

KANSAS FARMER

Volume XLV. Number 8

TOPEKA, KANSAS, FEBRUARY 21, 1907

Established 1863. \$1 a Year

PRISON TWINE.

EDITOR KANSAS FARMER:—I have been a subscriber of THE KANSAS FARMER for some time, and I would like a little information.

Have the managers of the State prison twine-plant entered into a combination with the dealers? I see by the papers that they met lately and have set prices for the coming season, and

like last season, parties purchasing smaller quantities than 5,000 pounds of twine are taxed one-half cent a pound for the twine more than the others. No one farmer wants 5,000 pounds of twine. Last season I purchased the amount I needed from a dealer and I had to pay the extra tax. Where do the managers get their authority for the discrimination? I am a heavy tax-payer



Iams' Yen (62384), first-prize 3-year-old Percheron at Nebraska State Fair 1906. Weight 2,040 Pounds.

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Established in 1863.

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 Special reading notices, 50 cents per line.
 Special rates for breeders of pure-bred stock.
 Special Want Column advertisements, 10 cents per line of seven words, per week. Cash with the order.
 Electrotype must have metal base.
 Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
 All new advertising orders intended for the current week should reach this office not later than Monday.
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 Every advertiser will receive a copy of the paper free, during the publication of the advertisement.
 Address all communications to
THE KANSAS FARMER CO.,
 625 Jackson St., Topeka, Kansas



and do my part to support the State prison and pay the warden his salary.
 THOMAS E. EVANS.

Labette County.

The matter of this inquiry was brought to the attention of Warden Haskell, of the penitentiary, from whom the following reply was received:

"A difference of one-half cent on a pound is made on lots of 5,000 pounds or more of binding-twine manufactured at the Kansas State Penitentiary. The reason is that the management of the Kansas Penitentiary found they could not sell all the twine manufactured direct to farmers as they desired to do. Many of the farmers preferred to pay a local dealer a small profit rather than order it themselves. Many farmers club together and buy more than 5,000 pounds and obtain a car-load or more.

"The twine-plant was established for the benefit of the farmers of Kansas, and its operation and maintenance has saved the farmers of this State many thousands of dollars. And if the farmers of this State would form clubs and buy in car-load lots, we would be very glad to have them do so.

"The prison twine is made from pure white sisal and is probably the best twine on the market to-day. We would be very glad to have your correspondent from Labette County and all others interested in binding twine to visit the institution and see the process of its manufacture.

"By making a difference of one-half cent per pound, it encourages large orders and many of the farmers avail themselves of the reduction by forming farmers' clubs and thus obtain twine at the reduced price.

"I have been informed that our price is a cent and a quarter lower than that of the International Harvest Company, and I can assure you that no combination is made with any trust, as the twine-plant was established for the people of this State to free them from trust prices."

It appears from this explanation that the farmer can buy twine at the same prices as are charged to the dealer. We are assured also that there is no rebate or other advantage allowed to the dealer. The farmer who does not need as much as 5,000 pounds of twine generally prefers to buy of the dealer

rather than to buy from the penitentiary direct. But if one or more farmers purchase 5,000 pounds or more of twine to supply their united wants, they can save the dealer's profits by ordering in one lot. A further advantage in freight, amounting on the average to about twenty-five cents per hundred pounds, can be had by cooperating to the extent of purchasing and shipping a car-load.

A HAND-SEPARATOR INQUIRY.

The Indiana Experiment Station has performed a valuable service in publishing the results of extensive and carefully conducted experiments in comparing the efficiency of the hand separator, deep setting, the shallow pan, and the water dilution separator. In these experiments the deep can, the shallow pan, and the dilution apparatus were given ideal conditions by the use of cold water and plenty of time.

The average per cents of fat left in the skim-milk were as follows:

Hand separator.....	0.02
Deep setting.....	.17
Shallow pan.....	.44
Water dilution.....	.68

It is shown that the butter lost in the skim-milk from one cow giving 6,000 pounds of milk in one year would be as follows:

	Pounds.
Hand separator.....	2.75
Deep setting.....	17.34
Shallow pan.....	25.80
Water dilution.....	29.07

Expressed in money values at 23 cents per pound for butter the losses figure out as follows:

No. cows.	Water dilution	Shallow pan	Deep setting	Hand separator
1.....	\$6.68	\$5.86	\$3.99	\$0.63
5.....	33.43	29.32	19.95	3.16
10.....	66.86	58.65	39.90	6.33
15.....	100.29	87.97	59.85	9.49
20.....	133.72	117.30	79.80	12.66

In a herd of 20 good cows the dairyman can save per year \$67.14 by using the hand separator in place of the deep-setting system, \$104.64 in place of the shallow-pan system, and \$121.06 in place of the water-dilution system.

These figures are further reinforced by the superior quality of the separator cream.

Such a showing will be found useful in helping to determine the question of buying a separator.

CONTRACT MADE ON SABBATH LEGAL.

EDITOR KANSAS FARMER:—Please give the law in the following if possible:

A had a lot of hay for sale. B called A up and asked the price of the hay. A priced it at \$7.00 per ton in the stack. This was on December 10, 1906. Sunday, December 16, B took C to look at the hay, then called on A and bought it for \$7.00 per ton, to be measured in the stacks by D. B then offered A his check for \$50.00 in part payment. A refused the check and told B he could pay him when D measured the hay the next day.

This sale was made on Sunday, Dec. 16, in the presence of C as a witness to the deal. Under the law who is the owner of hay, A or B? W. W. Bourbon County.

The statement is often printed that "a contract made on Sunday is illegal and void." This is an erroneous statement. Under the common law, as well as under the statutes of Kansas, a contract made on Sunday or on a holiday is as binding as if made on any other day. This point was discussed by Justice Brewer in 13 K, 529, in deciding the case of Johnson vs. Brown, which came to the Supreme Court from Lyon County. It was again referred to by Justice Brewer in 21 K, 238, in the case of Birks vs. French from Wilson County. In this latter case Mr. Brewer said: "The contract of sale, though made on Sunday, was valid. Our statutes simply prohibit labor on that day."

In the case as stated by our correspondent, B undoubtedly bought the hay and became the owner of it from the time he agreed to pay the price at which A offered it to him. No doubt A could have changed his mind about selling the hay between the time he priced it at \$7 per ton on December 10 and the time when B took him up on

December 16, and could have been released from all obligation to sell the hay at that or any other price by notifying B that he had changed his mind. But by stating to B on December 16 that he could pay him when D measured the hay, he completed the sale. The hay belongs to B who owes A \$7 per ton for the amount in the stacks, as ascertained by D's measurement.

This has nothing to do with the question of the morality of doing business on Sunday. Our correspondent asked simply for the legal statutes under the circumstances stated. The writer is of the opinion that people will live longer and better and accomplish more in the world by observing the Sabbath as fully as circumstances will permit.

SUBSCRIPTION CONTRACT LIKE ALL OTHERS.

EDITOR KANSAS FARMER:—Will you kindly state the law concerning newspapers, etc., through THE KANSAS FARMER?

It is customary for a publisher to continue to send his paper until it is ordered stopped and then in case one is in arrears, he will refuse to discontinue until such arrears are paid.

The writer has in mind a case where a person subscribed for a weekly paper. Subscription began in April, and in July or August following the firm sold out to another publishing company who sent its paper—different paper altogether—and continued to send it for about three years after the expiration of paid subscription. Can this publishing firm collect for this paper that was not subscribed for?

It is common practise for a publishing house or firm to send its paper for a while (3, 4, or 6 weeks or months) "complimentary"—and continue to send it and after a while send a bill for arrears. Can such a bill be collected?

Kindly reply fully and show where authority can be referred to.

Republic County. A SUBSCRIBER. Buying a periodical is not different from buying other things of value, and there are no special laws for collecting debts for subscriptions. The subscriber for a paper who continues to receive it after the expiration of the time for which he has paid in advance stands in no different light from the person who runs an account at a store and continues to obtain goods after the balance turns in favor of the merchant. The way to avoid liability in either case is to cease to receive the goods, or to order delivery discontinued. The business way to terminate any such transaction is to pay arrearages and order delivery stopped.

In the case stated by our correspondent, the subscriber ought to have terminated the contract as soon as he became dissatisfied with what he was receiving. The successor to a business has the same legal rights as the former owner. The fact that the goods became inferior—that the paper changed character—does not change business relations of the seller and the purchaser—in this case the publisher and the subscriber—but the recipient of the goods is obligated to pay for what he received up to the time at which he discontinued the arrangement.

THE JUVENILE COURT SYSTEM.

A book entitled "The Juvenile Court System of Kansas," by George Asbury Stephens, has recently issued from the press. The juvenile court system is working well and is receiving careful attention from the growing numbers of people who believe the effort to reduce the production of criminals should be regarded as equal in importance and superior in its power for good to the effort to suppress crime after the criminals have been produced.

Mr. Stephens' book gives a candid review of the conditions which led to the establishment of the juvenile court; of one year's operation under the law; of the law as it is; and proposes a new law embodying such provisions as his studies have suggested.

This book will be found exceedingly useful to persons who are seeking to improve social conditions by securing

such legislation as tends to curtail lawlessness by the rational method of making good citizens of those who would otherwise become criminals.

CORNED BEEF.

EDITOR KANSAS FARMER:—I would like directions for keeping beef through the summer.

Russell County. E. L. NESMITH.

Those who have most experience are apt to say that there is no safe way to keep beef through the summer except in cold storage, dried, or canned. Some, however, claim that "corned" beef may be kept in a cool cellar.

Following are brief directions for corned beef: "Take water enough to corn the meat. Warm the water thoroughly. Dissolve in the water salt enough to make a brine so heavy as to float an egg on top. Add 2 ounces of saltpeter for each 100 pounds of beef. Cool the brine before using. Strain through a cloth. Place meat in a clean barrel. Pour the brine over the meat until it is completely covered. Weight down to keep all meat under the brine. Keep in cool cellar."

William Green, one of the largest retailers of meat in Topeka, informs the editor that the meat is liable to spoil in hot weather unless kept in a refrigerator.

COUNTY CLERK MUST HAVE STANDARD WEIGHTS AND MEASURES.

An editorial in last week's KANSAS FARMER in which it was shown that it is the duty of the county clerk to act as sealer of weights and measures for his county, brings out the fact that at least some county clerks are not provided with the necessary standards for this work.

All such county clerks should read section 4 of chapter 116, General Statutes of Kansas, as amended by section 3 of chapter 167. This section says: "He [the county clerk] shall procure at the expense of the county, when not already provided, a full set of weights and measures, scales and beams, which he shall cause to be tried, proved, and sealed by the State standards, under the direction of the chancellor of the State University."

No doubt the county clerk will do as the law directs on having his attention directed to this section.

SCHOOLHOUSE QUESTION.

EDITOR KANSAS FARMER:—An inquirer from Rossville asks the following question: "If a schoolhouse is built on a person's farm with his consent, but the land was not sold or deeded to the district, and the schoolhouse stood on that land twenty years, is the schoolhouse the lawful property of the school district?"

Answer.—The schoolhouse is undoubtedly the property of the school district, with a full right to sell it or remove it. E. T. FAIRCHILD.

State Superintendent of Public Instruction.

TWENTY THOUSAND DOLLARS FOR HEREFORD PRIZES.

At a meeting of the directors of the American Hereford Cattle Breeding Association, held at the Midland Hotel, Kansas City, the 16th instant, the snug sum of \$20,000 was appropriated as special prizes for Hereford cattle at the various State fairs and National shows to be held during 1907.

It was decided to hold three registered Hereford sales during the coming year. They were given to Kansas City, Chicago, and Denver, and will be held during the days of the shows in these cities. Fifty head of cattle will be accepted for Chicago and Kansas City and 100 for Denver. Members will be permitted to contribute three head each until the requisite number is obtained.

These sales are under the auspices of the association. On February 21 and 22 a combination sale by members will be held in Kansas City. Committees to supervise the sales are: Denver, C. R. Thomas, Kansas City; Thomas Mortimer, Madison, Neb.; C. S. Stannard, Emporia, Kan.; Chicago, Thomas Clark, Beecher, Ill.; C. R. Thomas, Kansas City; S.

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The premiums were distributed as follows:

Kansas City: American Royal Live Stock Show.....	\$4,000
Chicago: International Live Stock Show.....	4,000
Fort Worth, Tex.: Fat Stock Show.....	1,000
San Antonio, Tex.: Interstate Fair.....	600
St. Joseph, Mo.: Live Stock Show.....	800
Denver: Fat Stock Show.....	800
Minnesota State Fair, Hamlin, Minn.....	500
Arkansas State Fair.....	300
Ohio State Fair.....	200
Indiana State Fair.....	300
Illinois State Fair.....	300
Kentucky State Fair.....	300
Iowa State Fair.....	500
Louis City Live Stock Show.....	300
Nebraska State Fair.....	300
Kansas State Fair.....	400
Colorado State Fair.....	300
Wyoming State Fair.....	300
Montana State Fair.....	300
Idaho State Fair.....	100
Washington State Fair.....	200
agerstown, Md.: Live Stock Show.....	200
out Dakota State Fair.....	200
orth Dakota State Fair.....	200
est Virginia State Fair.....	300
Missouri State Fair.....	200
Louisiana State Fair.....	200
Tennessee State Fair.....	300
Wisconsin State Fair.....	200
Michigan Live Stock Show.....	200
Oklahoma State Fair.....	50
Mississippi State Fair.....	100
Maine State Fair.....	100
Alabama State Fair.....	100
Virginia State Fair or Jamestown Exposition.....	500
and Mexico (place undetermined)	500

TOPNOTCHER SWINE SALES.

By reference to the reports of the auction sales of pure-bred Poland-China and Duroc-Jersey swine, advertised in THE KANSAS FARMER, it will be noticed that Kansas takes a front rank for high-bred hogs.

Last week the Dawley sale of Poland-Chinas broke all previous Kansas records in the handsome average made for bred sows, namely, \$205.75. When a Kansas breeder can, at a single sale, sell over \$10,000 worth of hogs, the breeding business has an uplift that should be encouraging to the fraternity in general. Never before in the history of the State have such high prices been realized at public or private sale, for either Duroc-Jerseys or Poland-Chinas. The public sales of Berkshires and Chester Whites have not been so numerous, but the breeders report equally satisfactory prices. It is especially gratifying to the Poland-China breeders that in comparison with the series of topnotcher sales held in Illinois, Iowa, and Missouri, the Kansas series made the highest general average. Our breeders are now conceded the highest rank. They have always been enterprising and ambitious buyers from the leading herds of America, and the time is now at hand when breeders from other States must patronize our leading establishments in order to hold their own. It pays to breed the best and to advertise judiciously.

KANSAS FARMER SUBSCRIPTION LIST.

For New Subscribers Only.

The Kansas Farmer Company is determined to secure 50,000 new subscribers, and in order to make quick work, are offering tremendous inducements to that end. We have selected the most valuable publications in America to join in this great enterprise for the expansion of the circulation of interesting, practical, reliable, and up-to-date publications. This subscription campaign represents a big investment to the publishers, consequently this offer is only for a limited time. Therefore we advise you to act promptly. Do it to-day. Address all orders to Kansas Farmer Company, Topeka, Kans.

Our Club Offer No. 1, \$1.00.—Kansas Farmer, Vick's Family Magazine, Woman's Magazine, regular price, \$1.60

Our Club Offer No. 2, \$1.00.—Kansas Farmer and the American Boy, regular price, \$2.00.

Our Club Offer No. 3, \$1.25.—Kansas Farmer and the Semi-Weekly Capital, regular price, \$2.00.

Our Club Offer No. 4, \$1.45.—Kansas Farmer, The Commoner, the Woman's Magazine, regular price, \$2.00.

Our Club Offer No. 5, \$1.70.—Kansas Farmer, Hoard's Dairyman, Semi-Weekly Capital, Woman's Magazine, regular price, \$3.50.

Our Club Offer No. 6, \$1.00.—Kansas Farmer and Dr. Mayo's new book, "The Care of Animals," regular price, \$5.

Our Club Offer No. 7, \$1.50.—Kansas Farmer, and Western Fruit Grower, regular price, \$2.00.

Our Club Offer No. 8, \$2.00.—Kansas Farmer and the Breeder's Gazette, regular price, \$3.00.

Our Club Offer No. 9, \$3.25.—Kansas Farmer and Scribner's Magazine, regular price, \$4.00.

Our Club Offer No. 10, \$5.20.—Kansas Farmer, Kansas City Daily Morning Times, and Kansas City Daily Evening Star, 15 papers each week, regular price, \$6.20.

Do persons who omit to sign their names to inquiries or other communications to THE KANSAS FARMER ever read what the editor says about unsigned communications and their short cut to the waste basket?

Miscellany

Money Paid for Support of the Agricultural College Comes Back in Increased Wealth.

J. H. MILLER, MANHATTAN, KANS.

The income of an agricultural State must necessarily come from its leading resource, agriculture. All business—banking, merchandising, railroading, etc.—is prosperous or not according to the prosperity of the farmer. As expenses increase it is but a matter of commonsense thrift to find ways of increasing or improving the source of supply. Kansas farmers have been unusually prosperous for several years, and people are prone to attribute it all to the favorable seasons. Thousands of our best farmers are free to say that it is because they are now better able to meet adverse conditions. Many thousands of others say it is because they are using better seed, both corn and wheat. Others say it is because they are making more money in stock-feeding, because they are using better breeding methods, better feeding rations. Others say it is because they have more acres of alfalfa and are using better methods of farming. Others are making more money from orchards because of better methods of caring for their orchards, cultivating, spraying, etc.

Now what has been the influence all these years for all these improved methods, gospel of better seed, better feeds, etc? It has been the Kansas State Agricultural College and the Experiment Station with its force of trained men devoting their whole time and energies to the problems of interest to the farmer. They report their work to the daily and weekly press, agricultural papers, etc.; they issue bulletins and send them to over twenty thousand Kansas farmers; they spend weeks of each year in institute work, talking directly to the farmers, and discuss with them the problems of interest to them; they answer hundreds of letters every month, replying directly to the questions confronting the farmer. It is not at all infrequent for one hundred such letters to come in one day to the several departments, asking about matters pertaining to feeding, dairying, poultry, orcharding, crops, methods of cultivating, soil fertility, etc. These are not only answered personally, but in most cases the letters and replies are published in the State farm papers that others may get the benefit of the same advice.

Does this pay? Does any other State investment so directly pay for itself? In fact it not only pays for itself, but it pays for the support of everything else. It is the one plant that the State owns that helps to pay the State expenses.

Kansas had this past year 6,584,535 acres in corn. If the Agricultural College in its various forms of help can increase the average yield two bushels per acre, or about 13 million bushels, it will mean over four million dollars to the taxable wealth of the State. The wheat acreage was 6,436,085 acres, and if the Agricultural College, through its bulletins, letters, distribution of seed-wheat, farmers' institutes, educational trains can increase the yield one bushel to the acre, or practically seven million bushels, it will add to the taxable wealth another four million dollars. The alfalfa acreage increased from 1905 to 1906 from 602,500 acres to 1,217,373 acres. For ten years the Kansas Agricultural College has done more to promote the growing of alfalfa than any other institution in America. The thousands of bulletins

on alfalfa and the thousands of letters and the hundreds of addresses made by college men have naturally "borne fruit" in this great addition to the acreage of this money-making crop. Suppose each acre would yield only three tons, this gain would be nearly two million tons, worth at least ten million dollars. And this could be carried out in other departments of farming and stock-raising, dairying, etc. The increase in dairy-products is phenomenal, from about \$12,000,000 to nearly \$18,000,000. Of course there have been many agencies to help bring about this increase, and not the least among them is the Agricultural College with its bulletins, circulars, thousands of letters, and several hundred addresses at farmers' institutes. Every dollar spent for the college for its regular work and for its extension work is but invested in a revolving fund and bringing back to the coffers of the State millions in interest on the investment. In other words, a liberal appropriation for the Agricultural College is the most economical way of supporting all other State institutions.

Methods of Cultivation.

BY PROF. JOHN FIELDS.

Methods of cultivation are becoming better understood. Not long ago, corn-growers plowed their corn two or three times and laid it by. And they plowed it too, using two big shovels to the gang and sending them down to the beam. Now, the custom of the best corn-growers is to give the corn a light cultivation with the harrow first; then if the soil has become compacted by heavy rains as often happens, it is given one deep cultivation resembling the plowing that used to be given. This deep cultivation admits air to the soil, which is necessary, and does not disturb the corn roots because they have not yet developed between the rows.

Later cultivations are uniformly shallow, the second and third with a riding cultivator, which kills weeds and loosens the surface only to a depth of one to three inches. After the corn is too high to straddle, some implement that will cultivate the space between two rows is used. All that is desired is to keep the surface loose down to a depth of one to three inches. Cultivation is often continued until the corn is practically matured.

There are sound reasons for this practice. Compact soil loses moisture rapidly because the capillary action is unbroken and moisture comes up to the surface to supply evaporation. A layer of loose soil on top prevents this loss of moisture and saves it for the use of the crop. If the soil is

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loosened to a depth of six inches, it dries out to that depth and the roots are broken by this deep cultivation. The nearer a crop approaches maturity, the more water is used by the plant and its only supply of water is in the soil. Shallow cultivation up to this time prevents loss of water from the surface of the soil.

The same general principles apply to all cultivated crops. Cotton- and potato-growers are doing less plowing and more cultivating and are getting better returns. The purpose of cultivation is to save water for the use of the crop that is growing.

Poisoning Wolves.

EDITOR KANSAS FARMER:—The expense of keeping hounds for the purpose of hunting wolves is questionable, for the reason that January and February are the best months to get wolves, and at that very time the stock takes the most care and the farmer has no time to hunt.

There are two methods of poisoning wolves which are very successful. The first one is by the use of a chicken.

Take a rooster or a hen of a large size, so that the hawks will not kill it, and lariat it out where the wolves are often seen. Take a knife and open the skin under the leg on the breast. Then with a smooth stick separate the skin from the flesh down to the breast bone. In this cavity drop your strychnine. Be sure to put in plenty. It will not hurt the chicken as there is no blood in the breast. Put out feed for your chicken. I have known chickens to be kept two weeks on the lariat. If you happen to miss your wolves, you can kill your chicken and then get the crows and hawks. Give the chicken plenty of rope, ten or fifteen feet. Some old rooster is the best because he will be heard at night.

The second method consists in boring a two-inch hole two inches deep in a piece of wood about a foot long. Put a little tallow in the bottom of the hole. Next put in your strychnine and fill the hole with tallow. Place this out for the wolves, with the tallow next to the ground so that a cur will pass it, but the wolf will hunt it up. When he finds something that has been hidden, he will dig it out.

If these two methods are carefully followed, you will get your wolf without much danger of harming your neighbor's dogs. Keep your poison tallow away from hay-stacks. Be sure that your chicken is of such a character that you would know it anywhere, because sometimes they get loose.

Shawnee County.

K. J. H.

Concrete Construction.

EDITOR KANSAS FARMER:—I saw an inquiry in your last issue asking about concrete floors and concrete for culverts and bridges. I have had a large practical experience along this line

and will try and give a few principles of practical use in the construction of concrete.

The first is to have clean material, the second is to have it mixed thoroughly in the right proportion. By actual use I find that 1 part of Portland cement, 2 parts of clean sand and 3 parts of crushed or pounded rock makes a good body. Crown three-fourths of an inch on top with 1 part of cement and 2 of sand, laying a scantling on each side of the places you wish to floor and strike top with another, scantling cross the work. Bring first work or body of work up to within one-half or three-fourths of an inch of the striking board and strike crown very thin or very moist so you will be able to drive the mortar ahead of striking board and let stand from about 10 to 20 minutes. Then take a plastering trowel and trowel down the same as troweling plastering and when smooth quit. In about twelve hours take water in a pail and throw on and flood until it runs off. Repeat for three or four days and then your floor is done. Take the scantling up from the sides and with a trowel fill the spaces with concrete and crown as you did the body of your work.

As for concrete culverts and bridges I would use the same proportion for body work and I dig my pits down to a solid foundation and use expansion in each form of not more than 14 inches by four feet. This avoids cracking by setting or freezing if the forms are made of 2 inch plank using full-circle arch the same as use for arch bridges for inside and adjustable forms with crank bolts. For outside forms you will build a bridge fully equal or better than the old fashioned arch bridge. I would advise the aid of a practical man for overseer as the expense of forms and the possibilities of failure are too expensive to risk. G. F. LAUGHMILLER.

Soldier, Kans.

A Twentieth Century Cottage.

The great interest which is now taken in the building of homes, especially those that have an attractive exterior as well as interior, has induced us to make arrangements with The Russell Co., a firm of well known architects, to furnish us with a number of designs of farmhouses and cottages. We hope in this way to be able to benefit our readers and furnish them ideas so that when they build they will be able to secure in their new homes the best possible arrangement for the money expended. Any suggestion that our readers may be pleased to send us of the size of house and arrangement of rooms that they would prefer to see illustrated, will be carefully noted, and as far as practical, carried out. It is our aim to make this department of the greatest interest and utility to our subscribers.

The picturesque little cottage shown this week is one that has met with

ness and hospitality that makes it a source of pride and enjoyment to its owner at all times.

Passing through the vestibule we enter a large well-lighted living-room, having in one end an inviting fireplace with seats on either side.

The center hall with which all rooms connect serves as a passage way to dining room.

The dining room is well lighted and is given a very pleasing effect by the large circular bay windows in which a few growing plants would add considerable to the cheerfulness of the room.

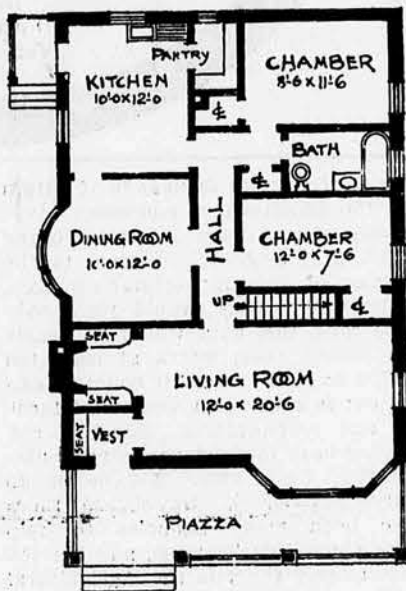
A door connects directly with a good kitchen which has a fine pantry opening from it.

Two medium size chambers, each with a roomy closet, and a well-arranged bath-room with linen closet, complete an ideal floor plan.

There is ample room on the second floor for two good chambers and a large storage-room.

Height of cellar 7 ft; first floor 9 ft.

This house will cost \$1,400.00, exclusive of heating or plumbing.



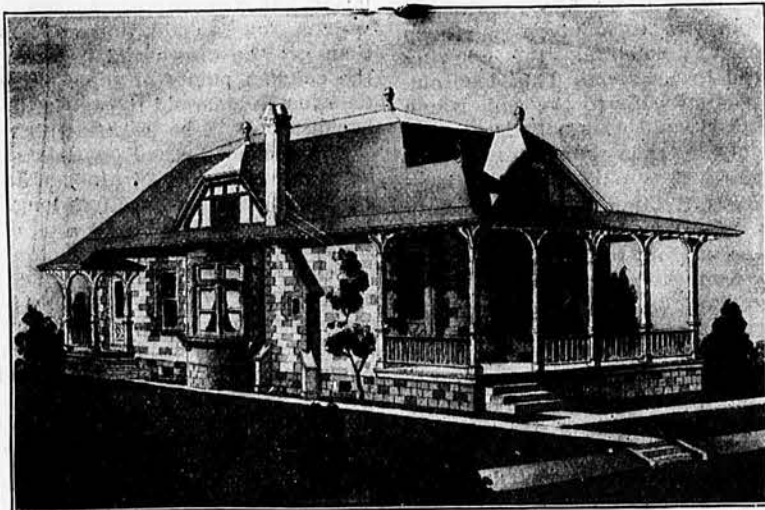
FIRST FLOOR PLAN

This is our No. 123. Complete floor plans and specifications will be furnished for \$12.00.

The 1907 edition of Twentieth Century Cottages, a book containing a number of views and complete floor plans of houses costing from \$1,000 to \$3,000, will be sent upon receipt of price, 25 cents, stamps not accepted. Address The Russell Co., 515 Century Bldg., Minneapolis, Minn.

Shortage in Beef Steers.

EDITOR KANSAS FARMER:—There are few men living in a range country or pasture country who do not admit that a Hereford is the most profitable beef animal for their country and the owners of the breed contend that in the feed-lot they have no equal. Be that as it may, I am a firm believer



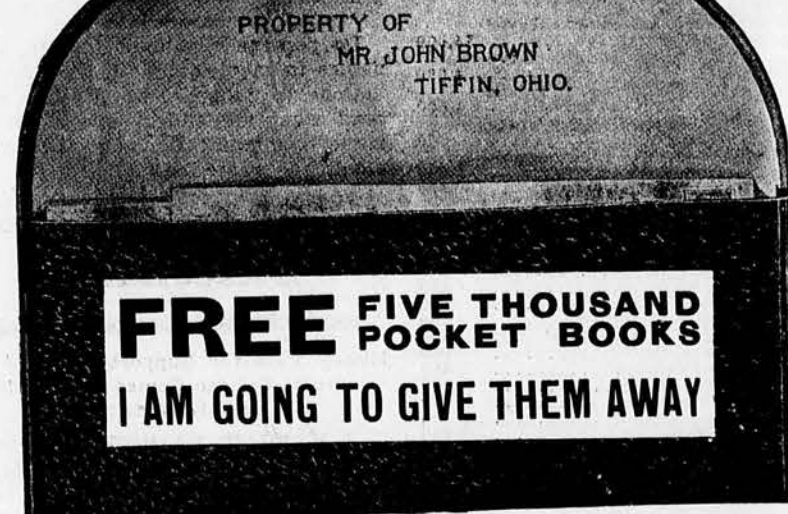
the greatest praise and will well repay you to study carefully. It is built of cement blocks, a material which has lately become so popular and is fast superseding wood and other materials on account of its durability and cheapness. The gables are covered with cement plaster.

The wide porch, two bay windows, outside chimney, and fancy gables give this little home an air of rich-

ness in the Hereford and believe that he has no equal as a beef animal, whether on the range, pasture, or in the feed-lot and as evidence of my good faith, I will say, "Convince me that there is a breed of beef cattle superior to the Herefords and I will breed them, for I want to breed the best and I want the best breed." I have lived in Kansas for twenty-three years, and in all those years there has not been a

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And now—just to show you how I feel toward farmers, I want to give five thousand of them one of these Pocket Books. If you are a farmer, I want to give you one. I want to give you one of these Pocket Books so you can show it to your friends and say, "My friend Ellis, publisher of the greatest Farm Paper in the world, gave me this." Then you and your friends will think of me and my paper—"The Metropolitan and Rural Home"—that goes to half a million farmers every month—and you will say among yourselves, "That Ellis must be all right. I want to read his paper and see what he says in it." These Pocket Books I am going to give you are made from genuine Rubber Covered Cloth. They are just the thing to carry valuable papers—such as notes, contracts, Fire Insurance Policies, weight receipts, etc., as well as money. They fold up flat and fit your inside coat-pocket—just the kind of Pocket Book every man likes to own.

Now you don't pay anything for the Pocket Book. It's FREE. I send it to you postpaid and don't ask you a cent. But to show that you are willing to be just as liberal with me as I am with you, I want you to send me 20 cents for the Metropolitan and Rural Home for a year. Now don't say, "that is what I expected." Wait a minute and read the rest. You haven't got to the most liberal part of my offer yet. Read this announcement all through. I would do as much for you. If you will do as I ask, I will have your name and address printed on the inside of your Pocket Book, so if it gets lost, it will be returned to you at once. When I send it to you, I will also send you some sample copies of the Metropolitan and Rural Home and I will continue to send the paper to you for Three Months. Then if you don't like it, just say so and I'll send you back your 20 cents and stop your subscription and you may keep the Pocket Book for your trouble. That gives you the paper three months FREE—no say nothing of the fine Pocket Book. Now—what do you think of that for an offer? A GREAT BIG ILLUSTRATED MAGAZINE FREE; mind you, The Metropolitan and Rural Home is a great big Magazine Paper. It is printed in clean, plain type on nice paper and there are lots of pictures every month. I just mention these things because they are extra—it's the stock, dairy and farm news, and good stories, that make my paper the best farm paper in the world.

