

The Farmers' Favorite.

It yields up to 150 bushels an acre, according to ground and cultivation, and 10 to 40 bushels per acre more than other corn grown along side of it. Will fully mature in 90 days; ears 16 to 24 rows; cobs small, 8 to 12 inches long and deep grain. This corn is tested and has strong vitality in germinating.

Money Spent for Good Seed Corn is Well Invested.....

One dollar per bushel. Don't miss to send 5 cents in stamps for three packages of the corn that was awarded Gold Medal at the Omaha Exposition, and a 20-page book, hints on corn-growing, "How the Big Farmers Grow the Big Crops, and How the Iowa Agricultural College Grew Ninety-four Bushels Per Acre That Shell Out Sixty-two Pounds From Seventy pounds of Ears." Address

PLEASANT VALLEY SEED CORN FARM, Shenandoah, Iowa.

BEST SEEDS ON EARTH!
 DIRECT FROM GROWER TO PLANTER.
 From Saginaw Valley Seed Gardens, Michigan Northern Grown Seed Potatoes, Vegetable, Flower and Field Seeds. Everything in Seeds at lowest prices.
 To introduce my superior Northern Grown Seeds everywhere, I will give away, Absolutely Free as Premiums, 1,000,000 Packets of Vegetable and Flower Seeds.
 Send your name and address to-day for my SEED BOOK which tells how to get THE BEST SEEDS FREE. Seeds that will grow.
HARRY N. HAMMOND, Seedman, Box 26, Fiffield, Mich. FORMERLY, DECATUR.

ARTICHOKESE THEMSELVES
 Prevent Cholera No. 1 for all Stock. Before buying send yours and neighbor's "address" for FREE ESSAY on kinds, culture, yield (often 1,000 bu. p. a.) with prices and fr. rates to all points. Single bu. \$1. Melville Seed Farms, Box 5, Melville, Ill.

SEEDS
 Cheapest Ever Grown, BEST in the world; none other as GOOD; warranted to be by far the CHEAPEST. Prettiest book in all the world FREE. SEEDS in and up for large packets. Send yours and neighbors names for my Beautiful Illustrated Catalogue.
R. H. SHUMWAY, Rockford, Ill.

FOR 14 CENTS
 We wish to gain this year 200,000 new customers, and hence offer
 1 Pkg. 13 Day Radish, 10c
 1 Pkg. Early Rippe Cabbage, 10c
 1 " Earliest Red Beet, 10c
 1 " Long Light'n'g Cucumber 10c
 1 " Salzer's Best Lettuce, 15c
 1 " California Fig Tomato, 20c
 1 " Early Dinner Onion, 10c
 3 " Brilliant Flower Seeds, 15c
 Worth \$1.00, for 14 cents, \$1.00
 Above 10 pkgs. worth \$1.00, we will mail you free, together with our great Plant and Seed Catalogue upon receipt of this notice & 14c postage. We invite your trade and know when you once try Salzer's seeds you will never get along without them. Onion Seed 68c, and up a lb. Potatoes at \$1.20 a Bbl. Catalog alone 5c. No. 70
JOHN A. SALZER SEED CO., LA CROSSE, WIS.

In buying seeds "economy is extravagance," because the cost of cultivation wasted on inferior seeds always largely exceeds the original cost of the best seeds to be had. The best is always the cheapest. Pay a trifle more for
FERRY'S SEEDS
 and always get your money's worth. Five cents per paper everywhere. Always the best. Seed Annual free.
H. M. FERRY & CO., Detroit, Mich.

Cheap Seed AND GOOD
 We can help you get them. Send 8 cents in stamps and receive four packages of home grown seed:—Twiss, new early cabbage; Potomac, the new tomato; Dirigo, the earliest beet; Quincy Market, the sweetest early corn, with our flower and vegetable seed catalogue, full of engravings. With one exception it is the largest vegetable catalogue published. Cut off one of the home grown labels, write in the name of this paper, and it shall count as 25 cents toward any order amounting to \$1.00, excepting our special collections, in which we offer 33 packages seed of choice vegetables for \$1.00, and 15 packages of selected flower seed, 40c.
J. J. H. GREGORY & SON, MARBLEHEAD, MASS.