Now I'm sorry I haven't got more of these Pocket Books, but there are only 5,000 to give away, so you'll have to hurry a little if you want one. They are such good Pocket Books that they'll go like wildfire, and you ought to stop right here, and mail me your order at once, so as to be sure to get one of these Pocket Books. Enclose twenty cents (stamps or silver) and mail it to me just as quickly as you can. Do it right away, so the Pocket Book won't be gone when I get your subscription. CHAS. E. ELLIS, PUBLISHER, METROPOLITAN AND RURAL HOME, Subscription Dept. 1312, NEW YORK CITY.

time when good Hereford cattle could be bought as cheap as they can now. You can start a herd with the cream of the breed for a very small sum comparatively, and there never was in my judgment a better time to start a cow herd. Most of the large cow herds on the ranges have gone to market and it is only a question of a very short time until there will be a shortage of steers.

(Bear in mind all cattlemen can not handle steers; some one must keep the cows and raise the steers.) There is a shortage of good steers to-day and I predict that this shortage will be severely felt before another feeding season rolls around, and that good cows will be selling 25 per cent higher twelve months from now than they are selling to-day. It is the time to buy and the better cattle you buy to begin with the better for your future. Pure breeds are the best and to-day they are costing little more than grades.

There will be a sale of registered Herefords at Kansas City, Missouri, on the 27th and 28th of February, which will afford an opportunity to buy some fine Herefords, both cows and bulls, at very low prices. Attend the sale and start a cow herd—one that you will always be proud of.

C. A. STANNARD.

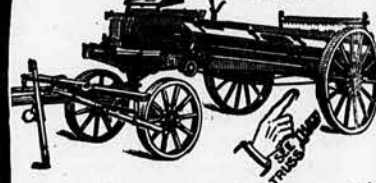
A Reliable Seed-House.

If you want to try a new seed house this spring, try, on our say-so, R. H. Shumway, Rockford, Ill. We have a good deal of confidence in the Shumway seeds, and certainly all confidence in Mr. Shumway himself, who has been growing and selling seeds perhaps longer than anybody else now in the business. By adhering strictly to the plan of selling only such seeds as he knows must prove satisfactory to his customers, Mr. Shumway has built up a very satisfactory business. It is not as large as some seed businesses, but Mr. Shumway places a limit on himself by declining to buy and sell seeds whose goodness he can not be absolutely certain of. In his forty years' trade this course has drawn to him an exceedingly valuable list of patrons who look to him and to no one else to supply them with seeds year after year. He will be found very liberal in his dealings. You not only get good seeds, true in variety, but you always get a lot of extra packages. He publishes a fine catalogue. Look up his advertisement in this paper and write him for it.

BEFORE YOU BUY A MANURE SPREADER

SEE that its frame and sills are made of oak; that it has a ball and socket joint on front axle to prevent racking and twisting and steel braces and steel truss rods to guard against warping and sagging. See that the apron does not run backward and forward on hilly ground but insist on a positive and continuous apron drive.

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See that it is practically automatic and so simple that any boy who can drive a team can run it as well as any man and control its every operation without leaving the seat. The

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Stock Interests

Kansas Live Stock and Kindred Organizations.

THE KANSAS FARMER desires to publish a complete list of the agricultural, stock, and kindred organizations of Kansas. Any reader who may know an organization of this kind that is not named in the accompanying list will confer a favor by sending the names and postoffice addresses of all the officers to THE KANSAS FARMER.

Kansas State Board of Agriculture.—President, A. L. Sponsler, Hutchinson; vice-president, Chas. E. Sutton, Lawrence; secretary, F. D. Coburn, Topeka; treasurer, Edwin Snyder, Oskaloosa. **Directors:** E. W. Hoch, Governor, Topeka; C. E. Denton, Secretary of State, Topeka; W. R. Dowling, Norcatur; J. M. Potter, Peabody; A. W. Smith, Groveland; I. L. Diesem, Garden City; T. A. Hubbard, Wellington; J. T. Treadway, LaHarpe; G. W. Glick, Atchison; Edwin Taylor, Edwardsville; J. C. Robinson, Eldorado; G. W. Hanna, Jay Center.

Kansas Improved Stock Breeders' Association.—President, Geo. W. Berry, Emporia; vice-president, E. W. Melton, Eudora; secretary-treasurer, H. Heath, Topeka; assistant secretary, D. Graham, Topeka. **Directors:** E. Arrington, Baker; S. C. Hanna, Howland; Jas. Malns, Oskaloosa; Geo. A. Blair, Mulvane; A. C. Shinn, Ottawa.

Kansas Swine-Breeders' Association.—President, E. D. King, Burlington; secretary-treasurer, I. D. Graham, Topeka; vice-president for Duroc-Jerseys, W. Jones, Concordia; vice-president for Poland-Chinas, Geo. B. Ross, Larned; vice-president for O. I. C., A. T. Larned; vice-president for Berkshires, E. W. Melville, Eudora; vice-president for Tamworths, C. W. Freeborn, Carbondale. **Executive committee:** President, secretary-treasurer, and all the vice-presidents.

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The Kansas State Poultry Association.—President, Prof. L. L. Dyche; vice-president, R. J. Collins, Wichita; secretary-treasurer, Thos. Owen, Topeka. **Directors:** L. L. Dyche, Lawrence; C. Short, Leavenworth; A. J. Wadsworth, Wichita; R. J. Collins, Wichita; G. Davis, Valley Center; W. S. Young, Pherson; M. W. McMannis, Lincoln; J. M. Maxwell, and Thos. Owen, Topeka.

Kansas Corn-Breeders' Association.—President, J. T. Martin, Hanover; vice-president, W. R. Hildreth, Altamont; secretary, M. D. Snodgrass, Manhattan; treasurer, A. M. TenEyck, Manhattan. **Directors:** C. H. Hildreth, Altamont; J. McCray, Manhattan; T. J. Furst, Peabody.

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Kansas Draft Horse Breeders' Association.—President, H. W. Avery, Wakefield; secretary, Prof. R. J. Kinzer, Manhattan; treasurer, Prof. G. C. Wheeler, Manhattan; vice-presidents, Geo. R. T. Roberts, Morrill; J. T. Treadway, LaHarpe; S. C. Hanna, Howard; E. F. McAllister, Westmoreland; L. R. Brady, Manhattan; J. A. Gifford, Beloit; F. H. Schreppel, Ellinwood; J. C. Robinson, Towanda.

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Kansas Poland-China Breeders' Association.—President, J. J. Ward, Belleville; secretary, L. D. Arnold, Enterprise.

The Improved Stock Breeders' Association of the Wheat Belt.—President, P. D. Van Cleave, Hunnewell; vice-president, J. R. Roberts, Deer Creek, Okla.; secretary-treasurer, Chas. M. Johnson, R. 3, Caldwell. **Directors:** I. E. Knox, Nardin, Okla.; J. C. Larrimer, Derby; T. S. Paris, Jefferson, Okla.; Geo. W. Stewart, Bluff City.


Hodgeman County Cattle-Growers' Association.—President, J. W. Hunter, Jetmore; vice-president, S. M. Holbrook Sr., Jetmore; treasurer, B. Kline, Larned; secretary, Chas. H. Jackson, Jetmore; assistant secretary, Geo. D. Martin, Jetmore.

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Plainville Breeders' Association.—President, Wm. Mellott, Plainville; vice-president, A. W. Hall, Plainville; secretary-treasurer, S. R. Tucker, Cordell. **Directors:** N. F. Shaw, Plainville; E. A. Karmer, Painville; C. S. Gaunt, Natoma.

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Forest Park Sales Pavilion Company.—President, Dr. O. O. Wolfe, Ottawa; vice-president, J. M. Woods, Ottawa; secretary, B. M. McQueston, Ottawa; J. R. Killough, Ottawa. **Directors:** Henry Ackley, Wellsville; B. C. McQueston, D. W. Thompson, C. W. Nolan, J.



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Rice County Improved Stock Breeders' Association.—President, Frank H. Foster, Lyons; secretary, E. H. Lees, Lyons; sale manager, C. S. Snodgrass, Lyons. **Directors:** Frank H. Foster, Ira Romig, Hooper Monroe, Geo. Monroe, C. S. Snodgrass, H. E. McCabe, all of Lyons.

Kansas State Fair Association.—President, Hon. H. S. Thompson, Hutchinson; vice-president, T. J. Templar, Hutchinson; second vice-president, Jno. R. Price, Turon; third vice-president, H. Hillyard, Haven; secretary, A. L. Sponsler, Hutchinson. **Directors:** All officers named.

Kansas State Exposition Company.—President, M. A. Low; first vice-president, E. H. Crosby; second vice-president, T. P. Babst; secretary, R. T. Kreipe; treasurer, C. E. Jewell, all of Topeka. **Executive Committee:** W. I. Miller, E. B. H. Remley, H. A. Heath, R. I. Lee, all of Topeka.

Kansas Horticultural Society.—President, Edwin Taylor, Edwardsville; vice-president, Edwin Snyder, Oskaloosa; secretary, Walter Wellhouse, Topeka; treasurer, E. G. Hoover, Wichita.

Last Call for the Kansas City Hereford Sale February 27 and 28.

This sale is one that should not be overlooked, as all the cattle to be sold have been carefully selected and not a poor one will be offered.

Every year at this time a big public sale of Herefords has been held in Kansas City, and each year the contributors have tried to put forward better cattle than the previous year, and this year they think they are putting forward the best lot ever yet offered. From the advertisement that appears on another page of this issue, it will be seen that the sale is made up from a number of the leading herds in the country, and as each contributor has selected some of his very best things, those who attend the sale with the expectation of seeing something really desirable, will not be disappointed. If a breeder wants just one good bull to head his herd, he can fill his wants at this sale; if the ranchman wants a carload of good, strong bulls to improve his range cattle, he can fill his wants at this sale; if the farmer or breeder wants a few good females to start with, or to add to their herds already started, their wants can likewise be filled at this sale. Every animal is of a good age and all are thoroughly guaranteed. The sale will begin promptly at 1 o'clock on the afternoon of the 27th and at 10:30 o'clock on the forenoon of February 28.

Catalogues are now ready giving a full description of each animal offered and if you have not already received one, Secretary C. R. Thomas, 221 West 12th St., Kansas City, Mo., under whose management the sale will be held, will take pleasure in sending you one. If you can not attend the sale in person, trust your bids to one of the auctioneers, any one of whom will be glad to serve you.

Lone Elm Stock Farm Hereford Sale.

We call especial attention to the sale of G. B. Little, of Olathe, Kans., to be held March 15, 1907, at his home place, Lone Elm Stock Farm, situated four miles from Olathe, two miles from Clare, and two miles from Bonita.

On account of advancing years and poor health, Mr. Little will close out his entire herd of pure-bred Hereford cattle. There are twenty-five head in all, consisting of eight good cows, by such sires as Antonia 118430, Sam 57265, Gilt Edge 92881, and Victor 76070. Also a number of fine heifers and young bulls. The young stuff is nearly all by Mr. Little's herd-bull, Wellington 156588, who, judging by his get, was a great breeder. Wellington was sired by Hesiod 2d 40679, he by Hesiod 11975, he by The Grove 3d 2490, and he by Horace 2492. Antonio, the sire of most of the cows, was by the imported bull Roderick.

Mr. Little's Hereford offering is a strong one both as to individuality and breeding. Those among the cows especially worthy of mention are, Lily Hesiod 152973 by Antonio. She is 4 years old and a splendid individual. She is the dam of King George 253837, and 8-months-old bull calf by Wellington that will be in the sale. King George is way up in quality and will make a herd-header fit to head any herd. Those wishing a good bull will want to keep their eyes on this fellow.

Another good cow is Alpha 9365. She is very large and smooth, a splendid breeder, and is in calf to Wellington.

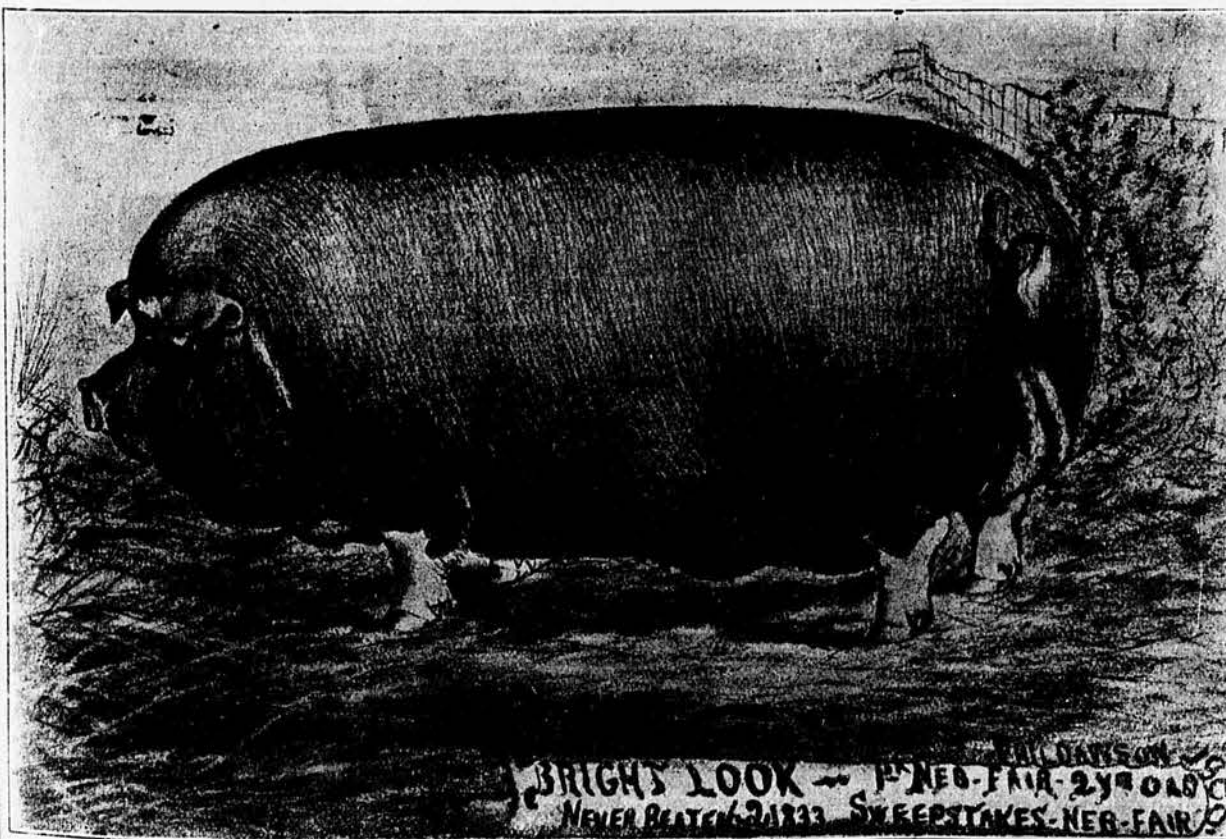
Melita 101934, very fine calf at foot by Wellington, and in calf to Orin 239274.

Alene 184908, a splendid individual, and the mother of a fine yearling heifer (by Wellington) that will be in the sale.

All of the heifers and young bulls are fancy, and exceptionally well developed, and will be of great value to those needing young stock for breeding purposes.

Mr. Little will offer at public sale at this time a carload of fat cattle, a number of good horses, and about 40 head of Duroc-Jersey hogs consisting of brood-sows and young stuff valuable for breeding purposes.

Remember this will be a dispersion



Winner of first and sweepstakes at interstate fair at Red Cloud, Neb., as a yearling at a weight of 700 pounds. Won first and sweepstakes and first as boar and 4 of his get at Nebraska State Fair fall of 1900 as a 2-year-old weighing 805 pounds. Bright Look is the sire of King Look 24459, the greatest breeding hog to-day in the State of Nebraska, sire of Just Look 37319, winner of second, 6 months and under year and headed young herd that won first and sold for \$100. King Look also sired boar under 6 months, Faultless Look 37318 that won first sow 6 months and under 1 year, Sweet Look (88715) won first. Sow same class Please Look (88714) fourth. Sow same class Kind Look (88712) sixth. King Look sire of 4 swine over 6 months get of same boar, second. All won at Nebraska State Fair 1905. Caddie Price (48475) dam of Bright Look 21835 is also the dam of Guy's Price 26037, winner of first and sweepstakes at Nebraska and Kansas State Fair in 1903. Caddie Price is dam of Caddie Look (88073) litter mate to Bright Look; dam of Ruby Look (83604), winner of second under 6 months at Nebraska State Fair and litter mate to Hutch 82287, the sensational 2-year-old at Nebraska State Fair, weighing 950 pounds, won first in aged herd, third in class and second as yearling in 1904, also sired second premium litter at Nebraska State Fair, weighed 680 pounds at 17 months. The Caddie Price family have the winning habit. She is the dam of two champions in Kansas and Nebraska and their get keep winning as fast as they are old enough. This stamps her one of the most noted sows of the breed, and her son, Bright Look, the greatest breeder in the West is the sire of King Look Nebraska's noted sire, Tecumseh White Face (89620), won first and sweepstakes, and Arkansas (89669) first at Kansas State Fair at Topeka, 1903. For some of his get see C. F. Hutchinson's sale advertisement.

sale, and the very best that Mr. Little has will be in this offering. Read his advertisement in THE KANSAS FARMER, and send for catalogue, giving full description, and don't fail to attend, for it will pay you to do so.

O. P. Hendershot's Stallion and Jack

Sale at Hebron, Neb., March 5, 1907.
Mr. Hendershot has the best lot of stallions and jacks ever put on the auctioneer's block. They were all owned by one person, and there is not a cull in the entire offering. They are all under 6 years old.

If you are in the market for a really good stallion jack, or brood mare, and don't find it in his sale he will pay all your expenses to the sale and home again. The stallions are Percheron, French Draft, and Clyde, and the mares are Percherons. They are broad backed, full chested, heavy boned, have good feet, fine style, and good action, and are guaranteed sound, and good breeders.

The jacks are large breedy fellows, of the Mammoth Kentucky type, and are the best lot we ever saw. I know they will please you when you see them. Mr. Hendershot says he has given all these animals plenty of outdoor exercise, and they have evidence of the fact, showing splendid muscle and clean limbs. Did you ask how big they are? We think every stallion in the lot will weigh a ton now, or will when they are fully matured. He has 2-year-olds that will weigh 1,800 pounds and 3-year-olds that will weigh a ton.

The jacks are from 14 1/2 to 16 1/2 hands high, and of the very best blood lines known, and guaranteed to be all right in every way. Read his sale advertisement and send for a catalogue, mentioning this paper.

Dawley Breaks All Poland-China Records in Kansas.

Mr. F. A. Dawley, of Waldo, Kans., in his Carnival Poland-China sale at Salina, February 15, 1907, broke the records for Poland-China sales in Kansas, and made the highest average at any public sale of pure-bred swine ever held in the State. Fifty bred sows sold for the snug sum of \$10,287.50, an average of \$205.75. The first ten animals sold averaged \$371.25. The top price of the sale was \$775, paid by Frank Fites, of Roann, Ind., for Faith, a daughter of Chief Perfection 2d, bred to S. P.'s Perfection.

The sale was attended by the leading breeders of Kansas, Missouri, and Oklahoma, and while the bulk of sales went to Kansas breeders, sales were made to prominent breeders in Illinois, Indiana, Iowa, Missouri, and Oklahoma. Mr. Dawley capped the climax with the closing sale of a three weeks' series of sales in Illinois, Iowa, and Missouri-Kansas, his sale closing the Missouri-Kansas series of five sales. The series of five sales started in Illinois and aggregated \$35,000. The following week was a series of sales in Iowa which reached the \$35,000 mark, and the Dawley sale closed the series of Missouri-Kansas sales, which exceeded the aggregate of either Illinois or Iowa series of sales. It was certainly a field day for Kansas Poland-China breeders in general and Mr. Dawley in particular. The principal sales of the last series began with Frank D. Winn's Meddler 2d bred sow sale on Monday, February 11, at Randolph, Mo., who sold forty-seven head for \$9,327.00, an average of \$198.50. The next day W. J. Honeyman, of Madison, set a new mark for Poland-Chinas with the general average of \$200.57, and the highest-priced sow, topping the sale at \$710, was Springtide by Meddler 2d, who went to J. M. Baler, Elmo, Kans. On Wednesday, A. P. Wright, Valley Center, Kans., had a splendid sale averaging about \$88. L. D. Arnold, at Abilene, on February 14, averaged \$55, followed by Dawley's Carnival sale, the detailed results of which are as follows:

Faith, Frank Fites, Roann, Ind.	\$775.00
Gwendoline 2d (85000), Thos. Hunt, Blue Rapids	250.00
No. 2 1/2, Thos. Lyon, Lincoln	225.00
Miss Choice Keep On 277032, S. P. Chiles, Fairfield, Iowa	500.00
Chief's Gem 83174, M. W. Adamson, Lincoln	350.00
Silver Heels, Leon Calhoun, Potter	400.00
Lampighter's Sister (81253), C. E. Toothacher, Hoxie	105.00
Ideal Fannie 264768, R. M. Lamb, Lincoln	145.00
Meddler's Fancy (96631), L. D. Arnold, Abilene, Oscar F. Olson, Brookville	305.00
Ione (85008), Thos. Collins, Lincoln	75.00
Cherry Blossom, Joe M. Balers, Elmo	310.00
I'm Queen, Goodrich Stock Farm, Eldon, Mo.	350.00
Corrector's Queen (89254), H. C. Bacon, Lucas	150.00
Laurinda E. L., A. J. Hinckley, Milo	105.00
Nonpareil Queen, Monroe Dawley, Osborne	100.00
May Queen (91752), Dan Wolfenberger, Lindsay	245.00
E. L. Venus (103339), J. B. Myers, Canton	255.00
Salvia (103371), B. M. Richardson, Marengo, Iowa	200.00
Peek-a-Boo (103535), W. H. How, Milo	205.00
E. L. I Know, E. L. Darnell, Armstrong, Ill.	155.00
Lady Oakwood, W. R. Louch & Co., Gardner, Ill.	230.00
Sunshine Ahead, Hebbard & Roy, Peck	175.00
Elsie Keep On (78670), E. E. Axline, Oak Grove, Mo.	350.00
Como Keep On 267852, W. J. Honeyman, Madison	360.00
Perfect Daisy (83787), N. E. Copeland, Waterville, Kans.	150.00
White Ear, J. W. Myers, Galva	145.00
E. L.'s Dewdrop (103539), E. E. Darnell, Armstrong, Ill.	250.00
Graceful E. L. 293604, Hanson, Black & Gaffey, Holbrook, Iowa	220.00
Lady U. S. 4th 103534, Frank Strebel, Alton	150.00
Shine On and On, Oscar F. Olson, Brookville	152.00
On's Rosalee (95864), Jno. Oss, Auburn, Ill.	150.00

Queen of Hearts (93836), Tom Collins	452.50
Diana, J. A. Fathergill, Hackberry, Okla.	87.50
Miss Meddler 265818, Jno. Bolin, Leavenworth	200.00
Queen of Sheba, E. L. Jamison, Oneda, Ill.	172.50
Beauty U. S. 3d (103343), A. J. Hinckley, Milo	145.00
Dolly (88354), D. L. Gossett, Fairfield, Iowa	205.00
Style and Finish, J. T. Louch	102.50
Chief's Daughter (103342), Tom Collins	220.00
Juanita 2d, F. M. Lall, Marshall, Mo.	165.00
Sallie 2d, Leon Calhoun	95.00
She's A Honey, Thos. Hunt	200.00
Rosaline (85010), W. D. McFarland, Chase	150.00
Dawley's Dream, Grant Crawford, Lincoln	105.00
Perfect Sunshine (85990), J. W. Myers	52.50
Mistletoe (85997), F. C. Herrick, Osborne	70.00
Marigold (96633), Jno. L. Clark, Bolivar, Mo.	100.00
G's Lady (91743), A. J. Hinckley	67.50
No. 51, M. W. Adamson, Lincoln	50.00
Pearl Perfection 1st 280722, Hebbard & Roy	170.00

Van Patten's Sale a History-Maker.

At Gilbert Van Patten's Duroc-Jersey sale at Sutton, Neb., last Thursday, the world's record was broken on high prices, Rosebud Lady 72130 selling for the sum of \$1,575, the highest price ever paid for a Duroc sow. A large crowd of breeders was present, and when Rosebud Lady was driven into the ring there was great excitement, for her three daughters that preceded her had just sold for the agreeable sum of \$1,145. Rosebud was started at \$300 with several in the game, but as she approached the \$1,000 mark every one dropped out but H. G. Warren, of Lebanon, Neb. From \$1,000 she slowly climbed to \$1,200, but after she reached this mark she went by leaps and bounds, quickly selling for \$1,575. Great excitement prevailed when she was finally knocked down to Mr. Warren, who is a new breeder, but who has already established a reputation as a breeder. This is one of the greatest Duroc sales ever held in the West. Every breeder was there for business and there was no hot air, but each one vied with the other to get the best. The following is a complete list of buyers:

Rosebud Lady, H. G. Warren, Inland, Neb.	\$1,575.00
Model C, Geo. C. Blessing, Homer, Neb.	505.00
Model B, E. E. Greer, Cambridge, Neb.	325.00
Model A, W. H. Taylor, Lincoln, Neb.	315.00
Red Bud 1, Frank Aldritt, Friend, Neb.	200.00
No. 5, M. B. Williams, Winona, Kans.	155.00
No. 7, Peter Jacoby, Aurora, Neb.	160.00
No. 8, W. F. Waldo, Dewitt, Kans.	100.00
No. 9, O. W. Simerly, Parsons, Kans.	100.00
No. 10, A. P. Bodwell, Lebanon, Neb.	95.00
No. 11, Mrs. C. Van Patten, Sutton, Neb.	140.00
No. 12, A. W. Ashberg, Auden, Neb.	105.00
No. 13, J. Stroh, Dewitt, Neb.	110.00
No. 14, E. Burkhardt, Fairbury, Neb.	80.00
No. 15, O. G. Smith & Son, Kearney, Neb.	100.00
No. 16, Mat Mason, Sutton, Neb.	80.00
No. 17, E. E. Greer	110.00
No. 18, W. M. Putman, Tecumseh, Neb.	150.00
No. 19, Peter Jacoby	180.00
No. 20, Peter Jacoby	110.00
No. 21, Will Jewett, Dewitt, Neb.	85.00
No. 22, Frank Aldritt	62.50
No. 23, Peter Jacoby	102.50
No. 24, F. A. Hamm, Saronville, Neb.	70.00
No. 25, G. Johnson, Sutton, Neb.	51.00
No. 26, R. F. Miner, Tecumseh, Neb.	100.00
No. 27, O. W. Simerly	95.00
No. 28, J. C. Webber, Friend, Neb.	40.00
No. 30, Peter Jacoby	47.50
Thirty head brought \$5,353.50, average per head of \$184.60.	

Arnold's Valentine Pig Sale.

L. D. Arnold, owner of the Quality Herd of Poland-Chinas, Abilene, Kans., held a Valentine sale of bred sows at the fair grounds, Abilene, Kans., February 14. It was his first public sale offering and was one of the snappiest and most successful sales of the season, and is certainly a very encouraging start for the first auction sale from this herd. Thirty-eight sows and young gilts sold for \$2,062, an average of \$54.26. The top price of the sale was for Lady Oakwood, sired by Meddler, that sold for \$210 to W. H. Howe, Milo, Kans. No. 1, Juanita Girl by Grand Chief, sold for \$150 to Oscar F. Olson, Brookville, Kans.	
2, Frank A. Dawley, Waldo, Kans.	\$50.00
3, Oscar Olson	50.00
5, W. H. Howe, Milo, Kans.	45.00
6, Edd Rice, Vine Creek	45.00
7, Leon Calhoun, Potter	52.50
8, W. P. Hammond, Portis	50.00
9, J. E. Bowsher, Abilene	82.50
10, Markam Bros., Council Grove	40.00
11, W. H. Howe	75.00
12, J. N. Burton, Abilene	60.00
13, W. H. Howe	55.00
14, R. P. Arnold, Oak Hill	51.00
15, R. P. Arnold	50.00
16, Dr. Conklin, Abilene	50.00
17, J. E. Bowsher	50.00
18, Clem Bell, Abilene	105.00
20, Col. W. C. Curphey, Abilene	55.00
21, Col. W. C. Curphey	50.00
22, Dr. Conklin	40.00
23, Clem Bell	47.00
24, F. F. Herrick, Osborne	37.50
25, Dr. Conklin	55.00
26, E. F. Gambler, Abilene	55.00
27, C. W. Dingman, Clay Center	40.00
28, J. E. Reed, Abilene	47.00
29, J. E. Reed	40.00



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Recommended by Veterinary Editors.

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Disinfectant

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For Cattle, Horses, Hogs, Sheep, and Poultry

We honestly believe Zenoleum is the best general live stock remedy for lice and vermin on all animals and a positive disinfectant and cure for skin troubles and internal parasites in hogs and sheep.

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AT ALL DEALERS—Small size, 25 cents; Quart, 50 cents; Half gallon, 90 cents; One gallon, \$1.50; Five gallons, \$6.25—or we will deliver one gallon or more, charges paid, to your station. **ASK YOUR DEALER FIRST.**

ZENOLEUM VETERINARY ADVISER
64 pages of interesting matter for farmers and stockmen—written by authorities at Agricultural Colleges—positively free for a postal card.—Ask now. We'll send it.



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31, Dr. Conklin	37.50
32, J. B. Reed	35.00
33, Geo. Armstrong, Abilene	39.00
34, J. M. Baler, Elmo	45.00
35, L. W. McGinnis, Talmage	30.00
36, J. B. Wilson, Abilene	33.00
37, J. B. Morley, Longford	21.00
38, J. B. Morley	32.00
39, J. B. Morley	26.00
40, Dr. Wilson, Abilene	33.00
42, Dr. Conklin	33.00

Geo. Briggs & Son's Great Duroc-Jersey Sale.

One of the greatest sales ever held in Nebraska, and the most successful one to the credit of the above gentlemen, was held at Clay Center last Friday. It was strictly a breeders' sale, and everything that was sold went to the most representative herds in the country. The top of the sale was Garnett 112872, the beautiful 3-year-old sow sired by Morton Prince and the granddaughter of Higgin's Model, who sold for \$600, going to H. G. Ward, of Inland, Neb., who had topped Gilbert Van Patten's sale the day before at \$1,575. The next highest priced animal was a daughter of Higgin's Model, a March 23 gilt, who was bid in by A. W. Iseburg, of Ong, Neb., at \$510. Mr. Briggs' offering was in the pink of condition, and it was undoubtedly the strongest lot of individuals ever driven into the sale-ring, and the breeders appreciated it by bidding with a vim that is seldom seen in public sales. After the catalogued stuff had all been sold, 12 head were driven into the ring and sold at an average of \$68.80. The following is a complete list of the buyers and the prices paid:

H. G. Ward, Inland, Neb.	\$600.00
E. E. Simerly, Parsons, Kans.	135.00
O. G. Smith & Son, Kearney, Neb.	260.00
Wm. Taylor, College View, Neb.	160.00
A. W. Iseburg, Ong, Neb.	510.00
Peter Jacoby, Aurora, Neb.	165.00
W. L. Eddy, Cornell, Mo.	100.00
A. P. Bodwell, Lebanon, Neb.	165.00
E. E. Greer & Son, Cambridge, Neb.	145.00
H. Warnerman, Ohioola, Neb.	70.00
O. G. Smith & Son	60.00
E. F. Lant, Parsons, Kans.	125.00
Harry Ticker, Inland, Neb.	300.00
Geo. Richards, Kearney, Neb.	80.00
Hopkins & Scandrett, Holdridge, Neb.	170.00
W. L. Eddy	135.00
Cuba Bros., Schuyler, Neb.	80.00
R. F. Minor, Tecumseh, Neb.	95.00
A. P. Bodwell	60.00
Ward Bros., Republic, Kans.	110.00
Chas. Van Patten, Sutton, Neb.	175.00
Peter Jacoby	175.00
Jno. Showalter, Cook, Neb.	175.00
Cuba Bros.	150.00
D. W. Rockefeller, Lowe, Neb.	80.00
O. G. Smith & Son	120.00
Cuba Bros.	65.00
No name	52.50
W. H. Taylor, Lincoln, Neb.	130.00
Total, 29 head, \$4,592.50. Average, \$158.30.	

Great Sale of Guthrie Ranch Berkshires.

On March 6, 1907, at Strong City, Kans., will be held one of the greatest Berkshire bred-sow sales ever held in the West. At this time and place T. F. Guthrie, of Saffordville, Kans., will sell forty head of proven sows and gilts. This offering will be one of the best ever made in this part of the country and should attract buyers from a long distance. At the head of Mr. Guthrie's herd is the great boar, Revelation, by Berrington Duke, a litter brother to Masterpiece. His grand sire was the undefeated Black Robinhood, and his grandam was the undefeated sow, Prosperity. He is a half brother to Ivanhoe, the grand champion Berkshire boar at the American Royal 1906. He is a boar of magnificent scale and quality, and will weigh in show condition 1,000 pounds. He is very long and deep with great bulging hams, has a splendid back and loins, perfect under line, fine head and ears, very heavy bone, and stands up on his toes like a pig. He is a won-

derful breeder and transmits his perfect qualities to all of his get.

Twenty of the gilts in this sale are by this famous boar, and are bred to General Premier 2d, litter brother to General Premier, first prize winner at the American Royal in 1906, and to Len A'Dale, half brother to Ivanhoe and Richard Masterpiece, one of the best breeding sons of the great Masterpiece.

Ivanhoe Jr., as his name implies, is a perfect image of Ivanhoe, from nose to heavy ham.

Some of the special attractions of this sale will be a daughter of Black Robinhood, bred to Revelation, 2 sow bred to Speculation, sire of the \$3,000 Lord Bacon, two to the great Masterpiece, one to Sensation, grand champion at the Illinois State Fair, 1906, one Lord Robbin, grand champion Longfellow State Fair, one to Premier Longfellow grand champion at World's Fair, and ten proven sows to Revelation.

The individuality and breeding of Guthrie's offering is as good as there is in the country. His sows are large, roomy kind with lots of quality the kind that farrow fancy litters and raise them. His gilts are strictly sow animals. They are well grown, very heavy bone and lots of quality and finish. THE KANSAS FARMER representative has carefully inspected Guthrie's herd and it is all that it is represented.

No breeder of Berkshires can afford to miss this sale. Write for catalogue and plan to attend, or send bids to K. Lewis, KANSAS FARMER fieldman.

Truman's Importation of Shires.

Mr. J. G. Truman, manager of Truman's Pioneer Stud Farm at Bushnell, Ill., and one of the best judges of horse flesh in the United States, writes THE KANSAS FARMER as follows:

"I am very pleased to report the arrival of our third importation of this season on Monday night. After looking them all over, I have no hesitancy in saying that they are, taken them all round, the best lot of Shire stallions we have ever imported. Every horse is a show horse. In age they run from rising 3 to 5 years of extra good colors, with very heavy clean, flinty bone and feathers of the right kind, and together with the stallions we have on hand, makes us far the most select and largest stud of imported Shire stallions to-day in the United States.

"These horses we are offering greatly reduced prices in order to make them as we have another importation about ready to leave England and have got to have the room. It will be your readers that are contemplating purchasing a stallion to come and see our horses before they buy."

Teagarden's Durocs Sell Well.

The annual sale from the Pleasant View Herd of Duroc-Jersey pigs, owned by T. P. Teagarden, Wayne, public County, Kansas, was held on 12th instant, and forty-two head of sows and gilts sold for the neat sum of \$1,409, an average of \$33.55.

Notwithstanding the fearful conditions of the roads, there was a fair crowd of farmers present, and under the circumstances the average was fair and entirely satisfactory to all concerned. The top price was \$50 for No. 6 and lowest price \$25 shows that it was very even lot of pigs.

The complete list of buyers is as follows:
Ed Smith, Agenda, \$32.50; L. F. Belleville, \$38; Jos. Stenger, \$41; Wm. Lawrence, \$45; A. Chapman, Wayne, \$50; Samuelson, \$46; J. W. Shoemaker, \$37; Thos. Frint, Belleville, \$35.50; \$30; G. W. Hubbard, Belleville, \$30; Ed Smith, \$30; H. C. Nesmith, \$40; L. F. Cary, \$39, \$42.50; Swanson, Scandia, \$36; A. S. Orr, \$29; G. W. Hubbard, \$36.50; Stenger, \$22.50; I. L. Feasel,

A Satisfactory Deal.

EDITOR KANSAS FARMER:—Some time ago I wrote you asking for the address of some good reliable firm that I could ship my wheat to and you gave me the address of the National Grain and Elevator Company, of Kansas City, Mo. I wish to thank you for the same.

I have shipped two cars of wheat to this firm and expect to ship another soon. The car that I have received full returns on, netted me 3 cents more on the bushel than any of the local buyers here would pay me for the best wagon-load in the car.

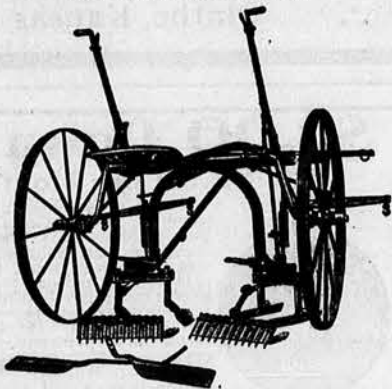
I balanced the scales and weighed the wheat and knew the weights were all right. I figure the 3 cents netted me on my own weights and the highest price paid for the best wheat from the time I loaded the car till I got full returns for the car, and part of this time wheat was still 4 cents lower than above price. I consider it worth from 10 to 20 bushels of wheat to the car to weigh your own wheat, and there is a good deal of sleight-of-hand and other tricks in this testing business. There is wheat that tests 62 pounds that sells here for no more than wheat that tests but 59 pounds, but if it does not test 59 strong, you must take less or haul it back home. The buyer does the testing act.

I sold 1800 bushels of badly damaged and bin-burned wheat to one of the dealers here for 40 cents per bushel. This wheat tested 52 to 56 pounds. The man that bought it told me that he could not let a stream larger than his finger run at a time into the good wheat without it being detected. So you see that he was making the farmer that raised wheat that tested better than 59 pounds pay him 15 cents per bushel for the wheat he bought of me for 40 cents and then 3 cents per bushel for the whole lot less than the National Grain and Elevator Company paid me for the same kind of wheat the farmer sold, and then I paid commission of 1 cent per bushel.

C. W. PHILLIPS.

Kiowa County.

The Improved "Tower."



The above illustration shows the improved Tower Surface Cultivator. Although it has done grand work for the past quarter century in increasing the yield of corn, cotton, potatoes, tobacco, garden truck, etc., the manufacturers have added several improvements to these machines for 1907. First, is a harrow attachment to be used when desired. Second, on the standard for holding knives they have added stops so that a knife can not be set too flat nor be turned over by an obstruction. Their machines for the plantation, the farm, or the garden are described in the illustrated advertisement appearing in our columns. They not only kill weeds in wet weather, but preserve moisture in dry spells, increase the yield over that obtained with deep cultivation, and induce the crops to ripen earlier.

How to Grow a Bumper Corn-Crop.

Manufacturers of corn-planters and cultivators have been doing their utmost now for several years to help corn-growers solve the question of cutting down the cost of growing corn, and at the same time increase the yield. But the most important factor in making a big yield has been the hardest thing to overcome. No matter what condition your corn land may be in, no matter what implements you use to plant and cultivate the crop, unless you get a uniform stand over your entire field, it will be impossible to make the yield. The machine which will enable the corn-grower to sort his seed so that the crop will be even and uniform, will be the greatest money-maker on the farm. Three kernels of uniform size, placed in a hill, will grow evenly and produce good ears on each stalk. When unsorted seed is used, you are likely to get one strong kernel and one or two inferior ones in each hill. This results in the big, strong

kernel growing away from the others. Then you have one nice ear and two bunnies.

Every corn-grower is paying more attention each year to increasing his corn yield. He is trying if possible to have two stalks of corn grow where one grew before, or three stalks grow where two grew before, or to get all the land is capable of producing. How to do this has been the great question. We have been searching for more information along this line to give to our readers. The great problem has been solved to our entire satisfaction. We have found a machine that will give the corn-grower the result he has been striving to obtain for years. No corn-planter ever has or ever will be made that will drop all sizes of kernels uniformly in the hill. There is no use trying to get a perfect stand unless seed is sorted; it can not be done. The Monarch Self Feeder Co., Cedar Falls, Iowa, are manufacturing a corn-sorter that will sort corn so the planter must drop the required number of kernels every time. The name of this wonderful machine is "Morecorn." The writer has visited the factory, tested the "Morecorn," and found it would sort corn more accurately than it is possible to do by hand picking kernel by kernel. The "Morecorn" is even more than the manufacturer has claimed for it. The machine is well built; simple and should last a lifetime if cared for. A child can operate it. It is ready to do the work just as it is shipped from the factory. No adjusting to be done on the farm. It is a wonderful machine, and we are gratified, indeed, to be able to present and recommend a machine like this to our readers.

We suggest that every corn-grower who reads this issue will write The Monarch Self Feeder Co., Cedar Falls, Iowa, at once for its catalogue of this machine. It is our aim in writing this article to assist every corn-grower in getting a better stand of corn in 1907 than he has ever had before. We are satisfied he can get it if he uses the "Morecorn" Corn Sorter, and will thank THE KANSAS FARMER later on for giving him this information.

146 Bushels Per Acre.

Professor Holden says he took seed corn from the corn-planter boxes of 100 farmers in 100 different fields near the State Agricultural College at Ames, Iowa, two years ago. All were planted on the experimental grounds of the college and all had the same cultivation and were grown under identical conditions. The difference in yield was a surprise to all. Some made a yield of less than 20 bushels per acre, while other sorts made almost 100 bushels, thus proving beyond doubt the superior value of good seed and good varieties. We don't understand just why farmers plant scrub corn when they can get such varieties as "Diamond Joe's Big White" that made a yield of 146 bushels per acre last year in an experimental test. We want every reader of this paper to grow the most bushels and the best corn, and would advise all who are interested in the crops they grow to send at once for the great book on corn and corn-growing just issued by Ratekin's Seed House, of Shenandoah, Iowa. It will be sent free if you mention this paper.

Hildreth's Yellow Dent Corn.

C. E. Hildreth, of Altamont, Labette County, Kansas, is the originator of a purely Kansas variety of corn. With it he won first and second prize four consecutive years at Labette County Farmers' Institute; also in acre yield won first prize, making 93 bushels and 50 pounds from one acre. Won six first prizes at Topeka and Hutchinson State Fairs in 1905 and 1906. At Kansas Corn-Breeders' Contest in January, 1906, won second prize on 10-acre exhibit and first prize for most productive acre, yielding 103 bushels. At the Boys' State Contest, January 1, 1907, won three prizes, including the first. (The only yellow corn that won a prize in Boys' Contest.) At State Corn-Breeders' Contest, Manhattan, January 1 and 2, 1907, won first prize in 10-acre exhibit and first prize in sweepstakes, also prize in acre yield contest, making 103 bushels per acre. Easily ranked first as the best-producing variety, giving an average yield from two plots of eighty-nine bushels per acre.—Kansas Agricultural Bulletin No. 124. Note the advertisement.

Free Sample of Congo.

Don't take whatever roofing the nearest dealer "works off" on you. Investigate carefully and save yourself trouble for many years. Write for a sample of Congo Roofing—the manufacturers will send one free. See how strong it is, how well made, how good and durable its materials are. It is called "The Neverleak Roof"—a daring name, but it earns it and justifies its reputation for staying tight. Write for that sample before the offer is withdrawn. Address the Buchanan-Foster Co., Chestnut St., Philadelphia, Pa.

The Farm Gasoline Engine.

The success which has attended the operations of the Witte Iron Works, of Kansas City, Mo., in their efforts to produce the best gas and gasoline engines for all purposes is remarkable. Not only have they succeeded in producing an engine that is at once simple in construction, easy of manipulation, and powerful in action, but they have kept their eyes especially on the farmers' needs and have produced a type of gasoline engine that is specially suited to his uses. This engine may be had in any horsepower and at a very moderate price for its quality. Cheaper engines may be had, perhaps, but they are only tolerably good. The Witte is a good engine, and besides, a tolerably good gasoline engine is like a tolerably good egg. The Witte Iron Works have just issued a handsome calendar which will be sent you free on request. They will also tell you all about these gasoline engines if you will ask them.

Apples Pay

\$500 to \$700 Per Acre.

Grapes Pay

\$500 Per Acre Per Year.

In the "early fruit belt" of the State of Washington fruits and berries pay these immense profit. Climate most healthful in the United States; so mild that, year around, existence is a delight.

A land of fruits, flowers and almost perpetually green clover and alfalfa fields.

Great hydraulic power plant building for electricity, for heat, light, power, electric railways and irrigation.

32,000 acres irrigated lands for sale on great Columbia River. "It's the climate and soil." Come to glorious, prosperous Washington.

Our "Question and Answer" circular letter tells all about it; sent free.

Hanford Irrigation & Power Company

E. C. HANFORD, Manager.

Dept. 12, Seattle National Bank Bldg.

SEATTLE, WASHINGTON

(Ten acres enough)

Profitable Stock Feeding

By H. R. SMITH, of the Nebraska Experiment Station,

Is a Winner

A second and larger edition has just been printed. It has been adopted as a textbook in the Agricultural colleges of Twenty States. As a compendium of facts for the farmer it is universally pronounced to be the best book of the kind ever printed. It is more fascinating than a novel to all interested in the feeding and judging of live stock. It contains more than 400 pages of clear cut information concerning the feeding of Cattle, Horses, Hogs, Sheep and Poultry. The parts devoted to judging animals are profusely illustrated. Bound in Vellum de Lux; printed on the best grade of paper.

Price, Postage Paid - - - \$1.50.

In order that this book may have a wide distribution The Kansas Farmer Company makes the following special offer, good until January 1, 1907:

Profitable Stock Feeding - - - \$1.50
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Agriculture

Grass for Land That Overflows.

I wish to sow land that overflows to grass in the spring. The land dries quickly. It has a porous subsoil and will grow large crops of corn, but cropping it to corn causes washing in places, and to hold the fertility I wish to seed it to grass. What is a proper mixture? It is for pasture only.

Cowley County. U. S. ALEXANDER.

I would recommend to sow a combination of English blue-grass, Bromus inermis, orchard-grass, and Alsike clover, say about 10 pounds each of the grasses with two or three pounds of the clover-seed per acre. Sow early next spring, preparing the seed-bed by disking and harrowing in preference to plowing, provided the ground is not too weedy. If you think it necessary to plow, plow early and rather shallow, working the well in order to pulverize and settle it previous to sowing the grass-seed. If your purpose is to turn this land into permanent pasture, it might be well to include a little Kentucky blue-grass with the other grasses named, sowing about two pounds less of each of the other grasses with six or eight pounds of the Kentucky blue-grass, and the amount of white clover named above.

A. M. TEN EYCK.

Seed-Corn Question.

I was told by a seed-corn man that to tip the ears and not plant the tips will shorten the ears in succeeding crops. Is there anything in the statement?

J. P. BRANDT.

Sumner County.

It is the practise of all corn-breeders to discard the kernels from the tip and butt of the ear, which are irregular in size and shape, for the purpose of securing uniform kernels for planting. All the experiment station men, so far as I know, who are breeding corn follow the same practise. For the last four years we have discarded tip and butt kernels, and I am sure that our corn is steadily improving in type, quality, and yield, and I have not observed any decrease in the length of ears. In my judgment there is nothing in the theory advanced by some farmers that discarding the tip kernels will influence the length of ears of corn in the crop grown from such seed. In any case if it were true that taking off the tip kernels caused the ears to become shorter, it might be a good thing to practise in Kansas, since the tendency in many localities is to grow too long ears of corn at the expense of depth of grain. We are breeding to-day for an ear of medium length and medium circumference with deep kernel and a rather large cob. Too long ears are apt to be comparatively small in circumference with short kernels, low percentage of corn in the ear, and a comparatively less yield of shelled corn per acre than may be secured from ears of medium length, larger in circumference, and with deeper kernels.

By carefully reading our bulletin No. 9, you will learn our latest views on this subject.

A. M. TEN EYCK.

Manure for a Winter-Wheat Dressing.

We have fresh horse manure and "washed-off" ground that is in wheat; do we have more of the same kind of ground which we want to put to corn. Would it be best to spread the manure over the wheat now while the ground is frozen or plow it under in the spring for corn? I mean, by "washed-off" ground, that the surface soil was washed during the flood.

ROBERT THOMPSON.

Pottawatomie County.

Last winter we applied a surface dressing of about 20 loads of manure per acre on a piece of winter wheat with very good results. The manured wheat yielded 39 bushels per acre, while the check plot which was not manured yielded 30 bushels per acre. I believe there is no doubt but that a surface dressing of manure on wheat as you describe would greatly improve the crop. I would advise not to apply too heavy a dressing; ten or twelve loads per acre would be better

than twenty. Take care to spread the manure evenly. Do not leave it in large chunks or piles. It might be a good plan to run a harrow over the field early next spring, although this is usually not necessary provided care is taken in spreading the manure. When the ground is frozen a manure-spreader does very nice work in surface-dressing wheat in this way.

Again, a light dressing of manure applied during the winter or early in the spring and plowed under will, without doubt, increase the yield of grain on the land which you describe. Care should be taken not to apply too heavy a dressing, and to plow as early in the spring as possible in order that the soil may become settled and the manure partially decayed before planting time. If the manure is coarse and strawy, there might be some objection to plowing it under for corn. However, a light dressing of coarse manure plowed under could do no harm and might give some increase in crop.

The soil which you describe is evidently deficient in humus and the manure is just what is needed to put the land in better physical condition as well as to supply more available plant-food for the use of the crops.

I have mailed you copies of circulars 2, 3, and 5, which give some information regarding the maintaining of the soil fertility by the use of manure and fertilizers and by rotation of crops.

A. M. TEN EYCK.

Grass for Pasture.

I notice in the catalogue of Barteldes Seed House, Lawrence, Kans., page 65, your recommendation for farmers to sow Hungarian Brome-grass, the same also to be mixed with orchard-grass and English blue-grass.

I have a blue-grass pasture on my farm, which is completely run out; I have no prairie pasture, and the tenant on the farm wants me to assist him in getting pasture started. I have had no experience myself in farming and as I do not listen to all the advice of the neighborhood, I have taken the liberty of asking you for advice as to which is the proper way to get a pasture started. What kinds of grasses have proven, in your judgment, to be the most successful in this section of the State? Would it not be a good idea to sow a mixture? The pasture formerly was Kentucky blue-grass and very likely has been over-pastured, which seems to be a prevailing evil here, and I am at a loss how to advise the tenant, or what kind of seed to get for him.

I would also like to know whether the soil should be plowed early in the spring, harrowed, and then the grass-seed sown, and harrowed again, or would it be best to disk the land, re-disk it again, and harrow it and then sow a mixture of grasses. What kind of a mixture would you recommend to bring the quickest results in the event of a drouthy season?

I have been unable to secure any literature that treats on pastures; that instructs directly on this subject for this section of the country. I find quite a number of pamphlets from Washington that give information on clover and alfalfa, and I have Secretary Coburn's volume on alfalfa, but there is no pamphlet that gives positive instructions as to how to start pasture where the prairie grass has died out.

I would like to start a pasture without experimenting with any new seeds which have not proven a success in this part of the State.

I have red clover and timothy-seed here, for about 35 acres, but am informed by many of the leading farmers that it will be quite difficult for me to start clover and timothy. I feel discouraged as I paid a very fancy price at the seed-house for the red-clover seed. Could you suggest anything that will make a more certain start, provided we have a favorable season? I have already read the pamphlet of yours, which you were kind enough to send me, regarding commercial fertilizers, and am at a loss to know what to do in order to get my alfalfa started, as barnyard manure is a scarce article on my half-section of land, because the tenant has simply pirated the land and does not keep any

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Every farmer can afford a Galloway Wagon-Box Spreader.

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My guarantee is the broadest possible—I back it up to show you that I mean business by a \$25,000 legal bond.

Then to absolutely convince you I say, "try one of my spreaders for 30 days on my free

plan." Let me send you one to take out in the field to use, or abuse if you want to, for 30 days. If it's not worth more than my price—take it to the depot—ship it back—and I'll return your money.

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partly or entirely pay for his machine without a bit of work done. It's a strictly business proposition and will positively hold good only for the first few farmers buying. Either send in your check pinned to this ad, telling me the style of truck you use, or write me at once, postal or letter, so I can send you by return mail my free booklet. Address me personally.

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stock. I presume it will take me several years before I can get this farm into proper shape.

Marshall County. CHAS. F. PUSCH.

If you wish to continue the blue-grass pasture as a permanent pasture, I would advise to reseed to Kentucky blue-grass and white clover, including also a little red clover. Perhaps the best plan for you to pursue in reseeding this pasture is to disk and harrow early in the spring, seeding about ten pounds of the Kentucky blue-grass with two or three pounds of white clover and three or four pounds of red clover per acre. I would advise to double disk, crossing the second time, then sow the seed and harrow a couple of times to level the ground and cover the seed. In order to insure a catch of grass and clover it may be necessary to keep the cattle off this pasture at least a part of the season and perhaps the whole of the first season after seeding. At least I would not advise to pasture until the latter part of the summer or early fall, and then the young grass and clover should not be pastured closely, the cattle being taken off early in the fall so that the grass may make a good growth before the winter sets in.

If the land is weedy and a great growth of weeds start, these should be cut at intervals, once or twice during the summer. Possibly it would not be a bad plan to allow the cattle to run on this field some early in the season soon after seeding in order to firm the soil and give the seed better conditions for sprouting. If it seems necessary, I would prefer to roll the land in preference to depending on the stock to firm it by tramping. However, it may not be necessary to use a roller. Perhaps the disk will put the ground in good condition. The soil should not be left too loose and open. It would help to get the grass started if you could manure this pasture-land during the winter. However, if it is not possible for you to secure manure, it may be a good plan for you to apply commercial fertilizers when you seed in the spring if you want to go to the expense. Some of the slaughter-house fertilizers, which are rich in nitrogen and phosphoric acid, should be preferred to the mineral fertilizers.

A combination of Bromus inermis, orchard-grass, English blue-grass, and red clover would make a pasture quicker and produce a larger amount of pasture the first three or four seasons than Kentucky blue-grass, although it would not be easy to start these grasses on sod land. The combination of grasses named above should not be considered so valuable for permanent pasture as Kentucky blue-grass. Rather they are to be used in rotation with other crops or under those conditions when the land is seeded to grass only for a period of four or five seasons before it is again broken and planted with corn and other grain-crops.

It is often advisable to sow a small amount of these grasses with the Kentucky blue-grass, and in this way secure an abundance of pasture the first and second season. This is not advisable, however, in the present case, since the domestic grasses will not start well on sod land and the old grass will revive, furnishing an abundance of pasture the second year after reseeding. Bear in mind, however, that it is particularly necessary to give this land a rest from pasturing for a year in order to renew the growth of the grass and again make it a productive pasture.

Your plan to plow and prepare a seed-bed would not be advisable, provided you wished to reseed the same year that the plowing is done. Better disk and harrow as I have described above. However, if you would break up this land and farm it for a year or several years with corn and other crops, you could more readily seed it down to the combination of domestic grasses named above, including some of the Kentucky blue-grass and white clover in order that, eventually, the pasture might become set with the blue-grass and clover and thus become permanent.

I would advise that you sow some annual crop to supply pasture next season. For early pasturing, barley or

oats may be considered a good crop, seeded early in the spring. Later, use sorghum, Kafir-corn, corn, corn and cow-peas, and rape. At this station we have found that a combination of corn and cow-peas furnish excellent pasture, which is preferred, by cattle, to Kafir-corn or sorghum. The later seedings of the second group of crops named would furnish fall pasture. For a full description of pasture grasses and how to start and renew pastures, I refer you to Professor Shaw's book on "Grasses," published by the Webb Publishing Co., St. Paul, Minn. I refer you also to another excellent book on "Grasses" by Prof. Wm. J. Spillman, published by the Orange-Judd Co., New York. We have no bulletin bearing directly upon this subject.

Your timothy and red clover would make a better meadow than pasture and would doubtless succeed fairly well on bottom-land or good fertile upland, and seeding the light soil to timothy and red clover and plowing it up in two or three years would greatly benefit the land, although there might not be a great profit in crops. In the Central States it is usual to seed Kentucky blue-grass with timothy and red clover when the purpose is to make permanent pasture, and it could do no harm to include a little timothy-seed with the Kentucky blue-grass in reseeding the pasture in question. You will find timothy no more difficult to start than any of the other grasses. In fact it will doubtless start better than any of the other grasses named. Clover often starts well, but is more apt to be injured by hot, dry weather than other grasses. Clover is safer for pasture than alfalfa, but we are using a combination of alfalfa with Bromus inermis and other grasses for pasture at this station, with good success. The combination of alfalfa with grasses furnishes more feed and makes a more permanent pasture than the grasses alone, while cattle apparently take little injury from grazing upon the alfalfa in combination with the grasses.

You could seed timothy and clover better on older land on a well prepared seed-bed. I have mailed you a copy of bulletin No. 134, under separate cover, which gives information regarding the preparation of the seed-bed for seeding alfalfa. The same principles apply also in seeding clover and grasses.

A. M. TEN EYCK.

Questions About Cow-peas.

Please give the following information and advice in THE KANSAS FARMER regarding cow-peas:

I have a piece of upland soil, sloping a little toward the north, which was in alfalfa about nine years ago, but was pastured so close that it was killed out and has since been sown to oats and came every year for the last six years, for hog pasture. What I want to know is, can I plant this land to cow-peas this spring and get the crop off by the first of September so that I can plow it and prepare it to sow alfalfa next spring? In sowing cow-peas which variety would be the best to raise for fodder? What quantity of seed should be sown per acre, and how should it be sown; broadcast or with a disk drill? How should the cow-peas be cut and cured? If mowed, should they be left in the swath, or put into windrows or bunched with a fork? Can the fodder be put into the barn or must it be stacked? Will it do to feed it to brood-mares? At what stage of maturity will be the best time to cut for hay? Mitchell County. W. H. FLETCHER.

Cow-peas are an excellent crop with which to precede the sowing of alfalfa. It is often difficult to get the crop off early enough in the fall to sow alfalfa the same season the cow-peas are grown, but ample time is given for preparing a good seed-bed the spring following the crop of cow-peas. I would advise to disk the land in the fall after taking off the cow-peas, and the disking may be continued during the late fall and winter if the ground does not freeze. Cultivate again early in the spring, working the ground rather shallow so as not to have too deep and loose a seed-bed.

The Whip-poor-will cow-pea is a

standard and is one of the best varieties for the production of fodder. However, we prefer the New Era cow-pea in general, both for fodder and seed-production. The New Era cow-peas mature a week to ten days earlier than the Whip-poor-will variety, the plants do not vine so much, and if sown in close drills the peas stand up well and may be cut with the mower. The Whip-poor-will cow-peas may also be cut with the mower if sown in close drills.

Planted in close drills for fodder production requires about a bushel of peas per acre. I prefer to sow the peas with a disk drill in drills rather than to sow broadcast and cover with the harrow or disk. In your section of the State it may be advisable to plant the peas in rows and cultivate the crop. This would make a better preparation for seeding alfalfa and you might produce a larger growth of peas by cultivating in rows in preference to broadcasting or sowing in close drills without cultivation after planting. The peas are not so easy to harvest, however, when planted in rows, since the vines will lie close to the ground and can hardly be cut with the mower. At this station we use a bean-harvester to harvest the crop when the peas are planted in rows. This machine has two knives which run into the soil, cutting the peas off just below the surface of the ground.

Cow-peas should be cured for hay very much the same as alfalfa is cured, care being taken to see that the stems are not green when the fodder is stacked. The best plan is to mow in the morning after the dew is off, rake into windrows early in the afternoon, and the same evening or the next forenoon place the fodder in medium small bunches and allow to cure in this way for several days before stacking. If well cured, the fodder may safely be put into the barn. If it is stacked, care should be taken to cover the stacks well since cow-peas will not shed rain so well as alfalfa or other hay. Cow-peas should be cut for hay just as the first pods are beginning to turn yellow.

I know of no reason why well-cured cow-pea hay should not be an excellent feed for brood-mares. Possibly the horses may not relish the hay at first but they will soon get used to it. Cow-pea hay is similar to alfalfa hay in feeding value and contains a high percentage of protein. Of course, it should not be considered as valuable as alfalfa hay, since it is coarser and usually it is very difficult to cut the hay and put it up in prime condition. I have mailed to you a copy of circular No. 8 giving further information regarding culture of cow-peas.

A. M. TEN EYCK.

Information About Testing Soils.

I wrote to the Agricultural Department at Washington for some literature on how to test soils as to their fertility and as to their chemical constituents, and they simply sent me literature on soil survey.

What I want is some knowledge of how to test soils so that I will know what crops the soil is best adapted to growing. If you will give me the information that I need on this subject you will do me a great favor.

McPherson County. C. H. HUBBELL.

The only conclusive test to prove the adaptation of certain crops for certain soils is to grow the crops on such land. In a general way we know that soil of a certain type is better adapted for growing some crops than others. For instance, a light, warm soil is well adapted for growing potatoes, melons, squashes, or early-maturing garden-crops, etc., and heavy clay gumbo land will grow grasses or alfalfa better than cultivated crops. The climatic conditions as well as the soil conditions, have much to do with the successful production of the different kinds of crops. The U. S. Department of Agriculture has been making studies of soils with reference to their typical condition and adaptation for certain crops, such as tobacco, cotton, etc, but such investigations have as yet not been very extensive nor are the results very conclusive. By writing to Prof. Milton Whitney, Chief of the Soil Division, U. S. Department of Agriculture, Wash-



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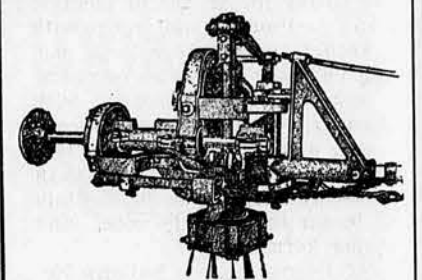
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ington, D. C., you can secure bulletins on this subject.

A good treatise on the various crops grown in this country is "Cereals of America" by Prof. Thomas Hunt, published by the Orange-Judd Publishing Co., New York. Special crops are treated in special publications, such as "Clovers" by Prof. Thomas Shaw, published by the Orange-Judd Co., and "Grasses" by the same author, published by the Webb Publishing Co., St. Paul, Minn. Secretary F. D. Coburn, of the Kansas State Board of Agriculture, is the author of a book on "Alfalfa," published by the Orange-Judd Co.

Other good books which are excellent for study and reference on the question of soils, fertility, and crop-production are: "Chemistry of Plants and Animals" and "Chemistry of Soils and Fertilizers" by Prof. Harry Snyder, published by the MacMillan Company. "Soils" by Prof. F. H. King, published by the MacMillan Company, is an excellent treatise on this subject. "The Fertility of the Land" by Prof. I. P. Roberts, published by the MacMillan Company, is a book full of valuable information and suggestions.

An advanced work on the subject of "Soils" is the book written by Dr. E. Roberts, published by the Macmillan Company. For a general book of reference on all crops, soil, and farm subjects, I refer you to "The Farmers' Cyclopaedia of Agriculture," prepared by Dr. E. W. Wilcox and Prof. C. B. Smith, published by the Orange-Judd Co.

The books named above should be an excellent collection for any farmer's library.

Any of these books may be obtained through THE KANSAS FARMER at publisher's price or a little below. This company conducts this branch of its business at cost so that its readers may have the advantage of the latest and best publications without the vexation of much correspondence with many publishing houses.—THE KANSAS FARMER COMPANY.]

Farmers' Visit to the Newest State.

Oklahoma will be admitted to the Union this year as the newest of the United States. It has had a magical rate of growth, one never equalled in the history of any other State. As recently as 1890 the first census was taken, and a territorial government organized. This wonderful development, and the admission of the State to the Union will call much attention to it during the next few months and a great many people will want to see this new State—about the size of Ohio—of remarkable agricultural increase and possibilities. For this reason the next session of the Farmers' National Congress will be held next October at Oklahoma, a metropolis of the new State, and a place of as remarkable growth as the State itself. The city, though only eighteen years old, has now many miles of modern-built, thoroughly up-to-date stores, factories, and public buildings. President John M. Stahl, of the congress, is already at work on a program of exceptional interest; and the railroads promise very low rates.