Spring
 is almost here with its blossoms and balmy days. Planting time, too, and you must have the seedman's catalogue to see what is newest and best for your Flower or Vegetable Garden. Ours is better and brighter than ever, full of choice surprises, and illustrated in half-tone from direct photographs. We send it free if you are a seed buyer.
JOHNSON & STOKES, 217 and 219 Market St., PHILADELPHIA.

MARKET REPORTS.

Kansas City Live Stock. Kansas City, Jan. 30.—Cattle—Receipts since Saturday, 5,154; calves, 150; shipped Saturday, 704 cattle; no calves. The market was slow and steady. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Includes sections for DRESSED BEEF AND SHIPPING STEERS, WESTERN STEERS, NATIVE HEIFERS, NATIVE COWS, NATIVE FEEDERS, and NATIVE STOCKERS.

Hogs—Receipts since Saturday, 5,501; shipped Saturday, 689. The market was strong to 5c higher. The following are representative sales:

Table with columns: No., Price, No., Price. Lists various hogs and their prices.

Sheep—Receipts since Saturday, 3,927; shipped Saturday, 450. The market was strong. The following are representative sales:

Table with columns: No., Price, No., Price. Lists various sheep and their prices.

St. Louis Live Stock. St. Louis, Jan. 30.—Cattle—Receipts, 3,000; market steady to strong; beefs, 14.50@5.80;

Hogs—Receipts, 8,000; market 5c higher; pigs and lights, 13.00@3.75; packers, 13.70@3.95; butchers, 13.90@4.05.

Sheep—Receipts, 2,000; market steady; natives, 13.00@4.10; lambs, 14.00@5.10; Texas sheep, 13.60@4.00.

Chicago Live Stock. Chicago, Jan. 30.—Cattle—Receipts, 16,000; good cattle steady; beefs, 14.00@3.10; cows and heifers, 12.00@4.70; Texas steers, 13.00@5.00; stockers and feeders, 13.20@4.60.

Hogs—Receipts, 31,000; market fairly active, mostly 5c higher; light, 13.60@3.90; heavy, 13.70@4.10; mixed, 13.70@3.97 1/2; rough, 13.70@3.75; Yorkers, 3.75@3.80.

Sheep—Receipts, 14,000; market steady to 10c higher; natives, 12.75@4.75; westerns, 13.00@4.20; lambs, 14.00@5.05.

Chicago Grain and Provisions. Table with columns: Jan. 30, Opened, High'st, Low'st, Closing. Includes items like Wh't, Corn, Oats, Pork, Lard, and Ribs.

Kansas City Grain. Kansas City, Jan. 30.—Wheat—Receipts here to-day were 278 cars; a week ago, 292 cars; a year ago, 123 cars. Sales by sample on track:

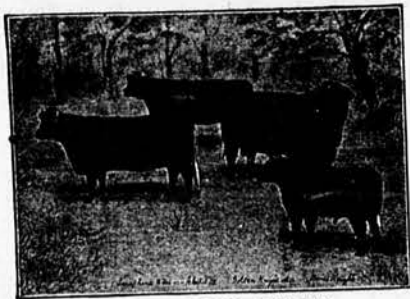
Oats—Receipts here to-day were 108 cars; a week ago, 87 cars; a year ago, 248 cars. Sales by sample on track: Mixed, No. 2, 33 1/2@34.00; No. 3 mixed, nominally 33 1/2; No. 4 mixed, nominally 33c; no grade, nominally 32c.

Oats—Receipts here to-day were 20 cars; a week ago, 11 cars; a year ago, 23 cars. Sales by sample on track: Mixed, No. 2, 27 1/2@28c; No. 3 mixed, nominally 27c; No. 4 mixed, nominally 26c.