This meeting will afford the farmers of the country an opportunity to do some pleasant sight-seeing, to broaden their ideas of the size and possibilities of the Nation, to have a profitable time socially, to increase their pride in their chosen occupation, to hear many instructive speakers, and to exert a helpful influence for agriculture through the resolutions they may adopt. And at a moderate expense. The secretary of the congress is George Mason Whitaker, 1404 Harvard Street, Washington, D. C.

Here and There on the Farm.
CHAS. WINANS, OZAWKIE, KANS.

We didn't say blizzards.

As we breathe on our hands and attack the wood-pile, we escape the coal trust.

Don't forget to urge the parcels post. There is nothing too good for the farmers you know. We might try our new Senator. And while we wait for

How many times during a year would you be willing to pay 5 cents an hour for a reliable power?

A good many times, no doubt. For shredding fodder, grinding feed, sawing wood, husking or shelling corn, churning, pumping water, separating cream, grinding tools, etc. A good many times, indeed, and when you want it you want it without delay.

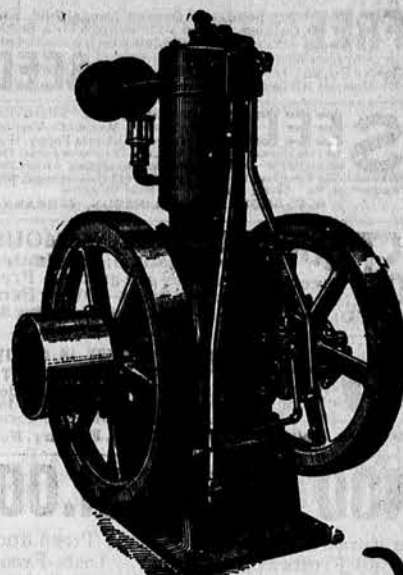
An I. H. C. gasoline engine will furnish such power—a 3-horse engine, for instance, will furnish power equal to that of three horses at a cost of five cents an hour, and it will be always ready when you want it, and ready to work as long and as hard as you wish. You don't have to start a fire—not even strike a match—to start an I. H. C. gasoline engine. All you have to do is close a little

switch, open the fuel valve, give the flywheel a turn or two by hand, and off it goes, working—ready to help in a hundred ways.

Stop and think how many times you could have used such convenient power last week, for instance.

There should be a gasoline engine on every farm. Whether it shall be an I. H. C. or some other engine on your farm is for you to decide, but it will pay you well to learn of the simple construction of I. H. C. gasoline engines before you buy. It will pay you to find out how easily they are operated, how little trouble they give, how economical in the use of fuel, how much power they will furnish, how strong and durable they are.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
(INCORPORATED.)



It will pay you to know these things, and the way to find them out is to call on our local agent or write for catalog. These engines are made in the following styles and sizes:—Horizontal (stationary or portable), 4, 6, 8, 10, 12, 15 and 20 horse power. Vertical, 2 and 3 horse power.

the parcels post, we might fix the roads a little.

There isn't much doing on the farm these days, when the old cow and the hen are taking a vacation.

We had some late corn-fodder, which we fed unshucked to the cows, that was hard to beat as a milk-producing food.

Give the brood-sows plenty of exercise. They won't hurt the pastures now.

Better commence slopping the spring pigs pretty soon. One month before and two after farrowing are the most important in the pig's career.

This is the public sale season and everything sells well. Old harness and farm tools are in extra demand. Stock brings good prices. But few notes are given. Most people pay cash.

Now we build air castles and farm on paper in the most scientific way; after while we get to the real thing and just do the best we can.

Marketable horses are selling at long prices, which is all right for the farmer so long as the good mares are not sacrificed.

A Gopher Exterminator.

EDITOR KANSAS FARMER: I have a field of alfalfa that the gophers are commencing to destroy. Will some that have used Sander's Gopher Exterminator tell me what success they have had with it and the expense and labor it requires? J. F. BACON.
Morris County.

Saving Coal and Wood.

Farmers without an evergreen wind-break ought to start one this coming season. It is a great protection and a saver of heating material. A good way to start one at little cost is to write the Gardner Nursery Company, Osage, Iowa. They are giving away four evergreen seedlings free to all that ask for them. These trees will grow and in a few years surprise their owner with their size and thriftiness.

Eleven Sterling Seed Premiums.

One of the most liberal free-seed offers of the year is made by Northrup, King & Co., Seedsmen, Minneapolis, on page 2 of their new 1907 "Sterling Seeds" catalogue, containing 132 completely illustrated pages. To see how to get 11 packages of vegetable and flower seeds free you need only write a postal card asking for this interesting catalogue on all kinds of seeds, including farm, field, vegetable, and garden seeds, and it will come promptly to you postpaid. Address to-day, Northrup, King & Co., 50 Wilder Street, Minneapolis, Minn. It will interest you to at least become familiar with all of the new varieties cultivated by these reliable seedsmen for 1907.

A Billion Dollar Corn.

Just now while farmers' institutes and corn-judging schools are being held all over the country, we would advise farmers and corn-growers to send for a free copy of the great Corn Book just issued by Ratekin's Seed House, of Shenandoah, Iowa. It tells how to grow the biggest corn and all about Diamond Joe's Big White, a new variety that has broken the world's record. It's a great book and it's free if you mention this paper.

From Factory to Farm NO AGENTS NO MIDDLEMEN

See what it Means.

14-in. Steel Beam Plow, Double Shm	Best that money can build, only	\$8.65
12-in. \$7.95		
16-in. \$9.25		
18-in. \$10.15		
Sulky Plow \$25		
Gang Plow \$30		
1000 other articles		
Free Big Catalog		
Catalogs of Bug-gles, Harness, Steel Ranges,		
Best Walking Cultivator, 4 shovel, \$12.00		
Improved Riding Cultivator, 4 shovel \$18.00		
Best Walking Cultivator, 4 shovel and Earle Claws, \$15.95		
Improved Riding Disc Cultivator, 6 Disc, \$24.95		
Corn Planter, complete, 80 rods wire, \$27.25		

Tell us what you want when you write for catalogue. Address
HAPCOOD PLOW CO., 1127 Front St., ALTON, ILL.
(Only plow factory in the United States selling direct to farmers at wholesale prices.)

SAMPLE CREAM SEPARATORS FREE GIVEN AWAY

Without Money and Without Price, No Deposit, No Note to Sign and Not Even Your Promise to Pay.

We Offer You Owners of Cows

A CREAM SEPARATOR that actually separates the cream from the milk by an automatic process that requires no ice, no chemicals, no labor and no extra machinery.

All realize the reckless extravagance and waste of butter fat, in caring for the cream and milk under the old process of crocks and pans. Besides the money loss of the old process, there is the back-breaking drudgery of washing pans and milk vessels, and the time consumed in this work that can profitably be devoted to other duties. Now the

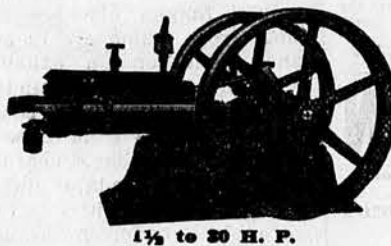
PEOPLES AUTOMATIC CREAM SEPARATOR

will stop this loss of Cream, money and valuable time. ARE YOU KEEPING COWS FOR PROFIT? If they are not paying we can make them pay. If we can increase the quantity of your cream from 15 per cent to 20 per cent over your present yield, that means more dollars for you, doesn't it? DO YOU SELL YOUR CREAM? If we give it to you cool, fresh and sweet directly after it comes from the cow unaffected by chemical action, that means more dollars, doesn't it? DO YOU USE YOUR CREAM FOR DOMESTIC PURPOSES? If we improve the quality of your butter all the year through by giving you a harder, sweeter butter that will not stale or become sour, that means a great deal to you, doesn't it?

It won't cost you a cent to take advantage of the above offer, as we will send one Cream Separator into each community absolutely free without money and without price. No contract to sign or note to be given, not even your promise to pay at this or any other time. WRITE TODAY, AS ONLY ONE PERSON IN EACH COMMUNITY WHERE WE HAVE NO AGENT MAY HAVE THE BENEFIT OF THIS FREE ADVERTISING OFFER. SEND US YOUR NAME AND THE NAME OF YOUR NEAREST FREIGHT OFFICE.

Peoples Supply Co., Dept. B, Kansas City, Mo.

5 Horse-Power \$150.00



1 1/2 to 20 H. P.

Model of simplicity. Works to Perfection. Will last a lifetime. Fully Guaranteed. Order now. Easy terms. Send for catalog of engines, thrashing-machines, and Hay machinery.

Cascaden-Vaughan Company
Waterloo, Iowa

Mention The Kansas Farmer.

FREE Our handsome Garden Annual and Seed Catalog. Send your address on a postal, with name of neighbor who is a seed buyer. For your trouble we'll mail you a packet of Flower Seeds. If you write before March 30th address Cole's Seed Store, Falls, Ia.

SEEDS As good as grown. 5 Pkts. Giant Cyclamen, Mammoth Verbena, Crimson California Poppy, Wonder Primrose and Gorgeous Pink; also 10 varieties Annual Flowers, all for 10c. 5 Pkts. Vervain, 10c. Plants. 6 Rooted; 6 Geraniums, 5c; 6 Begonias, 5c; 6 Pinks, 5c; 6 Chrysanthemums, 5c; 6 Pelargoniums, 5c. Catalog and Free Royal Giant Pansy free. A. C. ANDERSON, COLUMBUS, NEBRASKA.

STARK TREES ARE FAMOUS wherever planted; are planted everywhere trees are grown. Free Catalog of superb fruits—Black Ben, King David, Delicious, etc.—Stark Bros., Louisiana, Mo.

HEALTHY TREES HONEST IN QUALITY WE PAY FREIGHT Grafted apple 4c, budded peach 4c, budded cherry 15c. Concord grapes \$2 per 100. Black Locust \$1 per 1000. Complete colored cat. free. Galbreath Nurseries, Box 22, Fairbury, Neb.

400 STRAWBERRY PLANTS \$1.00 In three choice sorts. Fruit Trees and Small Fruits at Fair Prices. Lists Free. J. F. DAYTON, WAUKON, IA.

TREES THAT GROW Apples 4c, Peach 5c, Plums 15c, Cherries 15c. Best quality, a good bearers, grafted stock, not seedlings. Concord Grapes 2c. Flower and Forest Tree Seedlings \$1.00 per 1,000 up. We pay the freight. **GERMAN NURSERIES & SEED HOUSE** CARL SONDEREGGER, PROP. We have a complete line of Vegetable, Flower and Farm Seeds. Our large illustrated catalog free. **GERMAN NURSERIES**, Box 9, BEATRICE, Neb.

50 BULBS 25 Cents. Will grow in the house out doors. Tulips, Crocus, Fuchsias, Jonquils, Daffodils, Dewey Lily, Tuberoses, Gladioli, Chinese Lily, Begonia, Gloxinia, Lilies of the Valley—all postpaid, 25c. in stamps or coin. As a premium with these Bulbs we will send a free collection of flower seeds—over 200 varieties. **NATIONAL NURSERY**, Dept. Boston, Mass.

LET US FURNISH YOU our very low prices on grafted apple, budded peach, plum and cherry in all sizes; also evergreens, roses and ornamentals of all kinds. Catalogue free. **Gage County Nurseries**, Box A. Beatrice, Neb.

UP All vigorous, healthy, true-to-name. No culls, extra choice for the grade. Thousands are ready to ship at wholesale prices. No poor, brush-heap stuff. High-grade stock only. Save 40 per cent commission. Catalog and premium offer free. **WICHITA NURSERY**, Box 15, Wichita, Kan.

SEED We can supply your seed corn wants with seed particularly adapted to the Southwest—varieties that we have improved and perfected for this locality. We can also furnish your farm and garden seed needs with our tested seeds. Write for seed book and ask for our free Alfalfa Booklet. A postal will bring them. **ROSS BROS. SEED HOUSE**, 314 E. Douglas Ave., Wichita, Kan.

The World's Fair Prize Winning Corn Just WON FIRST PREMIUM at the Corn Breeders' State Show at Manhattan. Highest yield 118 1-16 bu. per acre. A grand lot of the 4 best corn's grown to-day. Sample and Catalog tells how to raise corn every year FREE. **JOHN D. ZILLER**, Hiawatha, Kans. HE RAISES CORN.

RED, RUST PROOF TEXAS OATS, pure red clover, timothy and alfalfa seed, white kafir corn and sweet corn all reclaimed seed and fancy of quality. A grand lot of Barred Rock cockerels; Poland-China males and gilts, the great big kind, an extra growthy lot of fall pigs. John D. Ziller, (he raises corn), Hiawatha, Kans.

Flower Garden Seeds Selected list. Varieties especially suited for attractive yard gardens and cut flowers. Good seeds. Popular prices. Price list free. S. C. Piggott, Dept. D, Quincy, Ill.

SEED CORN Ear or Shelled at Farmers' Prices. Selected, Butted, Graded, Tested. GRAIN, GRASS, VEGETABLE SEEDS J. B. Armstrong & Son, Originators of the Seed Corn Business. Catalog Free. Shenandoah, Iowa.

PLANT JACK PINE On sandy land in Kansas, Nebraska and northward. Jack Pine from Minnesota is most rapid evergreen for profit. As I supplied the very successful Jack Pine for the Government plantation in Holt County, Nebraska, in 1890, I probably know how to pack. I have a million vigorous seedlings. **H. B. AYRES**, Aitken, Minn.

Horticulture

Grafting the Peach.

EDITOR KANSAS FARMER:—Can you, or any of your readers, tell me about grafting the peach on peach-roots, also apricots on peach-roots, and how to do it? D. H. WELCH.

The peach, when grown upon peach-roots, is more often propagated by budding than by grafting. Budding is carried on in July and August upon stock grown upon seed during the season. It can be done rapidly and, under proper conditions, gives better results than any other method of propagation. Grafting, however, frequently gives satisfactory results. The most satisfactory way is to graft in the spring, at the time when the sap is beginning to flow. The stock upon which the graft is made should be of the previous season's growth. Remove the soil to the first roots and cut off the tree an inch above them. This method is known as the cleft graft. Make a sloping cut from the roots at such an angle that it will remove about half the surface of the horizontal cut. With a chisel or sharp blade split the stock at right angles to the cut that has just been made. This cleft should extend about an inch, or down to the roots.

The scions should be cut the previous fall or winter and stored in moist leaves in a cool, dark cellar. This will keep them in a dormant condition till the time for using them. To prepare the scion for grafting, take about eight inches of the terminal growth, making a wedge at the lower end an inch in length. This wedge-shaped part should be thicker on one side than on the other, and it is better to make the cut so as to include a bud near the upper portion of the thicker side of the wedge. Insert the wedge of the scion into the cleft of the stock, with the thick part of the wedge toward the side of the stock in which the bark has not been cut away. See that the cambium or growing part of the scion fits exactly to the cambium of the stock. Push the scion down into the top of the wedge-shaped cut even with the top of the stock. The shape of the wedge is such that the cambiums of the two parts will be held firmly together. Cover the portion with wax and draw the earth over it. The scion soon opens its buds and begins rapid growth. A good grafting wax for outdoor use is made as follows: 4 ounces of resin, 1 ounce of beeswax, half a pint of raw linseed-oil. Melt all together gradually and turn all into a pall of cool water. Pull until the color becomes light, make into rolls, and wrap with strong oiled paper. These rolls can be laid away and used at any time.

The apricot is grafted upon the peach in precisely the same way as has been described for the peach. W. L. HALL.

Old Orchards Need Fertilizers.

E. F. STEPHENS, CRETE, NEB.

In the case of orchards of some age or on thin land we regard the application of fertilizers as very important. Whoever saw a fat calf troubled with vermin? It is the poor, thin, scrawny animal that suffers. Likewise it is our belief that orchard-trees that are properly nourished and in full vigor can endure fungus diseases better than those trees which are in an impoverished condition on exhausted land. With this thought in mind we are at this time hauling 80,000 pounds of stable litter weekly from three and a half to four miles to our orchards. We are applying 400 pounds of stable litter to each tree. If the litter is very coarse, we apply it under the branches along the rows out of the way of cultivation one way. If the manure is fine and can be worked in the ground with a disk, then we prefer to scatter over the entire area.

An experiment conducted along this line some years ago in these same orchards indicates that stable litter applied to bearing orchards was worth \$1 per load the first year and its beneficial effects were apparent for a num-

ber of years. In one orchard and on one variety where we made very heavy applications of stable litter, under bearing trees, we secured an annual yield three years in succession at the rate of 1,500 bushels of apples per acre. This return was secured in one of our closely planted orchards where the apple-trees stood 12½ by 20 feet, giving each tree 250 feet of space or at the rate of 174 trees per acre. This excessive production, however, seemed to weaken the trees and they have not proved to be as long lived as the same variety planted where they had more room and less exhaustive over-bearing.

We are also hauling three hundred loads of straw into our orchards. We use this as a mulch eight feet in width on the row under the branches. We will continue to cultivate the middle of the rows. On side hills liable to wash when under cultivation, cover the entire area, and thus shut off the tendency to loss of surface soil.

Protection Against Plant Diseases and Insects.

PRESS BULLETIN NO. 140, OKLAHOMA EXPERIMENT STATION.

Plant diseases and insects are doing so much damage to the orchards and gardens in Oklahoma that it has become necessary to protect the plants by some artificial means. The method of destroying the diseased and wormy fruit and foliage is of great value if persistently carried out. This can not be done in so thorough a manner, however, as to destroy all the diseases and insects present, and a few left over and those that will come from neighboring farms will produce a dangerous number next year. The cheapest and most practical method of protecting plants from diseases and insects is spraying. The ideal method is to spray thoroughly and then destroy all diseased fruit, leaves, and trash about the orchard and garden. Either method is good when used alone and the value of each is greatly increased when used together.

SPRAYING SOLUTIONS.

Spraying solutions are divided into two general classes. Those designed to prevent the attacks of fungus diseases are called fungicides, and those designed to destroy or prevent the attacks of insects are called insecticides.

FUNGICIDES.

Fungicides protect the plants by preventing the fungus diseases from gaining a foothold on the plants. The solutions are composed of materials that destroy the germinating spores where it comes in contact with them. The copper and sulfur compounds are the most effective materials used in these solutions. Most of the fungus diseases of plants that can be prevented by spraying reproduce by means of two kinds of spores. One kind of spore is produced in the spring and summer and germinates soon after maturity. If the spore finds lodgment on tender growing parts of the plant and a favorable amount of heat and moisture is present, germination and growth immediately follow. If these spores do not soon germinate, they lose their vitality. This process of germination, growth, and fruiting goes on during the spring and summer. Late in the season another kind of spore is produced, which is capable of passing through the winter and germinating the following spring. The germinating spore sends the roots directly into the tissue of the plant, unless it is a surface-growing fungus, in which case the roots spread over the surface of the plant. If the plants are covered with a good fungicide when the spores germinate, the spores will be killed.

INSECTICIDES.

There are two general classes of insecticides. The first class of mixtures contains some poisonous substance that kills the insects when it is eaten with the foliage or fruit on which it is lodged. Paris green, London purple, and white hellebore are the poisonous materials most commonly used in these mixtures. These mixtures are effectual in destroying only those insects that eat the foliage or fruit of the plants, and are harmless to the insects that suck the juice of the plant. The other class of insecticides kills

Great Northern SEEDS are just as good Seeds as money can buy. You will be interested in the many novelties, beautiful, odd flowers, and delicious fruits and uncommon vegetables, all easily grown in your own garden. Flowers, vegetables and grains—all are equally good. The prices are the lowest at which reliable seed can be sold. You cannot afford to buy Seed until you have fully investigated our **Great Seed Offer**. Low prices and high quality our specialty. Liberal packages of free seed with every order. Special prices on purchases of large quantities. None better at any price. Get our **FREE Catalogue—WRITE TODAY.** Great Northern Seed Co., Dept. 11, Rockford, Ill.

50 KINDS SEEDS FOR 10c And Collection Flowering BULBS FREE **FREE SEEDS** Aster, Balsam, Pansy, Sweet Pea, Pink, Cosmos, Verbena, Nasturtium, Cypress Vine, Heliotrope, Mignonette, and 39 other kinds. DIRECTIONS—Write name and address plainly, enclose 10c. coin or stamps, for postage, etc., and you will receive at once 50 varieties best flower seeds and a collection of Flowering Bulbs FREE. Sent postpaid. **GRACE NURSERY**, Dept. E1, DOSTON, MASS.

HARDY CHESTNUT TREE FREE To introduce this tree and gain new friends we offer a 1 yr. tree free to property owners. Mailing expense 5 cts. A postal will bring it and our catalog with 64 colored plates. Write today. **The Gardner Nursery Co.**, Box 740, Osage, Ia.

Square Deal Seed Corn

Hiawatha, Yellow, Dent, Boone Co. White; heavy root system; stalky stalks, broad leaves, short heavy tassels; bred and acclimated on up-land by

H. H. WEBSTER & SONS, Corn Breeders, Burlington, Kansas. Catalogue, samples, prices, free.



SEED CORN—C. E. HILDRETH, Atamont, Kans. Original breeder and grower of Hildreth Yellow Dent corn. First prize at fair and corn shows. First prize each year, 108 bushels, 1905. First prize, acre yield, home county, 108 bushels, 1906.

YIELD COUNTS

The Famous Hildreth Yellow Seed Corn, winner of first premium and sweepstakes at Hutchinson State Fair, and Corn-Breeders' Contest at Manhattan. Our corn won second in yield (108 bushels per acre) and the acre measured was not given any special treatment whatever. We have a large amount of good seed for sale. Write early for price. The Deming Ranch, J. G. Haney, Mgr., Oswego, Kans.

FIELD'S SEED CORN

Sold ear or shelled. All graded, tested, proven—then guaranteed. No better at any price. Test it in your sprouting box. If you don't like it—free it back. You'll get your money back double quick. "Guaranteed-pure" Clover seed. Garden seeds that will really grow. Catalogue and samples free. **HENRY FIELD, SEEDSMAN**, SHENANDOAH, IOWA. BOX 55.

Let Us Help You

Let us help you make your planting a success. Our seed experience of over fifty years enables us to give you expert advice on the raising of various vegetables. This you will find scattered throughout our catalog. You need good seed to start with. We raise and sell only that kind, and guarantee all we sell to be fresh and reliable. Catalogue Free. **J. J. H. GREGORY & SON**, Marblehead, Mass.

GREGORY'S SEED CATALOGUE FOR 1907

GOLDEN NUGGET TOMATO

THIS grand novelty is a real gold nugget in value. Wonderfully prolific; each plant bears 150 to 200 fruits. Rich golden yellow color, delicious flavor and very solid. We are offering:

\$25.00 IN CASH PRIZES

to the persons growing the greatest number of fruits on a single plant. Seed sells at 20 cents a packet, but if you mention this paper, we will send a Prize Competitor's package of 25 seeds for two 2-cent stamps, with privilege of competing for prizes. Large, illustrated catalogue of

Vegetable, Flower and Farm Seeds, FREE. **IOWA SEED CO.**, Des Moines, Iowa.

the insect by coming in contact with the body. Kerosene emulsion, whale oil soap, and pyrethrum powder are the most common materials used in these mixtures. Mixtures of this class are used chiefly to destroy those insects that suck the juice of the plant and can not be destroyed with poisons. The poisonous insecticides may be mixed with fungicides and applied all in one spraying, but other insecticides must be applied separately.

DO NOT HARM PLANTS.

The fungicides and insecticides, if properly prepared and applied, have no effect upon the plants. If the mixtures are not correctly prepared and applied, they do not form the desired protection to the plants and may damage the foliage and fruit. There is never enough poison on the well-sprayed fruits and plants to alter their value for food. Most fruits are pared before eating and all sediment of the spraying material removed. In the case of fruits that are not pared before eating, as grapes, a person would have to eat from 300 to 500 pounds to get a small dose of poison. It will always injure the sale of such fruits, however, if there are any signs of a spraying material on them when placed on the market.

SPRAY PUMPS.

There are several kind of spray pumps on the market that can be purchased for eight to twelve dollars that will do all the work on the average farm. The best form of pump for the ordinary farm orchard is a compact, strong barrel pump. It should have a good-sized air-chamber and be capable of throwing a good quantity of water with great force. The working parts should be made of brass, and if all parts of the pump that come in contact with the liquid are brass the life of the pump will be greatly increased. Agitator attachments can be purchased as a part of the pump or as separate machines. These attachments are very convenient, but are not necessary. The agitation of the liquid may be done by hand with a board.

The pumps should be supplied with about fifteen or twenty feet of one-half or three-quarters inch rubber hose for each nozzle attached. A good length of hose saves a great deal of time and trouble about reaching all parts of the trees and vines.

The nozzle should make a fine spray and be able to throw it several feet. There are two well-defined groups of nozzles now in use. The first group forms the spray by forcing the liquid against an obstruction at the outlet of nozzle. These nozzles throw a fan-shaped spray and most of them can be adjusted to throw a very fine spray or as coarse a spray as may be desired, or even a solid stream. These nozzles are easily opened and cleared of any clogging material that may lodge in them, by adjusting them to throw a solid stream. This form of nozzle is best adapted for general use.

The second group of nozzles gives the liquid a strong rotary motion just before it leaves the nozzle. This causes the liquid to form a funnel-shaped spray. These nozzles form a very fine spray and for applying liquids that are not liable to clog are a very good form.

SPRAY THOROUGHLY.

The spraying must be well done if it is to be of any value. Slipshod work will never pay. It is just so much time and material used and still the plants are not protected. The liquid must be applied in the form of a very fine mist or spray. If the liquid is thrown on the plants in large drops it collects and runs off, but if thrown on in a fine mist the foliage and fruit can be wet on all sides and but little liquid reach the ground. The liquid must be applied from every direction so that all parts of the foliage and young shoots will be wet. If the top of the tree is very dense, the nozzle should be held in the center and the spray thrown in every direction. The work can not be done in a hard wind. The side of the plant next to the wind will be washed and the opposite side show little signs of the spray. The greater the power applied to the pump, the better the form of spray thrown by the nozzle.

SPRAYING A PREVENTIVE.

Spraying is a preventive and not a remedy. There are a few fungus diseases that can be destroyed by spraying, but they can also be prevented by the same operation. The damage done by a disease or an insect can be repaired only by the plant itself, and such work as can be done to protect it from further damage is about all that can be done for it. The spraying should be done early and the protection made complete before the diseases and insects appear. The first spraying should be done in the orchard, vineyard, and berry patches just before the growth starts in the spring. The second application should be made ten days or two weeks after the first and the third about two weeks after the second. If the orchard or vines are badly infested a fourth application should be made about two weeks after the third. If an application is followed immediately by a hard rain, the application should be repeated as soon as possible. If this plan is followed and the work is well done with properly prepared mixtures, there will seldom be any need of further attention in this direction during the season. The solutions used in these sprayings should be combined fungicide and insecticide, preferably Bordeaux mixture and a poison. If the above directions are followed they will meet the requirements for preventing about 90 per cent of the common fungus diseases and insect pests. There have been a great many spraying calendars published giving long lists of diseases and insects with specific directions for preventing each one. A careful examination of these calendars shows that a large majority of the treatments recommended are covered by those given above.

Bordeaux Mixture.—Copper sulfate (blue vitrol), 4 pounds; fresh lime, 4 pounds; water, 50 gallons; dissolve 4 pounds of copper sulfate in 2 or 3 gallons of water by placing the sulfate in a sack and suspending in the top of a jar or tub of water. Do not put this in tin or iron vessels as it will rapidly dissolve them. Before mixing dilute this to about 20 gallons. Slake 4 pounds of fresh lime by adding a small amount of water, and after slaking is finished add about 20 gallons of water. Stir the lime and water thoroughly and strain before mixing. Pour these solutions into the barrel or tank at the same time and stir vigorously while mixing. This may be diluted to 50 gallons.

Paris Green.—One pound Paris green; 3 pounds lime; 100 gallons of water.

Paris Green Bordeaux.—Fifty gallons Bordeaux mixture, made as above; 4 ounces Paris green.

Make up when ready to use. It will not keep.

One pound of lead arsenate may be used instead of the one-fourth pound of Paris green. Pure Paris green will dissolve in ammonia.

The Kansas Seed House, Lawrence, Denver, and Oklahoma City, have issued their 1907 catalogue. This seed house has been in business in Kansas for a great many years and has merited its reputation for good seeds and for square dealing. Everybody knows the firm and knows that when they buy from them they get what they want. It is also true that if you do not find in the catalogue the particular varieties that you desire, it is still wise to send them your order, because you know it will be filled and filled right. Everything that you need in the way of field-, garden-, and flower-seeds, shrubs and vines, evergreens and orchard-trees, insecticides, sprayers, all kinds of garden tools and poultry foods may be had from the Barteldes Seed Company, who own the Kansas Seed House and who may be addressed at either of the points named above.

Right here is Topeka there has grown up a seed house that is now doing an enormous business and is still growing. It could neither do the business nor continue to grow if it did not supply what the people demand and what they are pleased with. Their business is based on the fact that their seeds are all tested and known to be good before they are sent out to customers. The Zimmerman Seed Company, 625 Quincy St., Topeka, Kans., have fixed their motto on a "dollar's worth of seed for \$1.00." They do not offer novelties done up in handsome packages for high prices. They do not sell 50 cents worth of seed for \$1.00 and give a 25-cent present as a bait. They do sell a dollar's worth of seed for one hundred cents and it is Kansas seed thoroughly tested under Kansas conditions and ready for Kansas planters. They handle all classes of garden-, field-, and flower-seeds with rose-bushes and other shrubs and climbers and bulbs. They have this

ALFALFA SEED

less. Write for prices.

McBETH & KINNISON,

Kansas grown. Highest award at St. Louis for best alfalfa seed in world. Crop of 1906. Also Cane and Millet. Macaroni Wheat and other Field Seeds in carload lots or Garden City, Kans.

Kentucky Blue-grass Seed

For a beautiful as well as a most profitable pasture sow Blue-grass. The genuine Kentucky seed is what you want, and from September until June is the proper time to sow. For pure seed of our own raising, and full particulars write MT. AIRY SEED FARM, PARIS, KENTUCKY.

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Miscellany

Facts About Handling Manure and the Use of the Manure-Spreader.

M. DRAYNRAH.

Few people realize the waste that there is of barnyard manure by not hauling it to the field immediately. United States Bulletin No. 192 says that the value of barnyard manure in the United States is \$2,352,700,000 per year, and that a conservative estimate of the loss by handling is about one-third or \$784,233,000.

As a matter of fact, barnyard manure commences to ferment and undergo changes the moment it is dropped. The average farmer does not get a value to exceed \$1.50 to \$2 per ton out of his manure when he should get in increased crops, if the manure be properly handled, a valuation of from \$2.50 to \$3.50 per ton.

Barnyard manure has other valuations than that which is received from the nitrogen, phosphoric acid, and potash which it contains. The mechanical effect that the manure has on soil is of greater importance than the plant-food which it contains. Barnyard manure makes the particles of the soil porous so it retains the moisture. When the particles of soil are more porous, they throw out the plant-food they contain. Most soil contains almost an unlimited amount of plant-food, but after years of cropping the soil becomes what we might term hide-bound.

The time has come when every farmer should have a manure-spreader to maintain and increase the fertility of his soil. Any farmer cultivating even as small a farm as sixty acres can afford to pay 25 per cent interest for money with which to buy a manure-spreader.

There is probably no machine on the farm that is called upon to stand a greater strain than a manure-spreader. The spreader must be built strong enough to tear the chunks of manure into shreds before it is distributed, as it is a well-known fact that ideal manuring consists in placing a particle of manure with every particle of soil.

You should see that the machine you buy is extra strong. The sills and the main frame should be made of oak or some other hard wood, as all of the machinery which drives the apron and cylinder is attached to the main frame and if the frame is made of pine or soft wood it will twist out of shape and cause friction and binding in all parts. The main frame should also have truss and stay-rods to keep it square. The pole of the spreader should be just as good as the pole of a farm wagon, and, therefore, it should be made of oak not of pine.

There is not a reader of this paper but who knows that oak costs more than pine and that it is more durable. Therefore, when you buy a manure-spreader do not pay as much for a machine having a pine pole and pine frame and without truss and stay-rods as you would for a machine made as it should be.

Another important feature of a manure-spreader is that the front end be made strong and substantial so that it is capable of carrying its share of the load without pulling the front trucks out from under the machine. In my opinion, the Great Western spreader in this respect is superior to any other make of machine.

The front axle is the same length as the rear axle so the front and rear wheels track. This makes it possible to top-dress corn or other crops planted in rows without either the horses or the wheels running on the rows. This construction also cuts up the fields less and makes the machine pull much easier. The front axle is set back under the machine so the horses are hitched as close to the load as on an ordinary farm wagon.