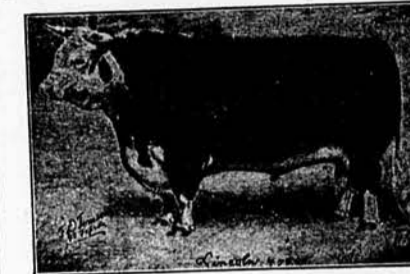
Hay—Receipts here to-day were 32 cars; a week ago, 73 cars; a year ago, 43 cars. Quotations are: Choice prairie, 16.50@17.00; No. 1, 15.50@16.00; Timothy, choice, 17.00@17.25; Clover, 16.00@16.50; Alfalfa, 16.10@17.50.

Kansas City Produce. Kansas City, Jan. 30.—Eggs—Strictly fresh, 14c per doz. Butter—Extra fancy separator, 18c; firsts, 16c; seconds, 15c; dairy, fancy, 14c; country roll, 10 1/2c; store packed, 10c; packing stock, 9c.

Poultry—Hens, 7c; springs, 8 1/2c; old roosters, 15c each; young roosters, 20c; ducks, 7c; geese, 50c; turkeys, hens, 8 1/2c; young toms, 8c; old toms, 7c; pigeons, 50c per doz.



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



SPRING VALLEY HEREFORDS. Lincoln 47095 by Beau Real, and Klondyke 42001, a the head of the herd. Young stock of fine quality and extra breeding for sale. Personal inspection invited.



GLENDALE SHORT-HORNS, Ottawa, Kas. Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 119370, by Ambassador, dam Galan thus, and Scotland's Charm 127284, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale.



ELDER LAWN HERD SHORT-HORNS. THE Harris bred bull, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruickshank bulls: Imp. Thistle Top 83876, Earl of Gloster 74529, etc. Size, color, constitution and feeding qualities the standard. A few good cows for sale now bred to Gallant Knight.



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

POLAND-CHINAS ANYTHING YOU WANT. J. W. HIGGINS, JR., HOPE, KANSAS. CAP-A-PIE HERD OF Poland-Chinas Geo. W. Falk, Richmond, Mo.

Is still doing business at the old stand, where, for the past fifteen years, he has been breeding and selling a class of hogs that have been winners at the leading State fairs, and have been topping the markets in Chicago and Kansas City—the end of all hogdom. Has constantly on hand boars large enough for service and sows bred and unbred. Write for prices, which are always reasonable.

THE AMERICAN GALLOWAY BREEDERS' ASSOCIATION

Has just issued an interesting pamphlet containing some well-written articles, which will be of interest to every stockman. They are for free distribution and you can get a copy by writing to FRANK B. HEARNE, Secretary, Independence, 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 28441, Black Joe 28603, World Benter and King Hadley. For Sale, an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly-bred sows. Inspection or correspondence invited.

Sir Charles Corwin 14520 and Harry Faultless, Jr. HEADS OF HERD.

We have been in the show ring for the last three years, always winning the lion's share of the premiums. If you want prize-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale. Write or come and see us. We have an office in the city—Rooms 1 and 2 Firebaugh Building. ELM BEACH FARM, Wichita, Kas., C. M. IRWIN. S. C. DUNCAN, Supt

PURE-BRED HEREFORDS FOR SALE. THIRTY-FIVE HEAD OF BULLS AND HEIFERS.

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

VALLEY GROVE SHORT-HORNS. THE SCOTCH BRED BULLS

Lord Mayor 112727 and Laird of Linwood 127149 HEAD OF THE HERD.

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

SUNNY SLOPE HEREFORDS 500 Head in Herd.

FOR SALE: 125 Bulls and 175 Females. Address..... SUNNY SLOPE, Emporia, Kas. C. A. STANNARD, Proprietor.

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

Blackleg Vaccine

Write for particulars, official indorsements and testimonials of thousands of American stockmen who have during the last three and a half years "vaccinated" their cattle with PASTEUR VACCINE and prevented losses from Blackleg.

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

Nelson & Doyle

Room 220, Stock Yards Exchange Building, KANSAS CITY, MO., Have for sale at all times, singly or in car lots... Registered Herefords and Short-horns, Cross-bred Hereford, Short-horns and grades of other breeds. Bulls and females of all ages. Stock on Sale at Stock Yards Sale Barn, Also at Farm Adjoining City. N. B.—We have secured the services of John Gosling, well and favorably known as a practical and expert judge of beef cattle, who will in the future assist us in this branch of our business.