The front axle is cold rolled steel with an oak axle cap running the full length of the axle. Bolted to the axle cap is a 16-inch malleable iron fifth wheel braced both front and rear. The fifth wheel is oscillating so that when one wheel drops into a rut the body is

carried level and the machine is not twisted out of shape. The double bolster above the fifth wheel is oak. Each piece is 3 by 5 inches. They carry the front end of the machine. This construction permits of setting the front axle and front wheels back under the spreader where they belong.

Every reader of this paper knows that a wide front axle with oak axle-cap costs more to make and is better than a narrow arched front axle without any axle-cap, and that a malleable iron oscillating fifth wheel and double bolster cost more and are stronger than a little light cast iron fifth wheel and single or no bolster. Every reader knows that it is better to have a machine with a strong front end capable of carrying the load close to the team than it is to put all of the load back of the front axle. It is a well-known fact that pine and cast iron are not as strong as oak and malleable iron.

Every reader of this paper knows that a big, heavy, strong, substantial machine weighing 2,100 to 2,200 pounds costs more to make than a little light machine weighing 1,700 to 1,800 pounds. When you buy a manure-spreader see that you get what you pay for. Don't pay as much for a light machine, one that is made of poor material, as you would for a big, heavy, strong machine made as it should be.

When you go to investigate manure-spreaders take your jack-knife in one hand and your rule in the other. Jab the knife into the sills and all parts of the machine and know whether it is made of soft or hard wood. Measure the spokes in both the front and rear wheels. Measure the fifth wheel, and all other parts, and take the weight into consideration.

When putting as much money into any machine as it is necessary to put into a manure-spreader, it is a great deal better to put a few dollars extra into the machine and get one that is made right. A few dollars extra in cost makes but very little difference to the purchaser if for every dollar that he puts in he gets \$5 extra in value.

A light machine will go to pieces soon it will cost more to keep in repair and the difference that you put into the price of a good machine will surely be made up in a year or two in repairs alone.

There are too many poor machines of all kinds on the market and the farmer to a certain degree is to blame for this as many of them take the price only into consideration. When buying they should investigate more carefully and know that they get full value for their money. They should go into details. It is with horror that we see some manufacturers are turning out machines that cost the farmer a lot of money, with neck-yokes similar to those furnished on cultivators, with single-trees sawed out square instead of turned; in other words they are simply a make-shift and are rarely of any real benefit or use when the machine is put in operation.

The standard thickness for the tire of a manure-spreader wheel is $\frac{3}{8}$ of an inch. Material has been going up and some manufacturers in order to maintain their prices have the tires rolled down 1-16 to 1-32 of an inch lighter. It seems advisable to keep the standard of the machine up even though the cost is a trifle more rather than to cut the weight here and there, making a cheap, light machine to give untold trouble.

The apron of a manure-spreader is a very important point as this carries the load back to the beater. The endless-apron machine costs more money to make than the half-apron machine, but it is always ready to load. There are no reverse gears, trips, springs, or other contraptions to get out of order.

There are many advantages in the endless apron. One of them is that if you have long hauls to make, the front half or two-thirds of the machine may be loaded as high as you wish. When two or three feet of the rear part have been spread, this leaves so much vacant space in the front end of the machine that the high part of the load can be forked forward into the vacant space.

It has been our intention in this arti-

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The Book will be sent to you free. It is worth \$100.00 but won't cost you a cent. If it does not do you any good, it won't do you any harm. It's brim-full of valuable information.

A Manure Spreader Must Be Made Extra Strong.

Don't buy a light spreader.

Don't buy a spreader that has a pine pole and pine frame.

Don't buy an experiment, a machine that has been on the market only a few years.

Don't let any manufacturer experiment at your expense.

Don't buy a spreader that has a narrow front axle. If you do you can't top-dress corn successfully.

Don't buy a spreader with the front axle set ahead of the front end of the body because practically all the load will be carried on the rear axle, making heavy draft.

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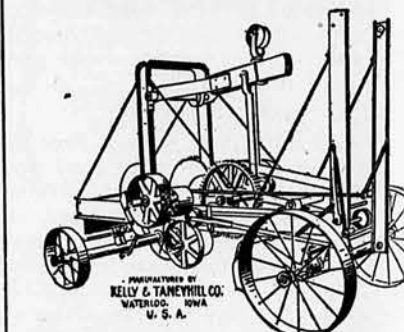
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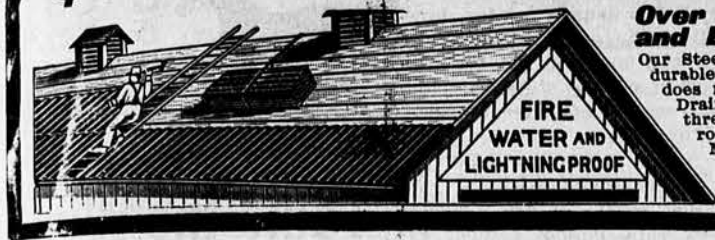
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cle to give pointers and advice in regard to the construction of the machine-spreader, and if you are in the market for a machine you should read this article carefully and guide yourself accordingly. When you buy, if you are bound to buy the cheapest machine on the market then see that you do not pay as much for it as you would for a machine that is made in an honest, upright way.

Good Road Laws.

HON. EDWIN SNYDER, OSKALOOSA, KANS.,
BEFORE THE STATE FARMERS' INSTITUTE AT THE STATE AGRICULTURAL COLLEGE.

What I have to say of road laws will be brief. The laws I desire are such as would extend State and National aid in the construction of macadam roads.

I am well aware that a proposition of this sort gives the average politician in Congress, or our State Legislature, a bad case of blind staggers. However they will quickly recover when they learn the sentiments of their constituents upon this subject.

We are truly a great Nation, an intelligent Nation. Illiteracy is rare. Our people are better clothed, better fed, and have more of the necessities, comforts, and luxuries of life than the citizens of any other Nation on earth. And yet we have the poorest public wagon roads to be found in all Christendom.

For six months of the year, sometimes longer, we are a great civilization stuck in the mud, and this condition of affairs exists because one class of our citizens alone, the farmers, have had to bear the sole burden of construction and maintenance of public roads, while all classes are to a greater or less extent benefited by good roads. Farmers in other countries are not put to the sole expense of construction and maintaining public wagon roads. Why should they be in this?

Formerly there was a school of political economists who taught that the sole duty of government was to maintain law and order. If this doctrine had obtained, we would not now be excelling all other Nations in the extent and diversity of our manufactures. We would not be underbidding England in steel bridges to be built in Africa.

New York City was 200 years old before she became the commercial emporium of this country, made so by the vast trade brought to her by the Erie Canal, which never would have been dug had not the citizens of the great State of New York repudiated the doctrine that "The sole duty of government was to maintain law and order," and taxed themselves to construct this great public waterway.

Directly after the close of the war of the rebellion, Congress resolved to subsidize railroads to the Pacific Coast, which it did by the most liberal land grants and generous loaning of the public credit. The buildings of these transcontinental lines would likely have been delayed for a generation but for Government aid, and the vast region which the roads opened to settlement, and which is now the home of busy, happy husbandry, would to a great extent be but a barren waste.

I believe that the doctrine that the "Sole duty of the Government is to maintain law and order" is narrow and pigoted, and that a judicious use of the public credit to aid public enterprises which are too great for private capital, is justified by past experience, and should be a settled policy of State and National Government.

The principle of government construction of public highways is as old

as civil government. Some of the famous roads of ancient Rome, although begun 312 years B. C., are still in use. Of course they were built of the best material and in the most substantial manner.

Cesar was a great military genius, but the legacy of fine roads he left Rome furnishes a perpetual tribute to his farsighted statesmanship, which far outshines his military achievements, and will bless his memory long after his war record shall have passed away down the dim aisles of oblivion.

Why have not State and National Governments done more for public road construction? Simply because the farmers, who are the principal parties interested, haven't asked for it. We are not organized as are other callings, and not represented by efficient, persistent lobbyists. When we ask for what we want in the right way, we will get it.

Congress appropriates annually about 30 million dollars for river and harbor improvements. At the instance of manufacturers it has levied a high tariff tax on imported goods. It has appropriated large sums for the construction of wagon roads in Cuba, Porto Rico, and the Philippines, and has begun the construction of the Panama Canal, to cost more than 200 million dollars. The Government has built palatial public structures in all the large cities for the accommodation of the urban population. All this it has done for the benefit principally of trade and commerce. What has it done for the great agricultural interests, which bear by far the larger part of the burden of public taxes?—endowed agricultural colleges, some of which are of doubtful utility to farmers; established experiment stations which are better; and given us a really great benefaction in free rural mail delivery. But when we ask for the appropriation of a paltry 24 million to be divided among the States to aid in the construction of stone roads, we are told this is paternalistic and wrong.

France has 25,000 miles of stone road, built and maintained at government expense; other European nations less. But all build and maintain roads which I read are kept smooth as a floor and hard as adamant. In this country a few States are giving State aid to townships and counties in building macadam roads; Massachusetts, New York, and Pennsylvania leading.

My idea of National and State aid in road-construction is that each should contribute one-fourth the cost of construction, and the township or county where built one-half. Work to be done upon plans and specifications to be approved by Government or State engineers.

I would have our State Legislature enact a law modeled after the Indiana law which seems to work admirably. I would have all classes help to bear the burden of road-construction, as all classes are benefited thereby. The logic of State and National aid in road-construction is unanswerable, but logic and reason are not always the most potent elements in securing legislation. We must convince our legislators of the popular demand for what we ask and that the whole people without distinction of class or profession will approve of moderate State aid in permanent wagon-road construction.

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It will clean, separate and grade your corn, clover, alfalfa, kaffir corn, oats, wheat and any other kind of grass seed or grain you raise.

We will ship you a Machine on trial, with freight prepaid, and you can convince yourself that it is just what you need to produce better crops.

Richland, Kans., April 17, 1906.
Dear Sirs:—Beg to thank you for your prompt shipment of machine and am much pleased with same. My neighbors say it is the best machine they ever saw.
Yours respectfully,
F. A. DEZINB.

Our separate corn grading machines will grade corn 98 per cent perfect and will insure a **BUMPER CORN CROP.**

Write us today and we will tell you all about our machines. Tell us what kind of grain you raise and we will send samples cleaned on the

Perfection.

THE LEWIS-TUTTLE MFG. CO.,

305 A Kansas Ave., Topeka, Kans.

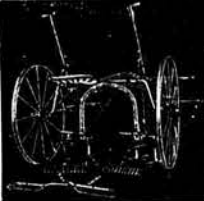


THE TOWER SURFACE CULTIVATORS

Raise this highest type of corn because the roots were not cut

Will do fully as well for Cotton, Potatoes, Tobacco and Garden Truck. "The pulverizer and cultivator made for me 55 bu. per acre on 200 acres of corn. Neighbors with shovel plows got 25 bu. on same kind of land. H. M. Jackson, Modale, Iowa." **Will increase yield.** Easier on man and team. Made in **three sizes**—one, two or three horses—for cultivating one or two rows. Send for "Treatise on Corn Culture," **FREE.**

The J. D. Tower & Sons Co., 14th Street, Mendota, Ill.



Stock Interests

LIVE STOCK REPRESENTATIVES.

C. E. SHAFFER.....Northern Territory
L. K. LEWIS.....Southern Territory

PURE-BRED STOCK SALES.

February 22, 1907—Poland-Chinas, Lemon Ford, Minneapolis, Kans.
Feb. 20, 1907—J. E. Joines, Clyde, Kansas, Duroc-Jerseys.
February 20, 21, 1907—Harvey County Breeders Association, Newton, Kansas, Norman horses, Hereford cattle and swine.
February 21, 1907—E. D. Morris, Bern, Kans., Poland-China bred sow sale.
Feb. 21, 1907—Leon Carter & Co., Asherville, Kans. Duroc-Jerseys.
February 22, 1907—J. C. Larrimer, Derby, Kans., Poland-Chinas.
February 22, 1907—Poland-Chinas, Bollin & Aaron, Leavenworth, Kans.
February 25, 1907—G. E. Avery, at Kansas State Agricultural College, Manhattan, Kans., Aberdeen-Angus cattle.
February 26, 1907—Duroc-Jersey bred-sow sale, Hannon Bros., Olathe, Kans.
February 26, 1907—Poland-Chinas, Holmes & McDaniel, Edmund, Kans.
February 26, 1907—Poland-China hogs, C. P. Brown, Whiting, Kans.
February 26, 1907—A. L. Sponaler, Mgr., Hutchinson, Kansas, Shorthorns.
February 27, 1907—J. A. Larson, Everest, Kansas, Mgr., Herefords at Hutchinson, Kans.
February 27, 1907—Poland-Chinas, W. H. Bullen, Belleville, Kans.
February 27, 28, 1907—Combination sale of Herefords at Kansas City, Mo. C. R. Thomas, Sec.
February 27 and 28, 1907—W. H. Cottingham & Son, McPherson, Kans., horses, Shorthorn cattle and Poland-China hogs.
February 28, 1907—T. P. Sheehy, Hume, Mo., Poland-Chinas.
March 5, 1907—Semi-annual sale of Limestone jacks and jennets, L. M. Monsees & Sons, Smithton, Mo.
March 5, 1907—L. M. Monsees & Sons, Smithton, Mo. Jacks.
March 8, 1907—T. F. Guthrie, Strong City, Kansas, Berkshire bred sow sale.
March 14, 1907—Horses, Hereford cattle, and Duroc-Jersey swine, G. B. Little, Olathe, Kans.
March 15, 1907—Herefords, G. B. Little, Olathe, Kans.
March 15, 1907—Dispersion sale of Poland-Chinas, Russell French, Salem, Neb.
March 21, 1907—Elderlaw Shorthorns at Manhattan, Kans., T. K. Tomson & Sons, Dover, Kans.
March 26-27, 1907—Herefords at Kansas City, D. R. Mills, Manager, Des Moines, Iowa.
March 28-29, 1907—Shorthorns at Kansas City, D. R. Mills, Manager, Des Moines, Iowa.
April 3, 4 and 5, 1907—Herefords, Aberdeen-Angus and Shorthorns, Kansas City, Mo., W. C. McGavock, Mgr., Springfield, Ill.
April 16, 17, 18, 1907—All beef breeds at South Omaha, Neb., D. R. Mills, Mgr., Des Moines, Iowa.
May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill.
May 14, 15, 16, 1907—All beef breeds at Sioux City, Iowa, D. R. Mills, Mgr., Des Moines, Iowa.

In What Form Should Corn Be Fed to Fattening Cattle?

(COPYRIGHT, 1906, BY H. W. MUMFORD.)

In the experiment referred to recently the feeds used were prepared at the university cattle-feeding plant. Both the corn and the corn-and-cob-meal were finely ground. The shock (fodder) corn and silage used were grown in the same field of the university farm, and the plots reserved for use were selected with the greatest care that the quality and proportion of grain to stover should be the same in each instance. Of the total crop, 56.6 per cent was grain and 43.4 per cent stover.

Taking into account depreciation in machinery by wear and the actual labor involved, the records show that it cost the following amounts to prepare the feeds used:

	Per ton.
Shelling corn.....	\$ 0.34
Grinding corn for cornmeal.....	1.20
Grinding ear corn for corn-and-cob-meal.....	1.44

With corn at 35 cents per bushel,

Broken ear corn cost.....	\$10.20
Shelled corn.....	12.48
Cornmeal.....	13.34
Corn-and-cob-meal.....	11.44
Shock (fodder) corn, including cost of hauling to feed-lots.....	5.30
Silage, including cost of putting up.....	2.75

Good average daily gains were made with corn fed in all the various forms, although shelled corn and fodder corn did not equal other forms. The average daily gain per steer for the six months' feeding period was as follows: Silage and cornmeal, 2.34; broken ear corn, 2.33; cornmeal, 2.33; corn-and-cob-meal, 2.32; fodder corn, 2.08; and for shelled corn, 1.99 pounds.

The lots fed corn in various forms were fed for the same length of time and marketed in Chicago on the same day, at which time they were sold at the following prices per hundred-weight: Silage and cornmeal lot, \$6.10; broken ear corn, \$6.15; cornmeal, \$6.15; corn-and-cob-meal, \$6.10; shock corn, \$6.05; and the shelled corn lot for \$6.05. The feeding cattle at the beginning of the test cost \$4.53 per hundredweight in the feed-lots and graded as choice.

To illustrate what an important item the labor element is in the preparation of cattle-feeds, it may be stated that the net cost of a pound of gain on the

steers cost in each instance as follows: Silage and cornmeal lot, \$0.076; broken ear corn, \$0.067; cornmeal, \$0.075; corn-and-cob-meal, \$0.078; shock or fodder corn, \$0.065; and in the shelled-corn lot, \$0.075. Thus it will be seen that the cost of a pound of gain is directly influenced by the amount of labor that is expended in the preparation of the corn for feeding. The net profit per steer in feeding these cattle corn in its various forms and at varying prices follows:

Form in which corn was fed.	Corn 35c clover hay \$5.00	Corn 40c clover hay \$7.50	Corn 50c clover hay \$10.00
Silage and cornmeal.....	\$6.57	\$2.17	*\$4.84
Broken ear corn.....	12.07	7.54	.330
Cornmeal.....	8.45	3.66	—3.750
Corn-and-cob-meal.....	6.61	2.07	—5.150
Shock or fodder corn.....	11.46	7.01	.125
Shelled corn.....	7.95	3.14	—1.270

*—indicates a loss.

The results of this experiment clearly indicate that simple methods, or in other words, cattle-feeding practices involving but a small amount of labor, require considerably smaller margins than do more complicated methods involving a large labor element.

The results of this experiment are so striking that it appears that the grinding of corn for feeding choice 2-year-old steers during the winter season is not warranted.

The feeding of silage in moderate quantities is not necessarily conducive to heavy shrinkage in shipping or small percentages of dressed beef. The reader is cautioned not to conclude, since the feeding of silage was not followed with as large profits as the feeding of several other rations, that it has no place in beef-production. Its use in growing young cattle and as a part of the ration of the breeding herd promises well in the hands of the experienced feeder, but to just what extent it may be profitably used for these purposes remains to be determined by future investigations.

Since the profits in feeding shock or fodder corn and ear corn are approximately the same, the writer is inclined to favor the feeding of ear corn in preference to fodder corn because in feeding fodder corn one is sometimes obliged to get on the land when it is too wet. This statement applies especially to the seasons of the year when bad weather is likely to prevail.

This suggests that there may be a season of the year when fodder corn can be fed to greater advantage than during mid and late winter. It is doubtful whether there is a more profitable way to feed corn than in the form of shock or fodder corn if it is fed during the fall season.

While the results of this experiment show that it does not pay to grind corn for winter feeding, it should not be assumed that it does not pay to grind corn for cattle that are being fattened in summer on grass. In some instances too young cattle are not able to handle the ear corn to advantage. Some of the modern improved varieties of corn are so compact and hard that cattle have difficulty in masticating it. Whether or not the cattle-feeder should use cornmeal or corn-and-cob-meal is largely a matter of convenience, what roughage is used, how the corn part of the ration is supplemented with other concentrates, and perhaps the season during which it is used.

Unless higher prices for fat cattle, or lower prices for stock cattle, or both, prevail than in conditions here recorded, the possibilities of profit with corn at 40 cents per bushel and clover hay at \$10 per ton are very small indeed.

Cane for Fattening Hogs.

I wish to make inquiry concerning pasture for hogs. We have a large number of hogs to fatten in the spring and are short on pasture. We thought of sowing cane on a 10-acre field, and as soon as the crop is a foot high turning the hogs in on it. The cane will keep on growing and will furnish pasture all summer. Is cane good for hogs, and will they do well and fatten on it? Would oats make a better pasture?
BET HOWARD.

Miami County.

Cane, sown in the way suggested, will furnish a very large amount of

succulent forage for hogs. We have used it here at the Experiment Station in our feed-lots, and have found it very satisfactory. We usually prefer, however, to allow the cane to get some larger than you mention, as the animals will clean up the stalks of cane after it has reached considerable size. If it is pastured down too young, the amount of forage secured will be considerably reduced in quantity.

For sowing early in the spring, Dwarf Essex rape makes a most excellent forage-crop for swine. The ground should be well prepared and the rape should be sown at the rate of six to eight pounds per acre. Oats also make a very desirable forage-crop for spring sowing, and the rape and oats may be sown together.

G. C. WHEELER.

"Straight, Crooked, or Crosswise, but Always the Best."

JOHN R. TOMSON, DOVER, KANS., BEFORE THE CENTRAL SHORTHORN BREEDERS' ASSOCIATION, AT THE ANNUAL MEETING AT KANSAS CITY, FEBRUARY 5, 1907.

That the Shorthorn breeders of America have formed a union is not generally known—in fact, very few if any of its members believe that such a thing exists, yet it does, and wields a mighty power. Its membership includes all Shorthorn breeders, but it is entirely separate from the American Shorthorn Breeders' Association.

The organization is unique, having no constitution, no by-laws, no written work, no officers, but is ruled by a guiding spirit, which I will call the "Supreme Oracle." There is no place of meeting, nor has it ever met. And yet strange as it may seem, no union has a more loyal or obedient membership.

All members have been initiated and as all present are, or expect to be, members, I will repeat the initiatory work. A candidate for membership to the Shorthorn Breeders' Union must first purchase some Shorthorns eligible to record in the American Shorthorn herd-book. He may care for them as he chooses, use any sort of bull he sees fit, and carry on his breeding operations to suit his own fancies, honestly thinking that he is a Shorthorn breeder until he attempts to sell some of his surplus stock to the breeders.

The "Supreme Oracle" then examines the pedigrees of his cattle, and if fashionable, he may take the oath and become a full-fledged breeder, but if unfashionable, a boycott is ordered and the candidate is informed that though he may consider himself a Shorthorn breeder, and though he has bred Shorthorns galore—perhaps has been following the avocation for years—and though he may have produced a class of cattle that were a great improvement on the common stock of the country, and though he may have many times saved the day for the breed in the great stock shows of the country, yet he is not a Shorthorn breeder, nor can he ever be until he takes and performs the following oath:

"I, Mr. Candidate, do promise and swear that I will at the first opportunity, discard the unfashionable cattle I now have, and restock with so-called fashionable sorts, and that I will assist in boycotting any other candidate who attempts to offer unfashionably bred cattle to breeders.

"I furthermore promise and swear that I will put my stamp of approval upon all Shorthorns bred in Great Britain, regardless of how or by whom they were bred, and will not insist that they be superior or even equal to the unfashionable sorts of this country.

"I furthermore promise and swear that I will not attempt to improve the breed in any manner other than by the use of pure Scotch blood, binding myself under the penalty of again being boycotted."

Mr. Candidate takes the oath or seeks some other means of making a livelihood.

What I have said is not literally true, but yet it is practically so, and all of us have taken our degree and silently subscribed to the oath, and the fear of the penalty has held us to it, much to our shame. America has capable men and abundant material.

HORSE OWNERS! USE
GOMBAL'S
CAUSTIC BALSAM.
A safe, speedy and positive cure for the most stubborn and intractable sores, ulcers, and other skin diseases. Removes all humors from the blood. Produces a healthy skin. For descriptive circulars, send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland, O.

Tame the Wildest Horse in One Minute!

YOU can do this by using the "mysterious" and wonderful Arabian Method. You can tame and subdue instantly the most vicious and ill-tempered horse and without the possibility of failure. Send us \$2 and we will teach you the Arabian Method, as used in Arabia for centuries, in one lesson, giving you the secret and full and complete instructions. Easy to understand and extremely simple in operation. YOU CANNOT FAIL. You will excite the wonder of your friends who will consider you a wizard and you can MAKE MONEY by giving exhibitions or treating valuable horses with bad tempers. We make a BUSINESS of furnishing information on ANY SUBJECT. If you want to know ANYTHING and can't find it in any book, catalogue or list, send us \$2 and we will TELL you or RETURN YOUR MONEY.

North American Information Bureau,

3802 Ellis Ave. Chicago, U. S. A.

Horse Owners

Do not let your horses work with sore shoulders. Harness, Saddle or Collar Galls positively cured with three or four applications of Beardslee's Gall Cure. Also a sure preventive for soft or green horses from becoming galled just when you need them to do your heavy spring and summer work. I will send a full pint of Beardslee's Guaranteed Gall Cure postpaid to any part of the United States for 50 cents, with a guarantee to cure or money returned. Also other valuable information to horse owners free.

—Address—

The Beardslee Co.
37 Belden St., Boston, Mass.
Agents Wanted in Every Locality

BIGGER PIG MONEY.

Scours and Thumps kill, on an average, half the pigs in every litter or make runts. Stop that slaughter and waste by giving them

ANTI-SCOUR

Does away with starving methods. Regular rations for sow and pigs. Endorsed by all hog-raisers who have tried it, and experiment stations. Guaranteed sure, speedy, easy and inexpensive, 400 doses in box, \$1.00. Sent postpaid or at your druggist's. Send for booklet, "Bigger Pig Money." Endorsed by Prof. Kinzer, of Kansas Agricultural College; Frank Dawley, Waldo, Kans.; Everett Hayes, Hiawatha, Kans.; John W. Jones & Son, Concordia, Kans.; and hundreds of other prominent farmers and breeders.

THE AGRICULTURAL REMEDY CO.
521 Kansas Ave. Topeka, Kans.

Save your temper, your cows, your milk, by investing 50 cents for an Anti-Kicker. You have needed it many times. You will need it again. Does not excite the cow nor disturb the flow of milk. It is indispensable for breaking heifers, cows with sore teats, or vicious kickers. Can not wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely, as hopple for cow, horse or mule. Send for it today, when you need it you won't have time.
A. B. SMITH, Topeka, Kans.

ALFALFA

EVERY-DAY EGG-PRODUCER, an alfalfa mash for laying hens. ALFALFA POULTRY FOOD, in 2½ lb. packages, best and cheapest egg producer in the world. ALFALFA HOG CHOLERA CURE, the best preventive and only cure for hog cholera. Largest alfalfa mill in the world. All kinds of Poultry Supplies. Send for free circular.

The Otto Weiss Alfalfa Stock Food Co.

221-227 So. Santa Fe, Wichita, Kans., U. S. A.

THOS. OWEN, 2801 West Euclid Avenue Ind. Phone 6306, is Topeka agent for these goods.

No More Blind Horses For Specific Ophthalmic Moon Blindness and other eye troubles, HARRY CO., Iowa City, Ia., have a cure.

Why not remove the penalty of this obligation and give them a free hand to follow the dictates of their better judgment? Allow them to breed thoroughbreds, straight, crooked, or cross-bred, "any old way" to get the best results, and when an outstanding good one is produced, backed up by outstanding good ancestry, use it.

The so-called fashionably bred thoroughbred of to-day can only be identified by the pedigree; no one can go into the good breeding herds of the country and pick them out by their appearance—there are not enough good, straight-bred ones to go round. Study the pedigrees of the outstanding winners in our great shows and you will find that a fair per cent of them were bred crooked or crosswise. This being true, why hesitate to use them and take inferior cattle instead?

Let us boycott the "Supreme Orange," break our oaths, and go to breeding cattle on the common-sense plan, straight, crooked, or crosswise, but always the best."

Sheep-Raising in Kansas—a Neglected Industry.

J. KNOLLIN, CHICAGO, BEFORE THE KANSAS IMPROVED STOCK BREEDERS' ASSOCIATION.

The invitation to address the Kansas Improved Stock-Breeders' Association came cordially, but in words that gave me to understand that I would be expected to be here. I feel, however, that our secretary need not have commanded my presence, for I assure you that it is a pleasure to be here with you. I was advised that I would be expected to talk about sheep, but was left to choose my subject. When I thought of Kansas with her vast domain and fertile farms as having but about 200,000 sheep within her borders, added to the pleasure of being home again, I felt it my duty to be here and remonstrate with you for your neglected opportunities, and this suggested my subject. "Sheep-raising in Kansas; a neglected industry."

"He who makes two blades of grass grow where but one grew before is a public benefactor." We have in Kansas a man, who, in this respect, stands preeminent—a man of deep learning, broad wisdom, and keen wit; a man who has unceasingly toiled for the welfare of the farmers of Kansas. He has not only given to us, but to the agricultural world "The Beef Steer and His Sister," "The American Hog," and "The Helpful Hen." By the study of his books the good wives and daughters of Kansas have learned the secret of successfully developing the latent possibilities of these useful animals, so that in Kansas, as is well known, the good housewife, with a few cows and her hens, is able to clothe and educate the children, buy a piano and furnish the parlor, leaving the husband to invest his revenue from the steer and the hog in bank stocks and railroad bonds. I have read Mr. Coburn's books on these subjects, and have often wondered why he has not given us something on the useful sheep. It can not be that Mr. Coburn has overlooked the sheep, and when he has time I have no doubt he will tell us much better than I can tell you why you should have sheep on your farms, the kind you should have, and how you can best take care of them.

CAUSES OF FAILURE.

My observation of sheep-raising in Kansas has extended over twenty-five years; within that time there have been many failures, in connection with the business, in Kansas—woeful failures. I do not intend to dwell at length on the bad times. Failures in the sheep business during those times were not confined to Kansas solely. Radical legislation affecting the duty on wool created havoc to the industry throughout the United States. While in other parts of the country the business was seriously crippled, in Kansas it proved to be a knockout blow. Therefore, we must find some other reason for these unfortunate conditions, besides adverse legislation. Primarily, men went into the business under conditions new to them, or who did not understand it, buying inferior stock and paying too much for it. I have in mind a gentleman who set-

You Can Increase Your Feeding Profits

YOU can increase your feeding profits, make more money in less time, and keep every animal on your place in a vigorous, healthy condition, by regularly adding a little Standard Stock Food to the ration.

Let us tell you what Standard Stock Food does.

A very little of it flavors the entire ration and makes it taste good.

It stimulates the flow of all the digestive juices, enabling the animal to digest its feed more easily, more quickly and more thoroughly so that it gets a large percentage of nutriment from the feed.

It decreases the waste and increases your profits, because it makes every pound of feed you feed go farther.

It tones and invigorates the entire system and puts every unthrifty animal in a thrifty condition. It makes a horse work better; a cow give more and better milk; a steer, a hog or a sheep take on more flesh and finer finish; a colt or calf grow more rapidly.

It makes stock thrive.

made, whether it costs 5c or 15c a pound.

You can easily prove this to your own satisfaction, simply by examining various stock foods and their manufacturers' directions for feeding.

The Standard looks better, smells better, tastes bet-

at least cost.

We urge you to investigate before you buy.

You can see for yourself why the Standard gives so much better results.

You run no risk for we sell you on our Square-Deal, Money-Back Guarantee.

We have more than 400,000 satisfied customers who have proved that "It Makes Stock Thrive."

Go To Your Dealer

and ask him to supply you. If he cannot, do not take a substitute but send to us direct.

We will ship immediately and protect you with our square-deal, money-back guarantee.

FREE TO YOU.

Our big stock book, "The Standard Feeder," 160 pages, 200 illustrations, 12 chapters on the feeding, care and handling of all kinds of live stock. Regular price 50 cents, and you could not buy its equal at several times the price. But free to you if you give us the name of your dealer and tell us how much stock you keep.

Standard Stock Food

"It Makes Stock Thrive."

And you can use the Standard at less cost to you than any other stock food, because a dollar's worth of Standard Stock Food contains more feeds, will go farther, last longer and produce more and better results than a dollar's worth of any other stock food

ter and is better—stronger, richer, more concentrated—and a much less quantity of it is required at each feed.

That's why it lasts longer and costs you less per animal per month.

It gives the best results

Standard Stock Food Co., 1517 Howard St., Omaha, Neb.



"My pigs were dying"



Writes Mr. F. L. Miller, a prominent stock raiser of Beaman, Iowa, after having the above unpleasant and very unprofitable experience not long ago.

And yet he feels he was quite fortunate.

You know there's some truth in that old saying that "there's no loss but there's some gain."

Well, in Mr. Miller's case he gained a great deal more than he lost—that's why we say he was fortunate after all.

First, he fortunately obtained the right remedy at once and immediately stopped the death loss among his pigs.

Second, he gained experience that will enable him to prevent such loss and sickness among his hogs in the future and this he values a hundred times more than his loss amounted to.

Third, now he's master of the hog disease problem.

The purpose of this advertisement is to tell you how to become master of all stock diseases, too, and before you experience loss if you will act on the advice and do as Mr. Miller did.