TEA SET FREE 56 PIECES. Full size for family use, beautifully decorated & most artistic design. A rare chance. You can get this handsome china tea set & one dozen silver plated tea spoons for selling our Pills. We mean what we say & will give this beautiful tea set absolutely free if you comply with the extraordinary offer we send to every person taking advantage of this advertisement. To quickly introduce our Vegetable Pills, a sure cure for constipation, indigestion & torpid liver, if you agree to send you a box of Pills at 25 cts. a box write to-day and we send Pills by mail, when sold send us the money & we send you one dozen Silver plated tea spoons together with our offer of a 56 piece china tea set same day money is received. This is a liberal inducement to every lady in the land and all who received the spoons and tea set for selling our Pills are delighted. AMERICAN MEDICINE COMPANY, Dept. R 30 WEST 13th St., NEW YORK CITY.

The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kans., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the KANSAS FARMER. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

Testing Eggs.

Will you please inform me, through the Kansas Farmer, how to test eggs, and how long after putting them under the hen can I tell the fertile ones, as I am a novice? J. A. RUNDLE, Stitt, Kans.

Answer.—The most satisfactory way, and the one most generally adopted, is to use an egg-tester, of which there are several patterns. The underlying principle in all is to use a lamp in a darkened room, so that the rays of light can be concentrated on the egg. Probably the most convenient tester is the style made to fit on an ordinary lamp, using a No. 2 burner, in place of the glass chimney. In operation, the egg is held before the side opening. If the egg is fertile, a small dark spot can be seen, with dark wavy lines radiating from it in all directions, something like a spider's legs. If the egg is infertile, it will be perfectly clear and transparent. If added or rotten, it will appear dark or very mottled. The time to test depends on the eggs. Hen eggs should be tested out on the seventh or eighth day. Duck eggs on the fourth or fifth, as the germ develops faster in duck than in hen eggs. Turkey eggs are tested about the same time as hen eggs, or a little longer, about the eighth or tenth day, as the shell is very thick and dark. White, thin-shelled eggs can be tested sooner than dark and thick shells. The lamp tester sells at supply stores for from 35 to 50 cents.

Expensive Experience.

Not all experience is expensive. The right kind of experience will prove beneficial, and with some men a little expensive experience has to be secured before the business will pan out at all. This is not the case with every person who branches in the poultry business. Every few weeks we hear of some man who is broken down in health, and whose finances have also been crippled, who desires to engage in the poultry business with a hope of recovery in every way. A man without money and experience is a peculiar combination, and has no assurance of winning from the outset. With a great many who engage in poultry intending to make it the chief business, it is not so much how it is going to be made to pay, as it is what it is going to cost to learn the business. With the farmer who keeps poultry it is quite another matter. With them it costs something to find out some things. They will have nice lots of fowls, and then through some mismanagement they learn something of vital importance to them. A farmer may have a good lot of poultry on the farm and it may cost him a good deal of money to learn that dampness is not a good thing for poultry houses. Twenty dollars' worth of fowls lost would have fixed the quarters so there would have been no loss from that cause. It need not have cost anything to learn this fundamental fact, yet it did.

Another bit of expensive experience is obtained by the man who succeeds in hatching out four or five hundred chicks and losing more than half of them through some lack of knowledge or some uncalled-for neglect. The value of these two hundred and fifty chicks before they die would not be far from \$20, to say nothing of the possible profit of over \$50. Then, there was the care that was given the sitters that hatched out the half that were lost. Nearly \$70 and a whole lot of work was what it cost to learn how to raise a lot of chicks. It is not a good plan to engage in a business so extensively while yet so ignorant about how to conduct it. Why not learn with a smaller number? With a smaller number to practice on fully as much knowledge would be gained at a much less risk. It is barely possible that more could be learned with fewer hens than with so many.

Many who attempt to manage poultry are too busily engaged in other matters to give the flock the attention they require. It may be that they are too much hurried to observe closely, and while they may be attributing their losses to thieves, the shoats on the farm are perhaps living sumptuously on chicken

every day. Those who are ignorant of the wants and needs of poultry, or are too busy to attend to the business, will find that it is costing them a good deal to learn.—Live Stock Indicator.

Feeding Out Bone.

The practice of feeding cut bone to poultry is of comparatively recent origin. Those who are well versed in it and who have had most experience with it have been most successful. There is just one danger in pursuing some new, good course by the novice. He is liable to think if a little will do a little good, a great deal will do more good. Almost any good thing in the way of feed may be made harmful if carried to excess. Green cut bone is unquestionably a valuable food for laying hens and it has long since passed the experimental stage. It is altogether probable that nine-tenths of the most successful poultrymen use cut bone, and to it is credited a great deal of their success. But some people, working on the plan that if it is a good thing it can be made a better thing, go to extremes, and the business is overdone. These parties will feed no more green bone, for they have had experience and have clearly demonstrated, to their own satisfaction, that it is no good.

Green bone is a highly concentrated food and needs to be fed with caution and good judgment. A pound to sixteen hens twice a week would be about the right allowance. When a poultry breeder goes beyond this point he is treading on dangerous ground and is liable to fall in with others in denouncing it as a food. It is easier to overfeed with cut bone than with any of the grains. A poultryman should feed with a liberal hand, but he should be intelligent enough to know what is liberal and what is dangerous. Sometimes generosity will make trouble when its intentions are good. Feed cut bone if you can get it fresh, and feed it with caution and intelligence.—Live Stock Indicator.

Show Notes.

Judge F. H. Shellabarger, of West Liberty, Iowa, has been engaged to distribute the ribbons next year. Judge Shellabarger has a reputation second to none, and undoubtedly will give entire satisfaction.

Some grand specimens of Light Brahmas were shown by Messrs. Chas. Foster & Son, of El Dorado, Kans. It would be hard to conceive of finer specimens than these, and Judge Rhodes seemed to appreciate them, as the string of ribbons they captured show.

The largest displays of birds by one breeder were made by Columbian Poultry Yards, Topeka, Kans., E. C. Fowler, proprietor, who had 50 birds on exhibition, and Col. J. W. F. Hughes, also of Topeka, who had 44. H. C. Short, Leavenworth, had 23, and W. A. Doolittle, of Sabetha, also had 23.

Probably the varieties represented by the greatest number of specimen birds were the Barred Plymouth Rocks, always a strong class, and Buff Cochins. In the latter, Messrs. Steinberger, Kistler, Forbes and Raub presented an attraction hard to break away from. In Barred Plymouth Rocks Messrs. Atwood, Weiss, Thompson and Hargraves showed excellent birds and won their share of ribbons.

Among the newest things seen at the show where Royce's safety egg box, for shipping eggs for hatching, instead of baskets, and the Eureka perch bracket, containing an oil cup to prevent lice and mites from passing from the house to the fowls while on the roosts. Both of these articles embody the most modern and up-to-date ideas, and are sold at Excelsior Farm. Their new catalogue tells all about them, and is mailed for 10 cents.

Everybody felt so good over the splendid work Topeka did for the show just passed that they decided to come back again next year. So far as could be learned, all went home with the determination to have "better poultry and more of it" in 1900, which is perfectly right. Now is the time to begin to get ready for it. Don't wait till the last minute to begin to get ready, and then take what comes handiest, but plan ahead to have something choice to show next year.

No exhibit in the hall seemed to attract more attention than that of Excelsior Farm, consisting of poultry supplies and fixtures of all kinds, various kinds of foods, medicines and insecticides. Mr. C. B. Tuttle, the proprietor, assisted by his daughter, were among the busiest people at the show during the week, showing and explaining their line of goods, selling and taking orders for future delivery. This week they are busy filling the orders secured at the show,

A Terrible Accident.

A FRIGHTENED TEAM OF HORSES RUNS AWAY.

Dashes into a Preceding Conveyance in the Road and a Young Lady is Seriously Injured.