And that is—Use Dipolene—the greatest disease preventive and dip ever offered to farmers.

Take advantage of Mr. Miller's experience—don't wait until your stock is threatened, or their death picks your pocket of their value.

Just read this letter. It's more convincing than pages of argument we can write simply because it comes from a fellow farmer who has used it.

MARSHALL OIL CO., Marshalltown, Iowa. Gentlemen:—I used your dip on 400 sheep and about 175 pigs. It killed the ticks on both lambs and sheep at the first dipping. Our pigs were dying from sour mouth and skin disease. We dipped them several times and I am satisfied we would have lost a large number but for your Dipolene. I shall always use it.

F. L. Miller, Beaman, Iowa.

Isn't that strong evidence. Isn't that actual, convincing proof? Then why take chances. Why put off getting Dipolene and being fortified against loss.

DIPOLENE

THE ONE MINUTE STOCK DIP

It will stop all diseases of cattle, horses, sheep or swine; kill lice, ticks, fleas, etc., cure scab, mange or eczema and do it in double quick time.

It not only cures disease but it keeps it off your farm, if you will use it as a preventive by spraying your pens, sheds, barns, etc.

To relieve you from any doubt, from any risk in giving Dipolene a trial we willingly make you the following

30 Days Free Trial Offer



Buy a can of Dipolene from your dealer, if he does not handle it then send to us direct—we pay the freight. Try it 30 days and if not as represented, send it back at our expense. All dealers have authority to make this liberal offer. Accept no substitute—there's none "just as good."

Isn't that a fair, open offer?

Ask us to send you "A Budget of Real Letters" from farmers—letters like Mr. Miller's in their own words and handwriting—they'll interest you. Also circular on our dipping tank and booklet "Dipping for Dollars"—they're free. If you need a tank ask your dealer to show you our Improved Stock Tank—the best made. Free circular tells why. Round bottom prevents drowning.

MARSHALL OIL CO., Dept. E2,

Marshalltown, Ia.



tled in Eastern Kansas, coming directly from England. He at once bought up "store sheep," as stock sheep are termed in England, stocking his farm on about the same basis that he had kept sheep in England. He first came to the country in the fall. The grass was green and luxurious. Soon, however, winter set in. The sheep were fed plenty of corn, fodder, and hay, but were left to graze on frosted blue-stem on which they will never do well. It required a great deal more feed to winter them than he had expected, and while his Kansas farm was enough larger than his farm in England so that his 700 sheep had plenty of room, they did not have the green grass, turnips, and careful folding that his sheep in England had. In the spring they were in poor condition. With the coming of the grass, the sheep as well as the owner rejoiced. They were lambled and sheared under favorable conditions, the grass growing fast and abundantly. But soon after the lambing was over, the hot winds came and the pastures dried up very fast. It was in August, I think, that I first met this gentleman at the sheep-pens in Kansas City. He wanted a buyer for his sheep. I went to see them and bought them. He was elated to be rid of them and said that he felt he had made a complete failure of handling sheep in the United States and would not attempt it again. Others made just as complete failures, endeavoring to raise sheep on the open range in Central and Western Kansas. For the purpose of protection against severe storms of winter, sheds were generally constructed, the roofs were low and the sheds were left open to the south. It frequently happened during a severe storm that sheep would huddle under

\$31,500,000.00 at Risks

30,000 Members

The Farmer's Alliance Insurance Company of McPherson, Kansas

We furnish insurance at cost; 18 years of successful business. Why carry your insurance with others when you can get it in this company at much less cost. Write for full particulars of our plan.

C. F. Mingenback, Sec., McPherson, Kansas

Save Money on Oil

We Sell Premium Machine Oil at Less Than Half the Price You Now Pay.

Our Premium Machine Oil is sold at \$3.50 per barrel. Thousands are using it and find it all right.

Every barrel guaranteed, and you be the judge. Other oils cost 85c to 40c per gal.; ours costs \$3.50 per barrel. Freight rate is 32c per barrel all points within 100 miles of Benedict, Kans. For each additional 25 miles add 2c.

After receiving and using 5 gal., if not satisfactory, return the balance, with bill of lading, and I will refund full price paid for said oil.

We Can Save You Money on Cylinder Oil. Write for Particulars.

T. C. Davis, Benedict, Kansas



LITTLE STAR Grain and Seed Cleaner

A money-maker for the farm. Increases yield of every acre 5 to 15 bushels. Pays for itself every year with every 20 acres tilled. Has 7 complete riddles, 4 double wire screens, 11 in. all, and does the grain and seed work for a 160 acre farm perfectly. Has double the screen surface of any machine of its kind. Separates, cleans and grades all kinds of seed, performs all three processes at once and will perfectly clean, separate and grade any four similar seeds at the same time no matter what proportion the mixture. The cheapest, most efficient absolutely even "drop" from the "Corn Planter," edge drop or otherwise. You are sure of the exact number of grains in a hill. Removes all weeds and noxious seeds including thistles. No shifting riddles nor change of adjustment. Does work of three machines, sells for the price of one. Price complete, freight paid, \$19.98. Order today. Every machine guaranteed.

The Independent Mill Grain and Seed Separator Co., Box 10, New London, Ia.

White Hickory Flyer

Worth \$75 to \$100
Yours for \$50

You have the
choice of 3 Plans
of Payment.

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You can try the White Hickory Flyer a
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**WATERPROOF
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BLACK OR YELLOW
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Tells how much better I make buggies, why they
are better, and why I save you half. Also gives
photographs of full line of high-grade Harness.
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Station 251 Cincinnati, Ohio

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FREE TRIAL**
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KANSAS CITY, MO.

MORE CORN MONEY

INCREASE Your CORN PROFIT
By Planting Sorted Corn

No idle ground; no missing
hills; big yield sure when
you sort your seed with this
machine.
It all depends
upon the stand

We want to show you how you can make
more money out of your next season's corn crop.
All you have to do is to make sure of a perfect
stand—get a uniform number of grains in every
hill.

We manufacture the ONLY machine that
will sort your seed corn so evenly that your
planter MUST DROP a given number of grains
every time.
"Morecorn" Seed Sorter does the work.
It was put through the most critical tests at
Iowa, Illinois and other state fairs. Thousands
of corn growers sorted seed with it so perfectly
that an edge-drop planter dropped 99 per cent
more than three kernels at each drop.

If you can get your corn fields planted like
that next year won't it give you the biggest crop
of corn that you ever raised? You can do it if
you sort your seed corn with the "Morecorn"
sorter. It can be done no other way.
No planter has ever been, or ever will be
made that can drop an even number of kernels
at a drop without the kernels being uniform in
size. You cannot get uniform kernels without
sorting your corn.

Don't think of planting corn again without
investigating the work of the "Morecorn." It
will pay for itself twice over every year and
last a lifetime if taken care of.
Let us tell you more about it. Write us today.

THE MONARCH SELF-FEEDER CO.,
Cedar Falls, Iowa.

these sheds, and the snow mixed with
sand and earth would drift in and
completely bury them. Some of the
flocks, however, would come through
the winter in fair shape. With the
coming of green grass they would im-
prove rapidly. The percentage of
lambs raised would be large. The
ewes and lambs would thrive while
the weeds and grass were succulent.
Forage on the plains consisted princi-
pally, however, of short grasses that
cure early in the season, even when
not dried up by the hot winds. These
conditions are not conducive to the
furnishing of an abundant supply of
milk to the lamb by the ewe, nor does
the young lamb relish dry feed, there-
fore it resulted in a heavy loss of the
lambs, and those that lived were bad-
ly stunted. As prosperous as the sheep
industry is to-day, it would not prove
profitable to handle sheep in Kansas
on the farms or on the range, provided
the natural grasses, only, were de-
pendent upon.

I will relate two instances of suc-
cessfully handling sheep in Kansas,
also two failures. Small successes and
big failures, each, however, teach a
lesson.

A COSTLY EXPERIENCE.

A young man from Michigan, who
had been started in the sheep business
in Southwest Kansas by his father,
bought in New Mexico a class of ewes
we seldom see these days. They were
termed in market "pink eyes" and
"modocs." They had no wool excep-
ting on their backs and sides. They
were hardy animals much given to
traveling, good mothers for offspring
of like kind, but impatient and un-
motherly to the more weakly lambs,
resulting from the crossing of merino.
Four dollars per head was paid for
these ewes, and from Michigan pure-
bred Spanish merino rams were sent,
costing forty dollars per head. Wool
at the time was bringing fair prices,
but the ewes sheared so little, and
such a small percentage of lambs
matured, that the son was obliged to
call on the father for money to meet
running expenses. After two years'
hard struggle the young man's con-
tinued appeals to his father for money,
instead of sending anticipated divi-
dends, brought the father to see for
himself, whether it was the fault of
the son, the sheep, or the country that
their venture was unsuccessful. It
was a sorry lot of sheep that the father
saw, scabby and poor. It was decided
to discontinue the business, but buyers
could not be found, therefore the entire
flock was shipped to market. Com-
mission houses refused to accept them
and stand good for the charges. After
they had been in the yards three days,
the superintendent came to me saying
that something must be done with
those sheep. After we had looked up
the charges I proposed that if the rail-
road company would take off \$12.50
per car freight, and the yard company
knock off the yardage, I would pay
the balance of the freight and for their
feed. The proposition was taken to
the young man. He said he preferred
to ship them on to Chicago, but it was
impossible to get them out, as the
railroads refused to take them, except-
ing all charges were taken up and the
freight to Chicago prepaid. After a
day or two they were turned over to
me on my first proposition.

At this same time there came into
the yards a wagon load of choice year-
ling wethers that had been raised in
Kansas. I bought them at a price per
pound that net the owner about \$6.00
per head. The farmer with the wagon
load took home with him a goodly
sum, while the young man who had
several car-loads journeyed towards
his father's house on a pass, with a
stock train as far as Chicago.

The other instance to which I re-
ferred occurred in my own experience.
I bought 700 wethers for feeding, being
careful to select good quality and good
shearing type of sheep, as I had
planned to feed them through and
shear before selling. They were fed
about seven miles from Kansas City
in a lot that seemed ideal for the
purpose, but without protection from
inclement weather, excepting from
natural windbreaks. It was my
custom, for a time, to spend at least

a part of each Saturday at the feed-
lots, it being a great pleasure to watch
the way they fed and gained. Com-
mencing in December and lasting for
two months the "weather man" gave
us every variety that had ever been
heard of or experienced. It would
snow, then warm-up, then rain, then
freeze up again. The feeding
ground became a mud-hole and the
sheep were moved to a rocky bluff,
there to be found one morning, half of
them with their wool frozen to the
rocks, so that we were obliged to cut
them loose with axes. It had rained
in the night and suddenly turned cold.
I had them to doctor for the scab and
foot-rot and my pleasant half holiday
of watching them had turned to con-
tinuous labor with discouraging re-
sults. I finally disposed of them, and
while not losing any sheep to speak
of, I had lost some money and gained
much experience. This was my first
venture in sheep-feeding and probably
would have been my last, had it not
been for the man who had charge of
the sheep. He bought an old black
ewe for 75 cents and was given permis-
sion to take her out with the wethers.
She, having a mind of her own as to
where she would live, preferred the
porch of a neighbor who objected to
her company. The ewe was given by
my man to his landlady, and was ten-
derly cared for by her, with the chick-
ens. As to how well she paid for this
care you may judge when I tell you
that her twin lambs were eating size at
Easter and that she and the lambs
sold for \$9.00. I know that sheep can
be raised very profitably on the farms
of Kansas—a few head on each farm.
Recently a gentleman from the West
came to Chicago and asked that I help
him buy some pure-bred ewes. I ad-
vised him that the kind he described
would cost about \$25.00 per head. To
my surprise he said that he wanted
750. When I learned that he expected
to keep them to eighty acres of land,
I told him he had better start with 75
to 100 head. He said his land was very
fertile and worth from \$125 to \$150
per acre and that it would not pay him
to handle so few sheep. Seeing that
he was quite in earnest in the matter,
feeling confident that his eighty acres
would produce feed enough for 750
sheep, I told him of the experience of
the Englishman handling sheep in
Kansas that I have related to you. He
finally decided to buy 150 head, but
was not convinced that he could not
handle 750 on his eighty acres. He
finally concluded that it would be
cheaper to raise them himself from a
start of 150 ewes rather than make an
investment outright for 750.

He said he could raise 250 tons of
alfalfa for winter-feeding on forty
acres and that the other forty would
grow more clover and other grasses
than it would be possible for that
number of sheep to eat; that he did
not depend on the rain-fall, but could
water his pasture whenever needed.
By housing them, cutting green feed
each day during the summer, with hay
in winter and a little grain, it would
probably be possible to keep 750 sheep
on the feed produced on eighty acres
of irrigated land, but it could not be
done by pasturing. This gentleman
will find that sheep need a change of
pasture; that they will not do well
pastured so closely together from year
to year.

We have to do, however, with the
farms of Kansas that can not be irri-
gated. I am confident that on every
quarter-section of land in the eastern
half of Kansas forty good ewes can be
kept with very little expense. This
would mean an increase in the number
of sheep within our borders quite sur-
prising. The eastern half of Kansas
comprises forty thousand square
miles; one hundred and sixty thousand
quarter-sections. Forty ewes to each
quarter would amount to 6,400,000.
Ewes of the mutton type, well cared
for, should raise 125 per cent of lambs,
which would be a crop to be proud of—
8,000,000 lambs. Allowing 10 per cent
of these to replace aged ewes and
losses, we have left 7,200,000 lambs
for market. At the present market
value they would net the owners \$26,
000,000 and for the wool from the ewes
we should receive \$7,000,000, a total of
\$43,000,000 per annum, quite a hand-

CONGO ROOFING

Congo is "never leak"
high-grade ready roof-
ing. It is durable, weath-
er-proof, rot-proof, and easy
to lay. The rolls are careful-
ly tested and inspected in man-
ufacture so that every one
is perfect. No faulty rolls,
no torn edges, no waste.
Sample free for the asking.
Address

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Write
To-day
For Free
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Wire Fence 29c
48-in. stock fence per rod only
Best high carbon coiled steel spring wire.
Catalog of fences, tools and supplies FREE.
Buy direct at wholesale. Write today.
MAISON FENCE CO. Box 21 Leeburg, Va.

FENCE STRONGEST
MADE. Built
strong chole-
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sale price. Fully warranted. Catalogue free.
COILED SPRING FENCE CO.,
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HEAVIEST FENCE MADE
All No. 9 Steel Wire. Well galvanized. Weighs
more than most fences. 15 to 25¢ per rod
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Many styles and heights;
Diamond or Square Mesh;
prices low. Sold direct
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prepaid. Catalogue free.
KITSELMAN BROS.
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The only fence perfectly tight. The crimp
in the wire does it. Can't sag, bulge or loosen
from the tie wires. Made of high carbon,
crimped, spring steel wire. Never needs repairs.
**SHIMER
STEEL FARM FENCE**
Requires only half the usual number of posts.
Agents Wanted in every community to take
orders for Shimer fence. Permanent employ-
ment. Liberal profits. Permanent employ-
ment. Address nearest factory. Write for proposition.
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Spring Steel Fence & Wire Co.,
Box 210, Anderson, Ind.

**PAGE
Poultry Fence**
Strongest, best on the
market. Fences poultry
in, stock out, and lasts.
Costs less erected than
common netting, because
it requires no boards at
top or bottom and so few
posts—one every 50 feet.
You can't afford to buy
poultry fence without in-
vestigating Page. Write
for descriptions.
Page Woven Wire Fence Co.
Box 786, Adrian, Mich.

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Last a Lifetime
Manufactured by
**THE M. K. FENCE
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Write
For
Free
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EVERGREENS
Mention
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paper.
Nursery grown, hardy everywhere.
All sizes for all purposes, lowest
prices. 50 bargain lots, first class,
prepaid at \$1.00 per 100. Also Nur-
ery grown Forest Trees.
FREE!—One beautiful Black Hill
Spruce to every customer. Send
for free list and bargain sheet.
D. Hill, Evergreen Specialist
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ome revenue from the investment and the little work required.

In manufacturing and mercantile pursuits the needs of the public are studied by the twentieth century business man. He even goes further than this in order to increase sales and profits. He explores new fields, produces new articles, both useful and ornamental, thereby creating a demand. If we inquire closely into the early history of many productions that are standard articles of trade, in every-day use and indispensable, we still find they are by-products, produced from something that had for ages been considered valueless. Our farmers in this respect are in line with this progressive age, for our honorable secretary of agriculture tells us "The pig gets one luxury—dishwater. Dishwater contains preserves, molasses, pepper, tomatoes, milk, onions, steak, gravy, pickles, grease, cheese, and ex-laid dish-rags; it is sour and sweet, wholesome and toothsome." He further says: "Napoleon lost Waterloo because his army had soup, and the English bacon—and that Ingalls would have gone back to the Senate if he had eaten bacon instead of oatmeal and baked apples. If we wish to conquer in battle or rise to the glory of poetry and song, we should feed our fodder to the cattle,—eat our pork and beef ourselves." This is an extreme illustration of utilizing waste, and if such beneficent results are obtained by feeding the pig swill and then eating the hog as stated by Mr. Coburn, it appeals to me that by eating lamb chops, juicy roast mutton, lamb stew and dumplings we would grow quite away from things earthly and rise to heavenly thoughts and actions.

THE SHEEP AS A WASTE-UTILIZER.

A cleaner animal than the sheep can not be found. And as a utilizer of wastes of the farm, the sheep has no peer. If you have cattle to pasture, do not fear to turn a few sheep with them. They will nibble here and there at the clover blossoms, but you will find them looking principally for the weeds and flowers. They will trim out every fence corner; it seems to suit them best to pick around the edges. After the lambs are weaned, turn them into the corn-field. Excepting that you have too many cockleburrs, they will nip them in the bud, destroy the weeds, eat the lower blades of the corn, and after the corn had been gathered they will find the overlooked ears and scattered kernels. They will likewise clean your grain-fields, be very much at home, and thrive on the winter wheat and rye, and I doubt very much whether wheat that has been grazed with sheep would winter-kill.

In England, where rents are high, the sheep is called the rent-payer, and it is generally stipulated in the lease that a certain number of sheep are to be kept on the land. The farm where sheep are kept soon becomes fertile. The hoof of the sheep is indeed golden.

It is, however, necessary to success that well-bred sheep be kept and that they be given good care. There are splendid opportunities for pure-bred sheep husbandry. Pure-bred sheep and lambs are bringing fabulous prices. With increased consumption of mutton the demand for rams of the mutton type has grown quite beyond the supply. Can a pure-bred sheep be produced in Kansas? For answer I refer you to E. D. King, of Burlington, who raised Baby Lord, a ram that holds the world's record for weight of fleece, 54 pounds I think it was. As to the time and trouble of caring for 40 to 50 head of ewes and their lambs on the farm, I will say from personal experience that it is no more care than that of a cow and her milk, with returns many fold greater.

Sheep thrive best in the open air. Summer showers do not hurt them, but they must be protected against the cold rains for a time after shearing and in the fall and winter when their fleeces become heavy. Therefore, a well ventilated shed or barn should be one of the improvements on every farm where sheep are kept, and it should be seen that they are properly housed during bad weather. The idea prevails, I find, among farmers who have not handled sheep that they must

have hilly or rocky pastures and a great deal of shade. In truth they do better in the open. Timbered pastures for sheep have ruined many anticipations, and while they like to graze the hills, they do equally as well on any land that is well drained—just such lands as we have in Kansas. Sheep should not run year after year on the same pasture. It should be broken up and rotated with crops. They do, however, need some protection from the mid-day sun. An open grove or a single large tree provides the best shade, but in the absence of these a cheaply erected shade should be provided on a knoll if possible, where the air can have free access under it.

Like cattle, sheep are worried by flies, and will always be found seeking shade where breezes blow. They are particular about drinking, prefer pure spring water or fresh drawn from the well. They should never be forced to drink from stagnant ponds or dirty troughs.

GREEN FOOD A NECESSITY.

I have spoken of the need of green feed for successfully growing lambs. This can be had on every farm by pasturing winter wheat or rye during the fall, winter, and early spring, by sowing rape in the corn at the last plowing or in open fields; it is not too late to sow after wheat and oats are harvested. Alfalfa and turnips, as well as many other root-crops that produce abundantly on our soil, can be provided for winter feeding. Care for the ewes in a like manner as you care for the cow that you desire to have produce milk abundantly, and their lambs will abound with joy and grow apace.

I think you may have in mind asking what the results would be to our markets if the dormant possibilities of sheep-raising in Kansas were realized. While the number of sheep in the United States has decreased many millions the last decade, and now seems to be about at a standstill, the growth in our population has been greater than ever before in the history of our country. The demand for mutton increases from year to year at a rate that seems incredible. I noticed in a market paper only yesterday the statement that the supply of sheep and lambs in the Kansas City territory will fall 33 1/3 per cent below the requirements of the trade this season, and appeals are being made to the feeders of Nebraska and Northern Colorado to send shipments to that market. Conditions for feeding sheep are ideal in Kansas, yet, like breeding, it is neglected. The farmers of Colorado, although obliged to buy their corn in Kansas and Nebraska, are awake to their opportunities. The fattening of sheep and lambs, started by them a few years ago in a small way, has developed into an output of a million fat sheep and lambs each year. The question suggested as to demand was just as forcible twelve years ago, when Colorado fed a few thousand, as it is to-day.

The sheep received at one of our Western markets in a day now would have been sufficient to supply all of our markets East and West, twenty-five years ago. Now two of our slaughtering firms kill 30,000 sheep and lambs each per week, and four of them slaughter each per week, 15,000 head, making a total of 120,000 head per week—6,240,000 head per annum. There are a great many smaller concerns throughout the country that slaughter sheep and lambs, especially in our Eastern cities and on the Pacific Coast where mutton is more in favor than it is with us. I think I will not be much amiss to say that throughout the country at present there are near 15,000,000 sheep and lambs slaughtered annually.

While the present consumption of mutton is enormous, as compared with a few years ago, it amounts to only about one pound of mutton consumed to ten of beef. There is no daintier meat, nor more wholesome, than lamb or mutton, when properly prepared. I prophesy that home consumption of mutton will develop when our farmers produce the lambs, and there will be a market ready and waiting for the surplus.

From time immemorial the shepherd (Continued on page 255.)

It is easy enough to shave yourself no matter how stout your beard, if you have the right Shaving Soap, the kind which thoroughly softens the beard and makes easy work for the razor. Williams' Shaving Soap not only does this but has a healing, soothing effect on the face.



"The only kind that won't smart or dry on the face."

Send 2 cent stamp for a TRIAL CAKE of Williams' Shaving Soap, or 4 cents for a Williams' Shaving Stick, trial size, enough for 50 shaves. Address

THE J. B. WILLIAMS COMPANY

Department A
GLASTONBURY, CONN.

Williams' Shaving Soap

A Shady Transaction

If anybody sold you some lumber and if upon careful examination you discovered that it was really not solid timber but merely short pieces spliced together you would call it a shady transaction. That is about the kind of a proposition you are up against when you buy cut stay fence.

It's really not a first-class, full strength product. About half of its strength is wasted—sacrificed to convenience and speed in manufacture. Our stay wire is NEVER cut. It runs continuously up and down across the fence for many rods without an end, thus preserving and utilizing ALL the strength and service there is in the wire.

30 Days Approval. Let us prove to you that Advance Fence is the best made fence on earth. We offer to ship you all you need on 30 days approval. We want you to examine it carefully and compare its construction with other fences. You may stretch up a part or all of it and turn your stock against it. In fact give it any kind of a test you wish.

Then we will let you be the judge—absolutely. If you do not like it send it back and it won't cost you a cent as we will pay freight both ways and refund to you every cent you paid. We know that Advance Fence will please you or we would not dare make this liberal offer.

We Prepay Freight and guarantee safe delivery of shipment. You take no risk whatever. Write for our Free Fence Book and Prices.

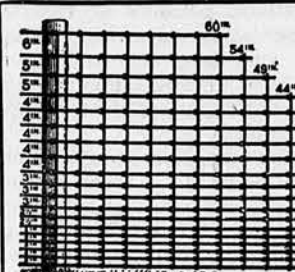
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THE BANNER RIDING ATTACHMENT

Will fit on any right or left hand wood or steel beam walking plow, lister, sod breaker, middle breaker or harrow. ALL OF THIS WITH THE SAME ATTACHMENT. A wrench all the tool for attaching. Is regulated by levers, same as a regular riding plow. Plow or lister may be adjusted to depth from 1 to 12 inches, and from 8 to 24 inches width. Lifts point out of the ground for moving. Made of malleable iron and steel; no wood or hard castings. 26-inch wheel with removable box, 2-inch oval tire, 1 1/2-inch solid steel axles, steel levers, pressed steel seat—the best of material used throughout. Weight complete 110 lbs., and will cause plow or lister to stay in as hard ground and do as good work as any riding plow or lister. 15.00 now in use. WE GUARANTEE EVERY ONE. Only \$15 from your dealer or delivered by us to your nearest station. We want an agent in every locality and we prefer men who use plows. Write for terms and full descriptions. THE IMPLEMENT AND MFG. CO., Coffeyville, Kans.



THE "DENNING" FENCING IS FAMOUS

For its "Peerless Tie" close mesh, strength and durability. Our motto is "not how cheap but how good." Yet our prices are as low as any compared with weight. We use the best galvanized steel wire. Our hog fence is superior. Our poultry fence beats the world. Our lawn fence is ornamental. Our slat corn cribs and steel grain bins are popular. Ask your dealer, or write us for catalogue.

THE DENNING WIRE & FENCE CO. : : Cedar Rapids, Iowa



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Home Departments

CONDUCTED BY RUTH COWGILL.

"Papa, What Would You Take for Me?"

She was ready to sleep and she lay on my arm,
In her little frilled cap so fine,
With her golden hair falling out at the edge,
Like a circle of noon sunshine.
And I humm'd the old tune of "Banbury Cross,"
And "Three Men Who Put Out to Sea."
When she sleepily said, as she closed her blue eyes:
"Papa, what would you take for me?"
And I answered, "A dollar, dear little heart,"
And she slept, baby weary with play,
But I held her warm in my love-strong arms,
And I rocked her and rocked away.
Oh, the dollar meant all the world to me,
The land and the sea and the sky,
The lowest depths of the lowest place,
The highest of all that's high.
All the cities, with streets and palaces,
With their people and stores of art,
I would not take for one low soft throb
Of my little one's loving heart;
Nor all the gold that was ever found,
In the busy, wealth-finding past,
Would I stake for one smile of my darling's face,
Did I know it must be the last.
So I rocked my baby and rocked away,
And I felt such a sweet content,
For the words of the song expressed more to me,
Than they ever before had meant.
And the night crept on, and I slept and dreamed,
Of things far too glad to be,
And I waken'd with lips saying close in my ear,
"Papa, what would you take for me?"
—Eugene Field.

Common Things.

Life is made up of the common things, common to us because they are present every day and because they come along in the customary course of our being. Air, that element of nature upon which our very existence is dependent, is so common that it surrounds us, fills every empty space, and every vacuum, however tiny. It is so common that we fail to appreciate it or thank the Giver for it, and too often take too little of it in our eagerness to have something uncommon or out of our reach. Doctors would not grow rich nor would the sale of patent medicine be so lucrative a business if more of this common air were used. The importance of deep breathing is more and more being realized. Its value in warding off diseases and also in curing them is appreciated more than ever before, and much stress is laid upon the practise of it and other health-giving habits. The habit of drinking plentifully of pure water is important. As a rule, too little is taken to supply the demand of nature, and instead of the impurities and germs being carried off, they lodge in the system; in the kidneys, and cause Bright's disease, or other diseases of that organ; or collect in the muscles or joints and cause rheumatism, or may cause any of the ills that humanity is heir to. The sunshine—that wonderful vitalizer, sterilizer, life-giving element! how little we seem to appreciate it, until a succession of cloudy days visit us, or sickness chains us to our darkened room. Let us not despise the common things, nor get too rushed or preoccupied to enjoy them and seek their benefits.

Women sometimes rebel in their hearts that their lot is to perform the common things of life. To wash the dishes, sweep the floors, tidy the house, care for the wants and needs of the children and husband seem to them so common, and they wonder why they must spend a life in such commonplace duties. They long for a chance to do something great—something that, in their estimation, is worth while. Too often, alas, these common women are not appreciated! Like the common elements of nature, which are essential to life and happiness and comfort, their ministrations are accepted and enjoyed as a matter of course. These common women need not deprecate themselves. These common, everyday duties, if performed conscientiously and faithfully, are not to be despised. Though seemingly common they are the foundation of great things—the foundation upon

which the very nations are builded. The home life is dependent upon the doing of these common things, and what kind of a nation would it be without the home life? If in the doing of these everyday, common duties one can look beyond and see and know the result, the monotony would disappear and the common woman would no longer consider her work unimportant. There is a tapestry made in Paris called the Gobelin's tapestry. It is the finest in the world and requires a great deal of time and patience. A workman averages only 1½ square yards a year. All this tedious work is done on the wrong side and the workman toils day after day, seeing only the rough, unsightly side. But all the time he is making a most exquisite picture and work of art that is so rare and costly it is used only as gifts to kings. And so may we, if we are faithful in the performance of our tasks, behold in the end the beautiful work of our hands; and so may we not be weary nor discontented nor despise nor call anything common that falls to our lot to do; and may we ever remember that:

"Every task however simple, sets the soul that does it free;
Every deed of love and mercy, done to man, is done for Me."

The Woman Who Achieves.

A fair share of intellect she must have and to this must be added enlightenment, ambition, determination, steadfastness of purpose, executive ability, generosity, justice, tenderness, firmness, and a certain amount of selfishness; also a willingness to make great sacrifices in order to attain certain ends and to be criticised without flinching.

A healthy body would seem a necessary adjunct to the woman who achieves, but it is not absolutely so.

There have been thousands of women who, handicapped by delicate, puny bodies, have accomplished much for the uplifting and betterment of mankind. In some lines of work, however, a perfect physical condition is necessary. Until a few generations ago, women were not supposed to be capable of achieving success only in certain prescribed vocations.

The avenues leading to great achievements were open only to man—mighty man. To-day conditions are changed. Woman has proven herself to be as capable as man in many fields of endeavor hitherto considered exclusively his own.

For example—Recently at the close of one of the leading colleges of the United States, the president received from a large business concern a request for the best man in the chemistry class to come and accept an important position with the firm. He sent back the information that, "The best man in the class is a woman." Immediately came the reply, "Send on the woman."

There are hundreds of similar cases that might be cited. Women have been admitted to the professions and followed business pursuits of various kinds as successfully as men. Among the women who have achieved fame we find writers, artists, singers, actresses, teachers, nurses, reformers, and philanthropists.

Many of our most famous women have been unmarried. A few of the best known of this class are: Florence Nightingale, Clara Barton, Susan B. Anthony, Frances Willard, and Jane Adams, of Hull House fame.

Women by nature is so constituted that she must have something to love. A healthy woman is possessed of more or less energy. If she has no husband or children to love and care for, then this love and energy must be expended upon mankind in general; some particular branch of mankind or some particular cause that she chooses to espouse.

Great achievements by women are not confined by any means to this class. In my opinion the greatest

achievement a woman can attain is to make a happy home for husband and children; to hold their love and respect while life lasts, and to live such a life that her memory will be revered and cherished by them after she is gone.

I have this opinion from the fact that our present-day civilization and the high moral standard of living that is now required of men and women in high stations of life depends upon the perfect home life—the true relationship between husband and wife. A woman may achieve the highest fame in the world of art, science, or letters, yet in her heart of hearts she would rather be the one woman in the world to some one man; preside over his home and be the mother of his children than receive the plaudits of the multitudes. MRS. JOHN HAMILTON.

Columbus, Kans.

Some Uses for Soda.

A weak solution of soda will revive the color in a dusty carpet. Keep flowers fresh by putting a pinch of soda in the water. Add a little soda to the water when boiling out enamel saucepans, and it will help to cleanse them. A spoonful of soda added to water in which dishcloths are washed will keep them a good color and sweeten them. One large teaspoonful of sal-soda will bleach a kettleful of clothes. Hair brushes need a weekly cleansing; for this purpose add one tablespoonful of soda to a quart of hot water, dip the bristles—not the back—into this and shake well, until perfectly clean. Rinse and stand on edge to dry. When the waste pipe is clogged with grease, pour down a gallon of boiling water in which has been dissolved a cupful of soda. Repeat this until the impurities are removed. In cooking gooseberries add a pinch of soda, the size of a pea, to each quart of fruit, and less sugar will be required to sweeten it. Add a teaspoonful of soda to the water in which you wash silver. Before using glass fruit-jars the second time, wash with soda water and rinse in order to sweeten them. Dampen soda and apply when bitten by any poisonous insect.—The Housekeeper.