From the Advocate, Crestline, O.

Probably there is not a single incident remaining more vivid in the minds of the people in this locality, than the accident which befell Miss Fannie Thoman, a young lady nearly twenty years old, residing about three miles west of this city, while out riding one day in May, 1894. In conversation with a friend recently, Miss Thoman told the story concerning this horrible affair and the results from it.

She said: "I was working in a dressmaking establishment in Galion, Ohio, and one day while out riding with my friends, we were overtaken by a team of runaway horses, and the carriage in which I was riding was badly wrecked and I was thrown out, receiving a hard fall.

"I was taken to my home, and a physician was called and upon examination told me that my right kidney had been affected. He gave me medicines which relieved me some, but which never helped me as they should.

"I was weak and whenever I attempted to do light work about the house, I would become prostrated. I was very dizzy and frequently pains would dart through my back in an indescribable manner. In fact, my whole constitution was affected. I had a very sallow complexion with seemingly no color in my face at all.

"I remained in that condition for over two years and nothing seemed to relieve me. I happened to read in a paper how some people had been cured by the use of Dr. Williams' Pink Pills for Pale People. One case described was similar to mine, and I called

the attention of the other members of the family, and mamma suggested I should have a box at once.

"Of course I was anxious to get well and a box of these pills was secured and tried. When I had taken the pills one week I noticed an improvement in my condition. A better color came in my face and lips, I became stronger, had an increased appetite and the dizziness in my head was relieved.

"I had often read of these pills but gave no attention to them until the day I procured my first box. Since then I have taken twelve boxes and have been greatly relieved. My blood is in a better condition, I have gained in flesh and my entire system has been built up. I most certainly recommend Dr. Williams' Pink Pills for Pale People to any one troubled with kidney complaint."

An analysis of Dr. Williams' Pink Pills for Pale People shows that they contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexions, all forms of weakness either in male or female, and all diseases resulting from vitiated humors in the blood. Dr. Williams' Pink Pills are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box, or six boxes for \$2.50—(they are never sold in bulk or by the 100) by addressing Dr. Williams' Medicine Co., Schenectady, N. Y.

shipping goods to almost every part of the State as a result of their exhibit.

The East Side Poultry Farm, of P. C. Bowen & Son, Cherryvale, Kans., is again represented in our "Breeder's Directory." Referring to the results of last year's advertising, they state that their trade in fancy poultry and eggs for hatching is largely increased, having already sold much the larger part of surplus breeding stock this winter without a line of advertising except what they did last year in the Kansas Farmer, which clearly exemplifies the efficient aid the paper afforded, also the excellency of their stock, which gave such great satisfaction to their patrons.

POULTRY SUPPLIES.

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

HATCH YOUR CHICKENS

in an Incubator \$7.50. Raise them in a Brooder, \$6.00. Stamp for Circular.

NONE-SUCH INCUBATOR CO., TERRE HAUTE, IND.

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.

SHOEMAKER'S POULTRY BOOK
and Almanac for 1899. 160 pages, 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. How to raise Chickens successfully, their care, diseases and remedies. Diagrams with full descriptions of Poultry houses. All about Incubators, Brooders and thoroughbred Fowls, with lowest prices. Price only 15 cents. C. F. SHOEMAKER, Box 852, Freeport, Ill.

A BUSINESS INCUBATOR.

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



"SUCCESSFUL"

MONEY MAKERS ARE FOUND IN GOOD INCUBATORS AND BROODERS

We manufacture a greater variety of standard machines than any other incubator firm. Capacity, 50 to 800 eggs; price, \$8.50 to \$68. Over 1,000,000 chickens hatched by our incubators last season. Send 6c. for 148-page catalogue. Tells how to raise poultry and contains designs for poultry houses and other useful hints to the poultryman.

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

HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating **EXCELSIOR INCUBATOR**. Thousands in successful operation. Lowest priced first-class hatcher made. **GEO. H. WYATT**, 114 to 124 S. 6th St., Quincy, Ill.