Don'ts for Mothers.

- Don't work too hard.
- Don't try to do two days' work in one.
- Don't take on a whole lot of outside work when your hands are full.
- Don't be a fiend of neatness.
- Don't be cross.
- Don't scold.
- Don't fret nor whine.
- Don't allow yourself to be nervous.
- Don't be despondent.
- Don't be complaining.
- Don't rob yourself of sleep.
- Don't neglect the children.
- Don't forget to love and caress them.
- Don't forget that your husband is your old lover.
- Don't stand when you can sit down.
- Don't go without a lunch when you are faint.
- Don't wear uncomfortable clothing.
- Don't wear slipshod shoes.
- Don't forget to inflate the lungs often with fresh, pure air.
- Don't forget to sit upright.
- Don't slump the shoulders and become hunchbacked.
- Don't get out of the habit of walking with spine erect.
- Don't read worthless literature.
- Don't set bad examples.
- Don't forget to be kind and keep sweet.
- Don't forget that the home without mother is desolate.
- Don't forget to be a lady.
- Don't forget that you are molding characters for eternity.—Mrs. F. D. Rose, in Farmer's Sentinel.

Stops Asthma Attacks.—Toxico the Famous Vienna Formula for Asthma and Catarrh Sufferers.

Thousands of sufferers who have heretofore been unable to find permanent relief for the distressing diseases of asthma and catarrh, will be delighted to learn that a noted Vienna specialist has at last discovered a remedy that effects a permanent cure. Toxico is an internal treatment and acts directly on the mucous membranes.

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MAMA! Don't be frightened—but be warned! Every Mother knows, or should know that the terrible Mortality among children is caused by Stomach and Bowel troubles. Colic, Sour Curd, Cholera Infantum, Summer Complaint, Measles, Rashes, Scarlet Fever—even Mumps—have their first cause in constipation.

The Delicate Tissues of a Baby's Bowels will not stand rough treatment. Salts are too violent, and Castor Oil will only grease the passages, but will not make and keep them Clean, Healthy and Strong.

There is no other medicine as safe for a child as Cascarets, the fragrant little Candy Tablet, that has saved thousands of families from unhappiness.

The Nursing Mother should always keep her Milk Mildly Purgative by taking a Cascaret at night before going to bed.

No other medicine has this remarkable and valuable quality. Mama takes the Cascaret, Baby gets the Benefit.

Cascarets act like strengthening Exercise on the weak little bowels of the growing babe, and make them able to get all the Nourishment out of Baby's Natural Food.

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Home is not complete without the ever ready Box of Cascarets. Ten cents buys a small one at the Corner Drug Store.

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Washington's Birthday.

March, march, march, under the broad blue sky,
and over the frozen streets.
March, march, march, let the banners fly,
Wherever the long roll beats.
This is a gala day,
This is a holiday,
This is a birthday morn,
Washington was born.
This fair land, and here he won
Fame. Hail to our Washington!

March, march, march, over the beaten track,
Past bannered balconies;
And startle not at the cannon's crack,
That shakes the echoing skies,
George Washington was born
That February morn;
One of the whitest days
In calendars of praise;
I sacred it shall ever be
Washington and Liberty.

March, march, march, in the golden light,
And when the sun goes down,
Liberty, in luster bright,
Will wear her glowing crown.
Casting the light of stars
Across the harbor bars,
A watcher at the porch,
Lifting her flaming torch,
Stainless brow with stars im-
pearled;
Liberty Enlightening the World."

March, march, march, with joyful life
and drum,
This is a holiday!
When will the good time coming come?
When equity bears sway;
In right, not might, the day shall
win,
Light without, and light within.
—Youth's Temperance Banner.

"Let Every State Salute."

birthday ever rising bright of
glory's towering son
sheds the light of truth and right,
the light of Washington.
Every State salute the morn with
drum and trumpet and gun,
live and forty living stars are
shining now as one!

—Henry Austin.

Ivan's Reward.

WITH MAY KERR, STOCKTON, KANS.
at on a wild, bleak Western prairie
as the sun was going down, a
mn of pale blue smoke could be
rising from the top of a distant
n. The cabin faced the south. It
a small frame structure, about
teen feet in length and twelve feet
width. A few yards south of the
n there was a dim road. It was
this road that the scattering peo-
of the neighborhood made their
to the nearest town.
e little cabin, despite its lonely
oundings, was homelike and invit-
The teakettle was singing a
y tune over the newly made fire;
Ivan Lee, the only occupant, was
aring supper.
was a bright, active, fun-loving
of nineteen years, who had gone
the previous year to begin life
pioneer. Like all pioneers he

worked hard, and took but little time for recreation.

Ivan Lee was poor; and the thought of his poverty and that of his dear ones in the attic of a far-away tenement house urged him to work beyond his strength. He realized that his strength was giving way, and longed for a day of rest, one day in which he would have nothing to do; and when Ed Allen came along early that morning and gave a glowing description of a picnic that was to be held in Fall-aher's Grove the following day, he determined to go.

He thought of little but the picnic the rest of the day; and in the evening as he listened to the singing tea-kettle he was still thinking of the joyous day in the woods.

The next morning Ivan was up bright and early. His heart was lighter than it had been for many weeks. When his chores were all done, he sat down on the doorstep to wait for the boys, and as he sat gazing down the road not a happier boy could be found.

Presently he heard the sound of horses' feet—and a minute later a buggy came into the yard. An old man alighted, and in a feeble voice asked if he might stop. He had taken suddenly ill, so he said, and could go no farther.

Ivan's heart grew strangely sad. He felt a lump rising in his throat. He could not turn the old man away, neither could he give up the picnic. He did not know what to do. A terrible struggle went on in his heart. Duty and pleasure were striving for mastery.

"You may stay," he said at length, and showed the old man the way into the house.

As he unhitched the team he again heard the tramping of horses' feet.

"It's the boys!" he cried, as the wagon came in sight, and his face grew very grave. "Everybody is going!" he mused, "everybody, but me. There is nothing for me, but slavery. Suppose I might just as well make up my mind to it."

"Ivan Lee," a voice seemed to say, "your father helpless, your mother taking in washing, and you crying like a spoiled baby because you can't go to a picnic! You ought to be ashamed of yourself!"

"So I ought!" Ivan exclaimed, drawing himself up to his full height, "I am ashamed of myself!"

Just then the wagon came up. "Hurrah for the picnic!" the boys shouted, "We are bound for the picnic!"

"I'm sorry, boys," Ivan said as he went out to greet them, "but I can't go."

"Can't go!" they cried in surprise. "What's up now?" Ivan explained.

"Shoot your old man!" the driver exclaimed, whipping up the horses.

Ivan went back to the house glad in his heart that he had done his duty. He found the old man very sick. He assisted him to the bed, bathed his tired eyes, and gave him a cup of tea.

The old man seemed better for a little while, but his flushed face and throbbing temples plainly indicated that he was in a serious condition.

Toward evening he grew rapidly worse. Ivan became alarmed. The doctor was summoned, and the old man's illness was pronounced brain fever. He was delirious most of the time and fancied himself in his own home. Ivan watched by his bedside day and night. After three weeks of intense suffering, he began to recover. He then realized his situation for the first time. He was grateful for all the kindness that had been shown him, and resolved to express his gratitude in a tangible way. He was intensely interested in Ivan, and often questioned him concerning his past life and his ambitions for the future.

"It seems so cozy and homelike here," he said one evening when able to sit up. "It reminds me of happier days." As he spoke he took his pipe from the shelf and seated himself by the stove.

"Did you live on a claim?" asked Ivan, who was bustling about getting supper.

"No!" the old man replied, shaking

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the ashes out of his pipe. "I lived in the little town of Conway."

"Did you live alone?" Ivan asked. "No," the old man answered. "I had a wife and one child. My wife died in a few short years," he added, "and as to Ethel, my poor little Ethel, I don't know where she is. I haven't heard from her for these twenty-three years." "Haven't heard from her for twenty-three years!" Ivan exclaimed, pausing midway between the cupboard and table with an armful of dishes. "That is queer!"

The old man did not reply, but paced back and forth before the blazing fire. Soon the supper was ready and they sat down at the table. The old man ate but little, however, and seemed so nervous and agitated that Ivan feared a relapse and insisted upon his retiring early.

"How did you rest?" Ivan asked next morning at the breakfast table.

"I didn't rest at all," the old man said, reaching for another piece of meat. "I kept thinking and thinking."

"Thinking what?" Ivan asked.

"Thinking as how it was just twenty-three years ago last night that Ethel ran away from home and married Charley Smith."

Ivan turned pale, crossed the room, and looked out of the window. "Were you angry when you found she had gone?" he asked, trying to speak naturally.

"Angry!" the old man exclaimed, rising and walking back and forth across the floor. "I was that angry that I vowed I would never look upon her face, and I never have—wicked and cruel man that I was! Many years have I lived to regret that terrible vow. Since then I have traveled constantly hoping to forget my sorrow. Each year I go back and take a peep at our beautiful home, and give orders for any repairs that it may require, but that is all. I can not stay there."

Ivan listened to the old man's story with tearful eyes, for had he not often heard of Ethel Brown?

"The place is of no use to me, only a source of care and anxiety," the old man continued, "and I give it to you as a reward for unselfish devotion to duty. Take it, bring your tired mother, your helpless father, and little sisters and brothers home and God bless you is my prayer."

"Only on the condition," Ivan replied, "that you will come and live with us and let us care for you as for a grandfather."

The old man consented; and Ivan sat down and wrote a letter to his mother, omitting the name of his benefactor, also any description of their new home that would lead her to believe that it was anything more than a very ordinary little place. He briefly told the story of his good fortune and requested her to pack up their household belongings, bring the family with her, and meet him at Conway the following Wednesday evening.

Mrs. Lee was bending over the steaming suds when she received the letter. She eagerly read it, then handed it to her husband.

Mr. Lee and the children were delighted with the prospect of having a home of their own, but Mrs. Lee went about with the air of a funeral. "If it were any place but Conway," she would say and brush away the blinding tears.

Wednesday evening, Ivan drove down to the little station in his new double-seated carriage. He found his folks walking up and down the platform waiting for him. They hailed his approach with delight for they had not seen him for over a year.

Ivan was not a fast driver, but that night, notwithstanding the intense darkness, he lashed the horses along at a rapid rate, so desirous was he of reaching home before being called upon to make any explanation. But that was beyond all hope.

"What is the old man's name? Why did he give his place away? Where is he going to live now?" These and similar questions were hurled at him, but invariably just at such a time something would go wrong. The carriage would slip into a rut, the horses would step into a hole, a strap would break, the whip would fall out, or the driver would lose his hat, and Ivan's

whole attention must needs be directed to right the difficulty, so the questions remained unanswered.

Upon reaching their destination, Ivan assisted his father into the house, and Mrs. Lee and the children followed. Ivan then slipped into an adjoining room.

Mrs. Lee turned ghastly pale upon entering the house. She staggered and almost fell.

"What is the matter, mama?" the children cried in one breath, but Mrs. Lee made no reply.

At length, drawing a deep breath, she recovered herself enough to say, "Children, this is mama's old home. There is your grandma's picture," she added, pointing to a large portrait upon the wall. "And there is my diploma above the piano where I hung it years ago."

The old man upstairs recognized the voice, and hurried down stairs.

"Ethel!" he cried, taking his daughter in his arms, "my own little girl."

"Papa! papa!" she sobbed, "I'm so glad to see you. This is my husband, Mr. Lee," she said a few minutes later, introducing a pale, careworn man who was sitting upon the sofa propped up by cushions. "Charley lived only a short time," she added, noting the old man's confusion. "He died the next year after our marriage."

"And these are the children," the old man exclaimed joyously, shaking hands with each.

Just then the door opened and Ivan walked into the room.

"This is your grandpa," Mrs. Lee said proudly. Ivan laughed.

"Tell me something I don't know," he said.

The Little Ones

A Morning Call.

Little Miss Isabel went to play,
With little Miss Mary over the way,
And both were blithesome and both were gay.

And both were sweet as a summer day.

But alas and alack ere the hour was done,

Two little misses had raced and run
Under the shadow, out in the sun,
Rioting, laughing, noisy with fun,

Till worn with their frolic I'm sorry to say.

Two little angels fought that day.
O'er the grass they rolled—it was not play—

They bit and they scratched in the good old way.

Parted at last, the combatants were worn,

Honor was satisfied, clothes were all torn.

Each face was dirty, each one forlorn.
They kissed and made up and their love was newborn.

—Myra Williams Jarrel.

The Boy Washington.

ANNA DEMING GRAY.

It is a mistake that so great and honored a man as Washington should be the subject of foolish jest, in all the comic papers, every 22d of February.

I suppose every little boy and girl in America knows the story of the hatchet and the cherry-tree, the pony that had to be killed, and the two or three other anecdotes, that each year are told and reprinted. But perhaps few boys and girls know that these stories have no real history to prove them. They were myths—fairly stories—of a certain Mr. Weems, who traveled about the country and sold the book he had written at the farmhouses and scattered plantations.

Such a perfect and proper little boy as he pictures, who never did nor said nor thought anything wrong, would not be a natural child. History proves that George was not a prig, but a perfectly healthy, mischievous, sometimes naughty, kind of a boy, but a natural boy. If he had not been he would never have grown into the splendid man he became in after years.

"But I want to know, mother, if it's really true about the cherry-tree and the rest, 'cause if he was so dreadful good, no other little boy would understand him, or like him," a certain little girl said once. "And if it's a true story why do people always make fun of it?"

"It may have been true," I answered,



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alog. State course desired.
Allen Moore,
Chillicothe, Mo.

C. W. PECKHAM, President,
Haven, Kans.

R. R. BEALL, Manager,
Kansas City, Mo.

The National Grain & Elevator Co.

Receivers and Shippers of Grain.

This Company is conducted on the cooperative plan by the Independent Cooperative Elevators. We are the terminal for Farmers and Independent Elevators and solicit your membership and patronage.

ARE YOU POSTED

on the recent development in the Grain Trust investigation by the Interstate Commerce Commission? IF NOT, ASK US. Why don't you farmers fight the Trust? We will help you, if you will help yourselves.

DO YOU KNOW

that the President of the Kansas City Board of Trade admitted in his testimony at the hearing of the Interstate Commerce Commission that they had boycotted The Independent Farmers' Terminal Co.?

The National Grain & Elevator Co.

Kansas City, Mo.

References—The Editor of this paper.

STANNARD'S PROCESSED CRUDE OIL Kills Lice and Cures Mange. There is no Remedy on the Market as Good or as Cheap. It not only kills all lice on cattle and dogs, but all nits, and one application does the work. Does not injure hair or skin. Can be used in vats or with brush. Also kills lice or mites on chickens. Put up in new 52-gallon barrels and sold for \$5 per barrel. I have used nearly all dips on the market and I say to you, from experience, this oil is better and more effective than any of them. Why pay \$50 per barrel when you can get a better article for \$5? I also sell a heavy Pure Crude Oil as it comes from the well that is a good lubricating oil, 52 gallons for \$3.50; an excellent grease to keep plow shares and cultivating shovels from rusting. Try these oils and you will always use them. When ordering, state plainly whether you want the Processed Oil or the Pure Crude. Send remittance with order. C. A. STANNARD, Emporia, Kans., Sunny Slope Farm. Please mention Kansas Farmer.

"that he chopped one of his father's trees—lots of other little boys have done the same thing. And very likely he told the truth when they asked him about it. Lots of other little boys would do that too."

But the story is told in a foolish and ridiculous way—in a way that has made boys and girls and even grown people see nothing fine in it, but has made it a subject of jest for a hundred years. It has given the children who read it a false idea of the fine, manly, truthful boy that history proves George Washington to have been. In his "Biography of Washington," Henry Cabot Lodge says, "Even the language used in these stories Mr. Weems tells was not that spoken in Virginia in 1740, though it may have been in use some fifty or sixty years later."

All true history of Washington's boyhood proves him to have been honest and true, with nothing affected about him—the kind of a boy that could win and keep the friendship of a man like Lord Fairfax. It was Lord Fairfax who gave him his first real work. At sixteen Washington was almost six feet tall, and strong and muscular, for most of his life had been spent in the open air. Lord Fairfax owned a vast estate in Virginia, and had come to America from England to look after it.

In 1747 he engaged George to survey his estate, which stretched beyond the Blue Ridge. The boy had studied surveying for two years, and he was not afraid of hard work, so he gladly accepted this offer. With this work Washington's career really began.

What a splendid, manly fellow he must have been, to undertake and successfully finish a task like this at sixteen.

It is time we stopped thinking about and ridiculing all of those foolishly told and unfounded stories of Washington's childhood, and give this, one of our Nation's greatest heroes, the honor he deserves, as a natural, fun-loving child, a healthy, manly boy, and true and noble Christian gentleman.

Club Department

OFFICERS OF THE STATE FEDERATION OF WOMEN'S CLUBS.

President.....Mrs. May Belleville Brown, Salina
Vice-President.....Mrs. L. H. Wishard, Iola
Secretary.....Mrs. N. I. McDowell, Salina
Treasurer.....Mrs. W. D. Atkinson, Parsons
Editor.....Mrs. H. B. Asher, Lawrence
Editor.....Mrs. Grace L. Snyder, Cawker City

Our Club Roll.

Excelsior Club, Potwin, Kansas, (1902).
Women's Literary Club, Osborne, Osborne County (1902).
Women's Club, Logan, Phillips County (1902).
Domestic Science Club, Osage, Osage County (1902).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).
Haltso Club, Highland Park, Shawnee County (1902).
Cultus Club, Phillipsburg, Phillips County (1902).
Literateur Club, Ford, Ford County (1902).
Star Valley Women's Club, Iola, Allen County (1902).
West Side Forestry Club, Topeka, Shawnee County (1902).
Route 8 (1902).
Borntown Club, Grant Township, Reno County (1902).
Progressive Society, Rosalia, Butler County (1902).
Basant Hour Club, Wakarusa Township, Douglas County (1899).
The Lady Farmer's Institute, Marysville, Marshall County (1902).
Women's Country Club, Anthony, Harper County (1902).
Richardson Embroidery Club, Madison, Greenwood County (1902).
Fertile Reading Club, Cawker City, Mitchell County (1902).
Sunflower Club, Russell, Kansas.
The Sunflower Club, Perry, Jefferson County (1902).
Aldean Club, Sterling, Rice County (1904).
Well Reading Club, Osage County.
The Mutual Helpers, Madison, Kansas (1906).
West Side Study Club, Delphos (1906).
Domestic Science Club, Berryton, Shawnee County (1906).
Mutual Improvement Club, Vermillion, Marshall County (1903).
Columbia Reading Circle, Nemaha County.
All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor (Department.)

Clio Club.

Have before me the beautiful year-book of the Clio Club of Columbus. It is called "A Study of Beacon Lights in Music and Art," and begins with a quotation from J. G. Holland: "Artists are nearest God. Into their hands He breathes His life, and from their hands it comes in fairest articles to bless the world." There is a sample of one of their productions. This one is for February: Responses—Handicrafts.
The Marises—Mrs. S. L. Walker.
Frederique Emilie Auguste Melthe
Hannel—Mrs. Frank Hoover.

Every Niece and Nephew of Uncle Sam

should be deeply interested in what he has said about soda crackers, because they are the one food with which all of them are familiar.

Uncle Sam has given out figures showing that soda crackers are richer in nutriment and body-building elements, properly proportioned, than any food made from flour.

This is saying much for common soda crackers, and much more for **Uneeda Biscuit**, because they are soda crackers of the best quality. They are baked better—more scientifically. They are packed better—more cleanly. The damp, dust and odor proof package retains all the goodness and nutriment of the wheat, all the freshness of the best baking, all the purity of the cleanest bakeries.

Your Uncle Sam has shown what food he thinks best for his people. His people have shown that they think **Uneeda Biscuit** the best of that food, nearly 400,000,000 packages having already been consumed.

Uneeda Biscuit

NATIONAL BISCUIT COMPANY

5¢

Special Topic, Wives of Famous Composers—Mrs. Clarence Atkinson. Richard Wagner—Mrs. John McInty.

The club was organized in 1897. It was federated in 1900 and meets every alternate Monday at 2.30 p. m.

A Practical Dish-Washing Machine.

Among the labor-saving machines for the home, none will be more welcome by the housekeeper than a dish-washing machine that is a complete success. A machine that washes clothes is a good thing, of course, but when one considers that it is used only once a week, whereas a dish-washing machine is used three times a day, the value of the latter will be appreciated. Messrs Z. S. & C. L. Randleman, 7 W Grand Ave., Des Moines, Ia., have invented and are manufacturing a dish-washer that meets with all the requirements. They send their machine on free trial. Here is a sample of the many words of praise in behalf of their machine.

Mr. T. R. Wieland, Iowa Falls, Ia., says: "The dish-washer does the work just fine. We have a Sharples cream-separator. We wash every part of it in the dish-washer, except the two long pieces and the tank." Thousands of these machines are in use, and our readers will do well to write for free-trial proposition. See advertisement in this issue.

Big Improvement of Disk Harrows, the Transport Truck.

The American Harrow Company, of Detroit, Mich., manufacturers of the celebrated Detroit Tongueless Disk Harrow, are this year putting on the market a most excellent improvement in the way of an attachment for their disk-harrows.

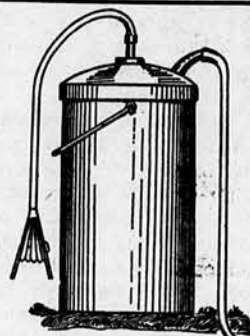
This attachment is their Transport Truck, which can be attached to any of their tongueless disk harrows in a few moments, and when attached raises the disks off the ground and the harrow rides on the forward and rear trucks.

This really converts it into a wheeled implement which can be driven over the roads without dulling the blades.

We believe every farmer will realize at once the importance of this splendid feature. It is provided with a convenient foot brake, which makes it perfectly safe in going down hill. When disking the truck can be removed and entirely out of the way in a moment's time.

The American Harrow Company have been doing a good many remarkable things during the past two years. Last year they changed their entire selling organizations and, although for twenty-five years they had been selling through dealers and jobbers, they took all of their implements out of the hands of dealers and jobbers and sold the entire output of their factory direct to farmers.

This, of course, enabled them to give a good saving in price, and as a result



Patent applied for.

Destroy the Gophers

In Your Alfalfa Fields by Using

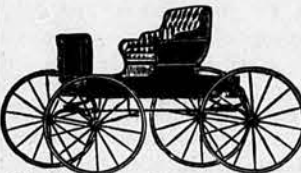
Saunders' Gopher Exterminator

This apparatus forces a deadly gas through their runways and is warranted to kill gophers within 100 feet of operation. With it a man can clear from five to six acres of gopher-infested land in a day at a cost of twenty cents per acre. The poison we use can be gotten at any drug store. Satisfaction guaranteed or money refunded. Complete outfit for \$5.

Flint Saunders, Lincoln, Kans.
Mention the Kansas Farmer.

34 Years Selling Direct

Our vehicles and harness have been sold direct from our factory to user for a third of a century. We ship for examination and approval and guaranteed safe delivery. You are out nothing if not satisfied as to style, quality and price.



No. 756. Bike Wagon with Fine Wing Dash, Automobile Seat and 1/2 in. Guaranteed Rubber Tires. Price complete, \$68.50. As good as sells for \$25.00 more

We are the Largest Manufacturers in the World

Selling to the consumer exclusively. We make 200 styles of Vehicles, 65 styles of Harness. Send for large, free catalogue.



No. 313. Canopy Top Surrey with Automobile Style Seats. Price complete, \$73.50. As good as sells for \$25.00 more.

Elkhart Carriage & Harness Mfg. Co.
Elkhart, Indiana

they were unable to fill all of the orders received last year, and they advise us that they are already being flooded with advance orders for spring.

They sell this implement on thirty days' free trial, allowing time payments when desired, and also pay all freight charges.

We are of the opinion that their Detroit Tongueless Disk Harrow is an implement every farmer who uses a disk harrow should know about, and now with the addition of the Transport Truck, they have a disk harrow proposition that every one of our readers should look into.

We would suggest that you write them for catalogue and other printed matter. Their address is

American Harrow Company,
10147 Hastings Street, Detroit, Mich.

The Economy Poultry Coop.

Every farmer who raises poultry to sell; every breeder who sends birds to his customers; every merchant who ships poultry; and every wholesale and packing-house should have a sup-

ply of Economy Poultry Coops. Here are twenty-five of the reasons why the Economy Poultry Coop should be used in preference to others. It is easier to handle; lasts longer; reduces shipping charges—20 pounds lighter; returns for half price—account folding; convenient to store—less space; easy to erect—simplicity itself; when sealed can not be tampered with; need fewer coops—returned quicker; convenient to clean—top removes entirely; no deductions for dead poultry—big saving; made of best materials—light and strong; manufactured by skilled mechanics—each coop perfect; folds to one-fourth its size; cheapest coop for price—economy; favored by all express companies; used by largest poultry-shippers in West; when erect—perfectly rigid; taking small space—express companies return promptly; built on scientific principles—very latest; thoroughly nailed and clinched with clout nails; impossible for coop to collapse—interlocks; saves its cost several times each year; saves worry over losses; destined to be standard coop; fills every profitable shipping requirement.

Dairy Interests

How About the Silo.

Hay is selling here in the bale at the rate of \$14 per ton. At the same time there is corn fodder wasting which, if it had been properly cared for last fall, would have been sufficient to have carried the stock nearly through the winter. Those who shock their corn find that not one-half of the fodder is eaten, and hence are not enthusiastic about handling it that way. There is not a silo in the country that I know of.

Farmers seem to think that the silo is too costly and not practical, and so 37 per cent of the value of the corn-crop goes to waste.

Now can not we have through THE KANSAS FARMER a thorough discussion of the silo question from those who have had experience with the silo, especially those who have stopped using it. We would like to know why they stopped. We would also like to have the cost of putting the corn into the silo as compared with the cost of shocking corn, and the facts in regard to the cheapness of getting stock through the winter when most of the feed is from the silo.

Does the corn that goes into the silo take the place of so much grain fed dry? I have studied the theory of this question for years, but can not get up courage enough to go to the extra expense of the building and buying the machinery to do the work.

Let us have both sides discussed by practical men, and figures given of the cost. I do not remember that the Agricultural College ever gave a very exhaustive report of their silage. I will say I always shock my corn and feed it as carefully as possible, but still am not satisfied with the way of handling it. The crop goes to make milk and pork. I have tried chaffing it, but hardly think it pays. E. C. COWLES.

Douglas County.

In order to thoroughly understand this matter it is necessary to give full information regarding the details connected with the production of ensilage, the siloing of the same, its relative merits as a feed compared with other feeds, and its relative cost. Experiments along this line have been carried on by the dairy department of the Kansas State Experiment Station, attempting to secure a basis upon which the cost of production could be estimated. Experiments were conducted with various ensilage crops, including alfalfa. It must be borne in mind that the cost is governed largely by the number of tons raised per acre.

Cost of growing corn per acre for silage, planted in listed drill rows three and one-half feet apart.

Cost of growing corn per acre for silage. Planted in listed drill rows three and one-half feet apart.

Rent of land.....	\$4.00
Double disking before listing.....	.86
Double listing (planting).....	1.27
Seed (one-third bushel).....	.42
Harrowing after planting (twice).....	.50
Cultivating (four times).....	2.50
Cutting.....	.80
Twine (seven pounds at 13c).....	.91
Hauling (12½ tons at 66c per ton).....	8.25

Total cost per acre.....\$19.51
Average cost per ton..... 1.56

Another field yielded 8 tons per acre, the cost of which would be \$16.54 per acre, or \$2.07 per ton. A third field produced 16 tons per acre, the cost of which was \$21.82, or \$1.38 per ton.

Cost of growing cow-peas for silage planted in close drills; namely, eight inches apart, receiving no cultivation.

Cost of growing cow-peas for silage planted in close drills; that is, eight inches apart, receiving no cultivation.

Rent of land.....	\$4.00
Double disking.....	.86
Double listing.....	1.27
Harrowing (twice).....	.50
Planting.....	.40
Seed (1.55 bus. at \$2.50 per bu.).....	3.87
Mowing.....	.35
Raking.....	.18
Hauling (7.78 tons at 66c per ton).....	5.19

Total.....\$16.62
Average cost per ton..... 2.11

Cost of growing corn and cow-peas together for silage. Planted in listed rows three and one-half feet apart.

Cost of growing corn and cow-peas together for silage. Planted in listed rows three and one-half feet apart.

Rent of land.....	\$4.00
Disking before listing (twice).....	.86
Double listing.....	1.27
Seed (peas 1-6 bu., corn 1-6 bu.).....	.63
Harrowing after planting (twice).....	.50
Cultivating (four times).....	2.50
Cutting.....	.80
Twine (four pounds).....	.52
Hauling (7.25 tons at 66c per ton).....	4.78

Total.....\$15.86
Average cost per ton..... 2.19

Cost of growing cane per acre for silage. Planted in drill rows forty inches apart.

Cost of alfalfa for silage, three crops per year. Seeded in fall of 1903.

1-6 cost of seeding.....	\$1.23
1-3 rent of land.....	1.33
Cutting.....	.35
Raking.....	.18
Hauling (1.25 tons at 66c per ton).....	.82

Total.....\$3.91
Average cost per ton..... 2.13

Cost of growing Kafir-corn per acre for silage. Planted in drill rows forty inches apart.

Cost of growing cane per acre for silage. Planted in drill rows forty inches apart.

Rent of land.....	\$4.00
Plowing.....	1.25
Subsurface packing.....	.50
Harrowing (twice).....	.50
Planting.....	.40
Seed, eight pounds.....	.16
Harrowing after planting (twice).....	.50
Cultivating (four times).....	2.50
Hoeling.....	.67
Cutting.....	.78
Twine, six pounds at 13c.....	.78
Hauling (10½ tons at 66c per ton).....	7.10

Total.....\$19.16
Average cost per ton..... 1.78

Cost of alfalfa for silage, three crops per year. Seeded in fall of 1903.

Cost of growing Kafir-corn per acre for silage. Planted in drill rows forty inches apart.

Rent of land.....	\$4.00
Plowing.....	1.25
Subsurface packing.....	.50
Harrowing (twice).....	.50
Planting.....	.40
Seed, eight pounds.....	.16
Harrowing after planting (twice).....	.50
Cultivating (four times).....	2.50
Twine, six pounds at 13c.....	.78
Hoeling.....	.67
Hauling (12½ tons at 66c per ton).....	8.05
Cutting.....	.80

Total.....\$20.11
Average cost per ton..... 1.65

The hauling of the above includes all of the expense of putting the same into the silo, except the wear and tear of the machinery and the cost of power. Ordinarily 5 cents a ton is the cost for power. The cost of the wear and tear on the feed-cutter is estimated at 10 cents per ton.

The cost of a 100-ton silo ranges from \$200 to \$350. For \$300 a good silo of 100 tons capacity can be erected. The lasting quality of the same we can not definitely estimate, but there are on record silos which have been built of stone that have been used for sixteen years and are still in good condition. The cost of such a silo for the first year would be \$3.00 per ton, and assuming that the durability of the same before in need of repair would extend over a period of fifteen years, the approximate cost would be 20 cents per ton. Hence, it is safe to estimate that under average conditions a ton of corn ensilage will cost about \$2.00.

LOSSES IN THE SILOING PROCESS.

After the green corn is put into the silo, there must necessarily be a slight loss owing to the fermentation that takes place in the cut forage. In good silos this loss occurs entirely on top of the silage, but in silos that are not air-tight there is frequently spoiled silage along the sides. Experiments conducted by Professor King in 1904 determined this loss to range from two to three per cent of dry matter in good silos. However, in our experiments we find this loss to be somewhat greater than this, ranging from six to seven per cent. The seven per cent loss in the silo would increase the cost per ton of palatable material to approximately \$2.14. In the case of dry corn-fodder the loss ranges from 27 to 33 per cent, hence there is a decided favor in the ensilage over the curing process.

THE FEEDING VALUE OF SILAGE.