HOW TO START in the POULTRY BUSINESS and how to make it a complete success in the home of our Poultry Guide. Tells all about poultry houses, how to build, cost, etc., and how to breed, feed and market fowls. Treats also of the famous **CYPHERS INCUBATOR** which is delivered freight paid to every purchaser. This machine requires absolutely no artificial moisture. Send 10 cents and get the book. Circulars FREE. **THE CYPHERS INCUBATOR CO.** Box 81, Wayland, N.Y.

INCUBATOR SUCCESS depends upon the following named essentials—proper distribution of heat and moisture and perfect regulation and ventilation. These points attain perfection in the **PETALUMA INCUBATOR**. Add to these points superior construction and finish and you have perfect machine. They deal only in high percentages of hatch. Sizes from 50 to 850 eggs. Prices \$10. up. **WE PAY FREIGHT ANYWHERE** in the U. S. Catalogue free. **Petaluma Incubator Co.,** Box 80, Petaluma, Cal.

LIGHTNING WELL MACHY IS THE STANDARD STEAM PUMPS, AIR LIFTS, GASOLINE ENGINES. WRITE FOR CIRCULAR. **THE AMERICAN WELL WORKS** AURORA, ILL. - CHICAGO - DALLAS, TEX.

A 12-Year Old Boy can do more and better work with this **HAND CULTIVATOR** than three men with common hoes. If no one in your town sells it, send \$1.25 for sample, delivered. **ULRICH MFG. CO.,** 46 River St., Rock Falls, Ill.

You want the BEST and SIMPLEST **Fence Machine.** WE HAVE THEM AND WILL PROVE IT BY A TRIAL. **\$10 AND \$15 DELIVERED.** FARM and YARD GATES, Wire and Ratchets, and Fence Supplies at low cost. FREE CIRCULARS. **Eureka Fence Co.** Box J, RICHMOND, IND.

THE DOMESTIC SHEEP.

By HENRY STEWART, World's Highest Authority on Sheep. "The 'Domestic Sheep' should be in the hands of every sheepman in the country. The more I look through it the more I am pleased with it."—Hon. James Wilson, Secretary of Agriculture. It treats in a practical and exhaustive manner the science of breeding; what crosses are admissible and desirable; the development of type; the formation and management of flocks, large and small. Sheep diseases and how to treat them. Sheep dipping and dips—their uses and abuses. The successful breeding and feeding of mutton sheep and lambs. The growth of special summer and winter crops for sheep and their relative value. The nature, fiber, growth, grades, preparation and marketing of wool. Sheep barns, sheds, feeding devices, hurdles, etc., illustrated. The influence of climate, soils and environment on the development of sheep. Illustrations of the different breeds in rich half-tones of typical sheep, and every other subject germane to the sheep, wool and mutton industry. This new book, of 372 pages and 105 illustrations, is an invaluable guide to the new beginner, and a wise counsellor to the older sheepman. It is the crowning work of an eminent, life-long and enthusiastic student of sheep life in all sheep countries. Postpaid, \$1.50; with Kansas Farmer, both, \$2.25.

"FEEDS AND FEEDING."

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

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For all soils, all work—crushes, cuts, lifts, pulverizes, turns and levels. Cast steel and wrought iron—therefore indestructible. Cheapest riding harrow and best pulverizer on earth. Sizes 3 to 13 1/2 feet. Catalogue free. SENT ON TRIAL to be returned at my expense if not Entirely Satisfactory. I deliver free on board at New York, Chicago, Columbus, O., Louisville, Ky., Minneapolis, San Francisco and other points. Address DUANE H. NASH, Sole Mfr., MILLINGTON, N. J., or CHICAGO, ILL. PLEASE MENTION THIS PAPER.

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Diamond Cut Steel Burrs. Cheapest and Best feed mill on the market. Write for prices and circulars. ZEIGLER & DALTON, Junction City, Kas.

WE SELL DIRECT TO THE FARMER. Hardened Steel Landside Double Board Plow, hard as glass, 16-in. \$9. Sulky, \$25. Riding Gang Plow, \$35. 8-in. Wagon, \$39. 1000 other articles. Big catalogue free. Write now and get ready for spring work. HAPGOOD PLOW CO., Box 485, Alton, Ill. Only Plow factory in the United States selling direct to farmer.

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

DO YOUR OWN... GRINDING with one of our FARMER'S FRIEND Sweep Feed Mills. The farmer can save mill tolls and save cost of hauling. It has adjustable force feed, steel ball bearings, burrs 30 in. diameter and self-sharpening. Write for circulars and prices. KELLY & TANEYHILL, Waterloo, Ia.

Pressure between burrs in grinding is carried on chilled roller bearings. Large inside burr revolves twice to sweep's once, Ordinary length sweep. DAIN DOUBLE MILL. Sold under an absolute guarantee to do double the amount of work of any other mill of same size or money refunded. Write for circulars and prices. DAIN MFG. CO., Carrollton, Mo.

THE UNIVERSAL REPAIR MACHINE FOR FARMERS AND MECHANICS. Vise, Drill, Anvil, Tool Grinder, Pipe Clamp and Cut-Off. ONCE SHOWN, SELLS ITSELF. For particulars, enclose stamp, and mention this paper Address. BLOOMFIELD MFG. CO., BLOOMFIELD, IND. Salesmen Wanted.

The Blue Valley Sweep Feed Mills



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

and remove the horns of your herd and that of your neighbor's herd BY USING DEHORNING KNIFE. Cuts clean on all sides, does not crush. One clip and the horns are off. Descriptive circulars FREE. A. C. BROSIUS, Cochranville, Pa. W. S. Young, McPherson, Kans., Western Agent.

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We are the largest manufacturers of harness and carriages in the world selling to the consumer exclusively. WE HAVE NO AGENTS, DEALERS OR MIDDLEMEN. We sell you direct from the factory at wholesale prices and save you all additional expense. We ship anywhere for examination. We guarantee and warrant everything. This Elegant Team and Farm Harness for \$19.50. Many customers who have bought it report that they have saved from \$4 to \$10 in buying this harness from us. For full description of this and 60 other styles of harness and 125 styles of vehicles see our new illustrated Catalogue. Your name on a postal card will get it. Elkhart Carriage and Harness Mfg. Co., W. B. PRATT, Secy. ELKHART, INDIANA.

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makes the fence no better. Then why pay him a lot of extra money? Why not save that amount by buying from us at wholesale prices? We do not impair the quality to make our fence cheap. In fact, we depend upon the quality to hold your trade. We could not sell the Advance Fence as cheaply as we do if we had to sell it through the dealer. When you buy from us you only pay one profit, when you buy from the dealer you pay two profits. Send postal card for circulars and prices. THE ADVANCE FENCE CO., 4102 OLD ST., PEORIA, ILL.

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MADE BY THE Anchor Fence Company, 1820 Grand Ave., Kansas City, Mo. Makers of "The Anchor Clamp"—The Tie That Binds. Also DEALERS IN WIRE FENCE MATERIAL. Gold medal awarded to Anchor Fence at the Trans-Mississippi Exposition, Omaha, 1898. The best wire fence on the market. Mention Kansas Farmer and write for full particulars.

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Are the Finest Equipped, Most Modern in Construction and afford the Best Facilities for the handling of Live Stock of any in the World. The Kansas City Market, owing to its Central Location, its Immense Railroad System and its Financial Resources, offers greater advantages than any other. It is the Largest Stocker and Feeder Market in the World, while buyers for the great packing houses and export trade make Kansas City a market second to no other for every class of live stock.

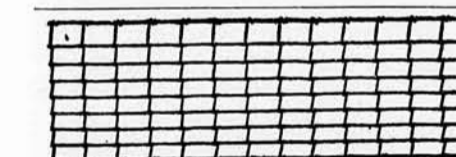
Table with 4 columns: Receipts, Cattle and Calves, Hogs, Sheep. Official Receipts for 1898: Cattle and Calves 1,846,233; Hogs 3,672,909; Sheep 980,303. Sold in Kansas City 1898: Cattle and Calves 1,757,163; Hogs 3,596,828; Sheep 815,580.

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