From a chemical analysis we find that corn-silage contains about 21 per cent of dry matter, 1 per cent of protein, 11.3 per cent of carbohydrates, and 0.7 per cent of fat. For sorghum we find that there is 23.9 per cent of dry matter, 0.6 per cent of protein, 14.9

STRENGTH

DURABILITY

SIMPLICITY

no other separator so strongly built, or so simple in construction.

Sharples Tubular Cream Separators

get all the cream, have low supply can, are easy to run, easy to clean, because there is only one little piece in the bowl to cleanse after each running, and the machine oils itself. It combines Utility, Simplicity and Durability. A glance at the pie-plate construction of most separators will give you a fair idea of what we mean by "simple construction" and "strength." For full information about the Sharples Tubular write for booklet E. 165



Mr. R. Carpenter, Davenport, Wash., says "Having used a Sharples Cream Separator over sixteen years can say it is just fine."

THE SHARPLES SEPARATOR CO.
Toronto, Can. WEST CHESTER, PA. Chicago, Ill.

Good Cows at \$15

Almost any man will pay that much for a first-class cow. Thousands of men have the cows but are losing \$15 on each one because of faulty dairy methods. Government and State Experiment Station reports show that if the milk from every cow in the country was passed through a first-class separator the saving to the cow owners of the United States would amount to \$200,000,000. It looks big but it's a fact. It means just \$15 loss on each average cow by the employment of milk pans, cans and other gravity processes of securing the cream. Your cows may be helping to swell this mighty fund. You can stop your part of the loss by the use of our

Great Western Cream Separator



Our catalogue tells all about this latest improved and most thoroughly up-to-date machine on the market, embodying everything which is best, such as a Perfect Skimming, Self-drawing, and Self-washing Bowl, Low-down Supply Can, High Crank, Ball Bearings—hence the easiest running separator made; a machine with shafts that never wear out. Bearings that can be easily and cheaply replaced; a machine with all its gears running in a spray of oil. It fully illustrates and describes a machine that is always ready for service, and will last as many years as you continue in the Dairy Farming Business. This book illustrates and describes all the essential parts of the machine; it tells of what each piece is made of, how and why the milk sours, the changes that take place, why the cream does not separate by gravity when souring begins, why the sour milk is of so little value for feeding purposes, how much cream is lost by all the old methods of milk separation, i. e., the shallow pans, deep setting cans, dilution separators, etc. It explains how the GREAT WESTERN SEPARATOR saves all this cream, making a profit of 12 to 15 dollars for each cow you milk; it tells you of the best methods for raising calves and about the most prominent breeds of cattle; it tells what thousands of men have been trying for hundreds of years to accomplish and how we have succeeded; it tells you how to make your cows keep you instead of you keeping the cows.

If you are milking two or more cows, write us at once as follows:

"I am keeping cows. Send me your Book No. 5078 of the Great Western Cream Separator. It is Free. Ask for it today. Don't buy a separator of any kind or milk again until you send for our catalogue. Address
Smith Manufacturing Co., 158-164 EAST HARRISON ST. Chicago, Ill.

Before You Buy a Cream Separator
You owe it to yourself to investigate

The Peerless

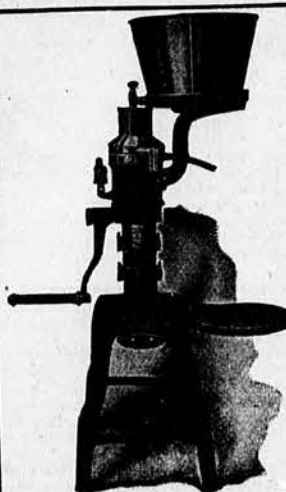
Because: The Peerless is different from all others and its points of difference are in your favor. It is the only machine that has a combination of the Hollow and the Disc bowl. That means double capacity or a smaller bowl for the same amount of work. That insures easier turning, less wear, easier cleaning and better cream—it doesn't break the large fat globules.

It Skims to a Trace

Write for free Catalogue, Guarantee and Special Terms.

Waterloo Cream Separator Co.

115 E. 2d Street, Waterloo, Iowa
Mention The Kansas Farmer.



per cent of carbohydrates, and 0.2 per cent of fat. For alfalfa there is 27.5 per cent of dry matter, 3 per cent of protein, 8.5 per cent of carbohydrates, 1.9 per cent of fat. This is compared with such hay as timothy, which contains 86 per cent of dry matter, 2.8 per cent of protein, 43.4 per cent of carbohydrates, and 1.4 per cent of fat. In the case of mixed grasses the hay contains 87 per cent of dry matter, 5.9 per cent of protein, 40.9 per cent of carbohydrates, and 1.2 per cent of fat. In the case of clover there is 78 per cent of dry matter, 5.7 per cent of protein, 32 per cent of carbohydrates, and 1.9 per cent of fat. From this we notice that with the average hays one pound of dry hay is equal to between three and four pounds of silage, depending somewhat upon the kind of hay.

Corn silage is not good to be fed alone for the reason that it is not a balanced ration in itself, and is too bulky and too succulent. However, it is an excellent feed in connection with some dry feeds. An experiment carried on by Mr. Jordan at the New York Experiment Station shows that 8 pounds of silage are superior to 1.98 pounds of hay, mostly timothy, mixed with clover, the quantity of digestible material being the same in both cases.

Mr. W. P. Wing, of the New York Station, in bulletin 97, states the following: In the results of ten years' experience made in different years where corn-silage formed a part of the ration, there has been an increase in the milk flow accompanying the use of corn-silage in the ration, and at the same time an increase in the amount of fat and the percentage of fat not diminishing. At the value of food given milk has very generally been produced at a lower cost, and the cost of the production of fat has been lower while silage has constituted a part of the ration.

In the experiment carried on by Mr. Voorhees, of the New Jersey Experiment Station, he states: "For the milk and butter-fat production, the feeding value of the dry matter of ensilage is greater than that of dry fodder. The yield of milk was 12.8 per cent greater and the yield of fat was 0.4 per cent greater in the ensilage than in fodder corn."

Prof. J. L. Hills, of the Vermont Experiment Station, report of 1901, states that a hay and grain-ration was fed with and without silage in alternating periods to six cows. When one-fifth of the hay was replaced by the silage, the yield of the milk and butter-fat was increased 7 per cent, the silage ration being much more profitable. The same experiment has been conducted at the Kansas Experiment Station, in which a per cent increase of butter-fat was noted.

It is now fully recognized that it is advisable to silo some leguminous feed in connection with corn-silage. A number of experiments along this line have been recorded, one at the Delaware Station, the results of which are given in Delaware bulletin No. 26, comparing cow-pea silage with bran for milk-cows. The result of an experiment to demonstrate that silage made from Southern peas is a substitute for corn was briefly reported. This required a careful daily record of those cows for a period of three months. The result in brief was that one pound of corn and six pounds of vine silage, when chemically considered, are interchangeable. When considered on a basis of butter-fat yield, the result was in favor of the vine. Similar reports from the Delaware Station show the comparison of two rations for milk-cows in which pea-vine silage was superior to its own weight in corn-silage plus 1½ pounds of cottonseed-meal. At the same station Mr. Neale reports that three cows fed on cow-pea vine silage during the winter and stored during the summer required uniform grain-ration. The change from silage to pasture indicated a gain of 1½ pounds of butter per week. The relative cost of silage and green pasture is considered, showing an expense against the silage of \$2.91 per ton, and a ration of 25 pounds of pea-silage and six pounds of hay was found suitable for growing stock. At the Ohio Experiment Station an elaborate experiment was carried on

with a mixture of pea-vine and of soy-bean silage 1 part to 2½ parts of corn-silage. The figures used in estimating the cost of the ration were as follows: Silage, 10 cents per hundred, hay, 30 cents; stover, 20 cents; wheat bran 95 cents; cornmeal, \$1.00; oil-meal, \$1.64. Butter was rated at 25½ cents per pound, and skim-milk at 15 cents per hundred. The cows fed the silage-ration produced 96 pounds of milk and 5.8 pounds of butter-fat per hundred pounds of dry matter. Those that were fed the grain ration produced 81.3 pounds of milk, 3.9 pounds of butter-fat. The cost of feed per hundred pounds of milk was \$0.68 with the silage-ration and \$1.05 with the grain-ration. The cost of feed per pound of butter-fat was 13 cents with the silage-ration and 22 cents with the grain-ration. The average net profit per cow per month over the cost of feed was \$5.86 with the silage-ration, and \$2.46 with the grain-ration. These facts simply justify the conclusion that silage can be made to take the place of a considerable portion of the grain-ration if it contains some legumes. It is believed that by growing more of the feeds rich in protein, such as alfalfa, cow-peas, soy-beans, and siloing them or feeding them as hay, it will be possible to further reduce the grain-ration.

These are in short some of the experiments reported which are of an authentic nature. However, there are several other things to be taken into consideration, which show the advantage of silage. By filling the silo with alfalfa or other green crops early in the season, early green succulent feed will be on hand when other pastures are about to give out during the latter part of the summer. Then again the silo may be filled with corn when it is in the roasting-ear stage, and the land will thus be entirely cleared earlier than when the corn is left to mature and the corn-fodder shocked on the land, making it possible to finish fall plowing sooner and to seed the ground down to grass or winter grains. There is a particular advantage in overcoming the loss of farm hays by rains in the case of harvesting for ensilage. The same may come on immediately after the rain and there is no harm done if it should rain. The silo furthermore is an economical storage space for hays. Less room is required for the storage in a silo of the product of an acre of land than in a cured condition in a barn. A ton of hay stored in the mow will fill the space of at least 400 cubic feet. A ton of ensilage will fill a space of 50 cubic feet. Considering the dry matter contained in both feeds, we have 8,000 pounds of ensilage, which contains about as much dry matter as 2,323 pounds of hay, or 160 against 456 cubic feet. Thus, it takes about three times as much room to store the same quantity of feed material in hay as in silage.

A silo becomes especially valuable as the price of feeds raises, and wherever intensive farming is practised more cows can be kept on a certain area of land than is otherwise possible. Hence, a silo is of particular advantage where the land is high priced. Gradually as the price of feed raises the more practical will the silo become. O. ERF.

A Book on Silage Free.

A vast amount of knowledge on the subject of Ensilage, in plain practical language one can easily understand, has been boiled down to 216 pages in a new book entitled "Modern Silage Methods."

The book is library size, copyright 1906, has over 40 illustrations, and is well indexed. Many State Agricultural Colleges use it as a text book in teaching. A copy will be sent free by the publishers, Silver Mfg. Co., Salem, Ohio, to all who mention the KANSAS FARMER in writing.

The Farmer and Cream-Separator.

It is interesting to note the improvements that are being brought out to make the work easier and more pleasant down on the farm, and while the work is much easier done with improved machinery, one is now able to save that which was wasted a few

WHO IS RIGHT ABOUT THE BEST CREAM SEPARATOR?

Every cream separator manufacturer, old and new alike, claims that his separator is better than any other. WHO IS RIGHT? Who can honestly make such a claim? We will leave the answer to you but wish to submit a few facts for your consideration. The DE LAVAL machine was the original separator and it has been manufactured for twenty-eight years, twice as long as any other machine. The world's best inventors and mechanics have been constantly working and trying to better it and thousands of dollars have been spent annually in this effort. The DE LAVAL has for many years been thoroughly tested, tried, and used in every civilized country in the world and under every conceivable condition. Over 800,000 have been sold to date, several times all other makes combined. From these tests and experiences the DE LAVAL experts have learned what a cream separator must be to be called BEST. The DE LAVAL machine of to-day represents this knowledge. Every feature of its construction is the result of years of study and practical experience and the expenditure of vast sums of money. Nothing has been left undone that would help to make and keep the DE LAVAL the BEST of all separators. No separator built to-day contains any feature whatever, not used in the DE LAVAL, which has not at some time or other been tried out by the DE LAVAL experts and cast aside for something better in the present DE LAVAL construction. Consider these facts well, consult every experienced separator user you can, learn all that is possible about cream separators and then tell us WHO you think is RIGHT. Meanwhile send for a DE LAVAL catalogue of separator facts and reasons, to be had for the asking.

THE DE LAVAL SEPARATOR CO.

Randolph & Canal Sts.,
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BY HIS WIFE

AGENTS WANTED Agents are coinng money. Send 50c for Canvassing Outfit and Contract for territory.
Big Book, 7x10, Price \$2.50
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LIGHTNING PORTABLE WAGON and STOCK SCALE



All above ground. Steel frame, only eight inches high. Octagon levers. Tool steel bearings. Compound beam. Most accurate and durable. Write for catalogue and price.

KANSAS CITY HAY PRESS COMPANY

129 Mill Street, Kansas City, Missouri.

years ago, thereby increasing the profits 25 to 50 per cent.

Notable among recent improvements are those made in cream-separators. We have in mind the Improved 1907 Model separators, which the Davis Cream Separator Co., 540 North Clinton Street, Chicago, are showing in their new catalogue which they will send to any one interested postpaid upon receipt of a request. This improved machine skims to a trace, so close you would never know there was ever any butter-fat in the milk, and is easily regulated to skim cream of any thickness either low, medium, or high just as desired. The wonderful cone bowl is made so perfect it is never out of balance.

Another thing, if you knew the low prices these machines are selling at straight from the factory, you would be surprised and want to buy one, but price is not the only good thing about this machine. While prices are low the quality is high and each machine fully guaranteed. We would advise any one interested in separators to write at once for Catalogue No. 125. Address as above.

With high-grade standard cream-separators selling at such low prices, we can't help but feel that any dairyman who does not now buy a cream-separator is simply wasting 25 to 50 per cent of the profits he should have, and doing twice the work that is necessary about the dairy.

Facts for Stockmen.

No combination or figures or long line of cyphers, can give a just idea of the colossal proportions of the cattle industry as carried on by American farmers and ranchmen.

Statistics of a year or so back tell us that 17,000,000 cows and more than 43,000,000 other horned cattle, roamed the great ranges of the West, or fed in farm yard and stable in every State of the Union. All this stock reaches a total valuation of one thousand three hundred million dollars—figures too large to get hold of with any clear comprehension. Now, in view of the immensity of this great business, what would it become in the future if all needless waste were eliminated? For there is waste, enormous and useless. Cattlemen are just beginning to realize how much has been lost by lack of system and the happy-go-lucky methods of a past generation of great cattle kings, and how great a loss there still is to-day in every stable

and on every farm. Success now depends upon economical methods—not on the thousands of head a man counts in his herds. Every pound of hay or grain is carefully reckoned with in these days, and the individual animal required to return the greatest possible growth or increase for the outlay. To further this desired result, knowing feeders give Dr. Hess Stock Food in small doses twice a day, because experience proves its great value as a digestive tonic and flesh builder. Common sense tells us that an animal in confinement is surrounded by unnatural conditions. When such conditions are made still more unnatural by the use of dry feed, nature must be assisted in her struggle for a proper balance and action of animal function. Dr. Hess Stock Food maintains this balance and activity of the animal economy by so assisting and strengthening the digestive organs that the maximum amount of nutriment is assimilated and converted to growth, fattening, or secretion of milk. That Dr. Hess Stock Food actually accomplishes this desired end is abundantly proved by the unsought testimonials of thousands of successful feeders, and by the endorsement of the Agricultural Department at Washington. Furthermore, Professors Quidman, Winslow and Finlay Dun—acknowledged authorities on such subjects—state that bitter tonics, iron for the blood, and nitrates to expel poisonous matter (all of which enter into the composition of Dr. Hess Stock Food) are essential in maintaining the highest degree of animal health and efficiency. With such abundant proof of actual value, farmers everywhere are turning to Dr. Hess Stock Food as the one thing necessary to put the feeding business on a paying basis. By its aid the margin of profit, sometimes so narrow as to come dangerously near actual loss, is increased till a year's operation shows a substantial balance on the right side of the ledger. Bear in mind, then, that nothing "tones up" a feeding animal, gives such good health and increased appetite, as Dr. Hess Stock Food.

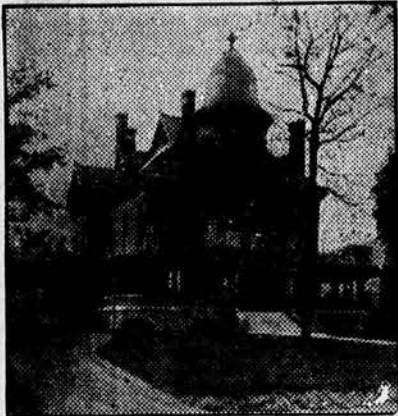
A little twice a day in grain ration solved the feeder's most serious problem, and places his business in the front rank as an agricultural stand-by.

"The trouble with humanity is, men dislike so much to give themselves to God just as they are."

Mrs. Cora B. Miller Makes a Fortune

Started a Few Years Ago With No Capital,
and Now Employs Nearly One Hundred
Clerks and Stenographers.

Until a few years ago Mrs. Cora B. Miller lived in a manner similar to that of thousands of other very poor women of the average small town and village. She now resides in her own palatial brown-stone residence, and is considered one of the most successful business women in the United States.



Mrs. Miller's New Residence Earned in Less Than One Year.

Several years ago Mrs. Miller learned of a mild and simple preparation that cured herself and several friends of female weakness and piles. She was besieged by so many women needing treatment that she decided to furnish it to those who might call for it. She started with only a few dollars' capital, and the remedy, possessing true and wonderful merit, producing many cures when doctors and other remedies failed, the demand grew so rapidly she was several times compelled to seek larger quarters. She now occupies one of the city's largest office buildings, which she owns, and almost one hundred clerks and stenographers are required to assist in this great business.

Million Women Use It.
More than a million women have used Mrs. Miller's remedy, and no matter where you live, she can refer you to ladies in your own locality who can and will tell you sufferer that this marvelous remedy really cures women. Despite the fact that Mrs. Miller's business is very extensive, she is always willing to give aid and advice to every suffering woman who writes to her. She is a generous, good woman and has decided to give away to women who have never used her medicine \$10,000.00 worth absolutely FREE.

Every woman suffering with pains in the head, back and bowels, bearing-down feelings, nervousness, creeping sensations up the spine, melancholy, desire to cry, hot flashes, weariness, or piles from any cause, should sit right down and send her name and address to Mrs. Cora B. Miller, Box 5462 Kokomo, Ind., and receive by mail (free of charge in plain wrapper) a 50-cent box of her marvelous medicine; also her valuable book, which every woman should have.

Remember this offer will not last long, for thousands and thousands of women who are suffering will take advantage of this generous means of getting cured. So if you are ailing, do not suffer another day, but send your name and address to Mrs. Miller for the book and medicine before the \$10,000.00 worth is all gone.

TAPE-WORM Expelled alive in 60 minutes with HEAD or no charge. No fasting, no sickness, no pain. Medicine pleasant and perfectly harmless.

Medicine sent to any part of the country. Large booklet containing valuable information FREE. Illustration shows segments (joints) of common tapeworm in different stages of contraction and expansion, these joints pass in the stool, also crawl away from one troubled with tapeworm.

DR. M. NEY SMITH, SPECIALIST.
Office, 509 Pine Street, ST. LOUIS, MO.

Don't Eat Glucose.

Use our Percolator (the family size and with the simple use of granulated sugar and cold water, make the purest and best syrup in the world, at a much less cost than you are paying for glucose or corn syrup. Operation perfectly automatic. Syrup cannot sour or crystallize. No waste. Price \$2.50. Write for full information.

Ever-Ready Syrup Percolator Co.,
188 C. Menree St. Chicago
Agents wanted.

BEE SUPPLIES

We can furnish you bee and all kinds of bee-keepers' supplies cheaper than you can get elsewhere, and save you freight. Send for our catalogue with discount sheet for early orders.
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7th and Quincy, Topeka, Kans.

GUNS \$2.95 Single \$6.75 Double
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WE SAVE YOU MONEY.
Catalog for 3 cent stamp.
POWELL & CLEMENT CO.
410 Main St., Cincinnati.

We Will Pay Men \$85 Per Month
to travel, collect names, advertise and give away samples. Expenses advanced. Write today. H. O. Rider Company, Chicago.

The Grange

"For the good of our Order
our Country and Mankind"

Conducted by O. F. Whitney, Station A, Topeka.
Items of interest are expected from each subordinate Grange.

NATIONAL GRANGE.

Master.....N. J. Bachelder, Concord, N. H.
Lecturer.....Geo. W. G. Gault, Mullis Hill, N. J.
Secretary.....C. M. Freeman, Tippecanoe, Ohio

KANSAS STATE GRANGE.

Master.....George Black, Olathe
Overseer.....A. P. Reardon, McLouth
Steward.....R. C. Post, Spring Hill
Assistant Steward.....C. T. Minor, Selma
Chaplain.....Alice M. Munger, Manhattan
Treasurer.....Henry Rhoades, Gardner
Secretary.....A. L. Hunt, Olathe
Gate Keeper.....J. H. Smith, Lone Elm
Ceres.....Joella Beach, Winfield
Pomona.....Sarah M. Phinney, McLouth
Flora.....Ellen Cady, LaCygne
L. A. Steward.....Effie Cline, Larned

EXECUTIVE COMMITTEE.

George Black.....Olathe
A. L. Hunt.....Olathe
E. W. Westgate, chairman.....Manhattan
J. C. Lovitt.....Bucyrus
O. F. Whitney.....Topeka

A Sketch of Master Geo. Black.

George Black, the present master of the Kansas State Grange, has been an energetic and continuous member of the Grange for thirty-four years. (There are very few people who know his exact age.) He came to Kansas in 1866, coming here soon after being mustered out of the army where he had served three years. He was a member of the 18 Ohio Volunteer Infantry, 2d Brigade, 2d Division, 23d Army Corps. He was with General Sherman in the Atlanta campaign and participated in the capture of that city. Then under General Thomas he started North. He was at the battles of Columbia, Franklin, and Nashville. When the war ended he was in North Carolina, and like a true soldier he quit fighting and has ever since been found in the front ranks of the upbuilders.

He was secretary of the Kansas State Grange for twenty-six years and only laid by those duties to assume those of master.

He obtained the charter of the Johnson County Cooperative Association of Olathe in 1876, and has been its secretary ever since. The association does a business of \$300,000 a year. He also procured the charter for the Patrons' Bank of Olathe in 1883 and has held the office of secretary of that institution ever since.

He was editor of the Kansas Patron, the official organ of the Kansas State Grange, for fourteen years, and was the editor at the time of the fire when the grange store building and printing-plant were destroyed.

He was here and saw the Grange grow and grow until it had a membership of 39,840 with 1,360 subordinate granges. The highest membership was reached in the winter of 1874-75 from which time it lost in numbers until a few years ago. Now it is gaining members quite rapidly. Had not our organization been founded on undying principles and for the upbuilding of humanity, we would have been like some others, numbered with the past a long time ago.

George Black has given a lifetime's service for his fellow man, and it is fitting that he should have the highest honor that our order can bestow on a fellow member.

Grange Notes.

New granges are coming in every week. Among those lately are one from Pawnee County with 89 members, one from Riley County, and one from Anderson County, each with a big list of charter members. What are you doing for the cause?

We as grangers are cautioned and requested to look after the welfare of the young. Are we doing our duty? The Government has recently issued a bulletin in regard to child labor. Only one-half the children between the ages of 10 and 15 years are in school. Now listen and see where we are—1,054,446 of 1,750,000 child laborers are employed in agriculture. This is all wrong. Stop in your mad rush for wealth and think of the crime against humanity by making bread-winners of these children. We had better organize our forces and market our products at a profit. Then the little one can

AILING WOMEN

How Many Perfectly Well Women
Do You Know?



MISS GRACE E. MILLER

MRS. W. S. FORD

"I am not feeling very well," "I am so nervous it seems as though I should fly," "My back aches as though it would break."

How often do you hear these significant expressions from women friends. More than likely you speak the same words yourself, and there is a cause.

More than thirty years ago Lydia E. Pinkham of Lynn, Mass. discovered the source of nearly all the suffering endured by her sex. "Woman's Ills," these two words are full of more misery to women than any other two words that can be found in the English language. Sudden fainting, depression of spirits, reluctance to go anywhere, backaches, headaches, nervousness, sleeplessness, bearing-down sensations, displacements and irregularities are the bane of woman's existence.

The same woman who discovered the cause of all this misery also discovered a remedy. Lydia E. Pinkham's Vegetable Compound made from native roots and herbs holds the record for a greater number of absolute cures of female ills than any other one remedy the world has ever known and it is the greatest blessing which ever came into the lives of suffering women.

Don't try to endure, but cure the cause of all your suffering. Lydia E. Pinkham's Vegetable Compound at once removes such troubles. The following letters prove this:

have an education and be better fitted to fight life's battles.

We often hear some of our brethren say that there is too much red tape about our initiation. Such is not the case. Our ritual is a living poem, and every sentence embodies a beautiful thought. Instead of having the ceremony abridged, it should be performed in full. Rehearsals to familiarize the members with its workings should be held often, and then when new members come into the fold, we can better express the beautiful sentiments of our grand and good ritual.

Sometimes new subordinate granges fall to understand some things in our ritual, and for the benefit of these brothers and sisters, we will endeavor to answer inquiries of that order. If we get any questions too hard for us, they will be referred to our ex-master, E. W. Westgate, who is the best ritualist in Kansas and perhaps in the United States. Address all letters as directed at the beginning of this page.

How to Save Money in Buying Farm-Implement.

"Think twice before you act" is an old saying that could be applied by purchasers of farm-tools with much profit. There is no question but the farmers of this country waste thousands and thousands of dollars every year through unwise purchases of farm-implements.

The greatest mistake, we believe, is made in purchasing tools of comparatively unknown reputation. The result is that when actual use has demonstrated them to be cheap and shoddy, the purchaser has little if any recourse for recompensation. It is easy to buy them, for the price is very often a big inducement, in fact, the thing that sells them, but it is a very different matter to get satisfaction from the maker, because he can't afford to "make good" an article he is obliged to make so cheap in order to sell it at the low price it is offered.

If there is anything in which cheap-

Mrs. W. S. Ford of 1938 Lansdowne St., Baltimore, Md. writes:

Dear Mrs. Pinkham:—
"For four years my life was a misery to me. I suffered from irregularities, suppression, terrible dragging sensations and extreme nervousness. I had given up all hope of ever being well again when Lydia E. Pinkham's Vegetable Compound was recommended. It cured my weakness and made me well and strong."

Miss Grace E. Miller, of 1213 Michigan St., Buffalo, N. Y. writes:

Dear Mrs. Pinkham:—
"I was in a very bad condition of health generally; irritable, cross, backache and suffered from a feminine weakness. Lydia E. Pinkham's Vegetable Compound, cured me after all other medicines had failed."

What Lydia E. Pinkham's Vegetable Compound did for Mrs. Ford and Miss Miller it will do for other women in like condition. Every suffering woman in the United States is asked to accept the following invitation. It is free, will bring you health and may save your life.

Mrs. Pinkham's Invitation to Women.

Women suffering from any form of female weakness are invited to promptly communicate with Mrs. Pinkham, at Lynn, Mass. From the symptoms given, the trouble may be located and the quickest and surest way of recovery advised. Out of her vast volume of experience in treating female ills Mrs. Pinkham probably has the very knowledge that will help your case. Her advice is free and always helpful.

ness is in reality expensiveness, it is low priced farm-machinery. The reason is plain if we'll only stop and consider it properly. For instance, take a drill or cultivator. A few dollars saved in first cost is soon lost in time and trouble because of failure to work properly or inferior work in the field. Again, it is bound to "play out" from one to five years or more sooner than a reliable tool, and in the end you are obliged to buy two such drills or cultivators where one good dependable tool would last and do perfectly satisfactory work.

It's just such judgment and management that keeps many farmers on the grindstone and in debt. It's what we term false economy and a most dangerous practise too. Economy is an ideal motto for the farmers, but be sure it is true economy, particularly in the purchase of the tools you need, for tools only are good, hard dollars at stake but the results at the harvest time must be considered, and good crops require good tools.

Our advice is simply this: Buy farm-implements made by well-known, reliable manufacturers and avoid all imitations. You'll find it will save you many dollars instead of taking the risk of loss and disappointment. Then, too, for any reason your purchase is not up to standard, you can be assured you will get fair, square treatment. Should you need this spring a drill or cultivator, look up the advertisement in this issue of that old, reliable firm of P. P. Mast & Co., Springfield, Ohio, and send for their 1907 catalogue.

Here is a firm who have been making farm-implements for over a century, which certainly guarantees quality and the best implements that experience and skill can produce. You'll find their goods well worth the price they ask and bargains compared to the cheap, unknown kind. Again, they are sold through your dealer, which gives you a home endorsement and protection well worth considering. No doubt you are familiar with the "Buckeye Farm Tools," but you will be unusually interested in this year's line. Ask for their 1907 catalogue and mention this paper when you write.

The McMillan Fur & Wool Co., Minneapolis, Minn., have mailed their new circular, which we have here for reference. This house has been established some twenty-eight years and on account of their extensive business, which minimizes the proportion of fixed expenses, are in a position to pay high prices. They make a specialty of receiving goods through agents, and shippers find returns satisfactory.

Dollar Package FREE

Man Medicine Free

You can now obtain a large dollar-size free package of Man Medicine—free on request. Man Medicine has cured thousands upon thousands of weak men. Man Medicine will cure you; restore you to full strength. Man Medicine cures vital weakness, nervous debility, early decay, discouraged manhood, blood poison, brain fog, backache, prostatitis, kidney and bladder trouble and nervousness. You can cure yourself at home by Man Medicine, and the full-size dollar package will be delivered to you free, plain wrapper, with full directions how to use it. The full-size dollar package free, no payments of any kind; no receipts; no promises; no papers to sign. It is free. All we want to know is that you are not sending for it out of idle curiosity, but that you want to be well, and become your strong, natural self once more. Man Medicine will do what you want it to do—make you a real man. Your name and address will bring it; all you have to do is to send and get it. We send it free to every discouraged man. Interstate Remedy Co., 1468 Luck Bldg., Detroit, Mich.

\$10.00 Sweep Feed Grinder. **\$14.00 Galvanized Steel Wind Mill.**

We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

CURRIE WIND MILL CO.,
Topeka, Kansas.

FURS, HIDES, PILLS.

McMILLAN FUR & WOOL CO.
MINNEAPOLIS, MINN.

TRAPPERS' GUIDE FREE TO THOSE WHO SHIP FURS.
WRITE FOR OUR PRICE CIRCULAR. PRICE OUR FOR WRITE.

BOWSHER

(Sold with or without elevator.)
Crush ear corn (with or without shucks) and grind all kinds of small grain, and head kaffir. Use Centrifugal Grinders. Different from all others.

LIGHTEST RUNNING.
Handy to Operate. 7 Sizes—2 to 24 h. p. One size for wind-wheel use.

Also Make Sweep Grinders, both Geared and Plain.

C. N. P. Bowsheer Co.,
South Bend, Ind.

FEED MILLS

Canadian Government FREE FARMS

OVER 200,000 American farmers who have settled in Canada during the past few years, testify to the fact that Canada is beyond question the greatest farming land in the world.

Over Ninety Million Bushels of Wheat from the harvest of 1906 means good money to the farmers of Western Canada, when the world has to be fed. Cattle Raising, Dairying and Mixed Farming are also profitable callings. Coal, wood and water in abundance; churches and schools convenient; markets easy of access; taxes low. For literature and information address the Superintendent of Immigration, Ottawa, Canada, or the authorized Canadian Government Agent **J. S. CRAWFORD**, 125 W. 9th St., Kansas City, Mo.

The Kansas State Agricultural College

OFFERS courses in Agriculture, Domestic Science, General Science, Mechanical Engineering, Electrical Engineering, Architecture, and Veterinary Science. Also short courses in Agriculture, Dairying, and Domestic Science. Admission direct from the country schools. A preparatory department is maintained for persons over eighteen. Necessary expenses low. Catalogue on request. Address

PRES E. R. NICHOLS,
MANHATTAN, KANS.

Sheep-Raising in Kansas—A Neglected Industry.

(Continued from page 251.)

and his sheep have been the subject of song and story, and when the shepherd is faithful to his charges no animal can be more attractive. At our fat-stock shows you will find the sheep receive their full share of admiration. Say, ye that know, ye who have felt and seen, Spring's morning smiles, and soul-enlivening green, Say, did you give the thrilling transport way, Did your eyes brighten when young lambs at play, Leaped o'er your path with animated pride, Or gazed in merry cluster by your side.

A few begin a short but vigorous race, And indolence, abashed, soon flies the place; Thus challenged forth, see thither, one by one, From every side, assembled playmates run; A thousand wily antics mark their stay, A starting crowd impatient of delay. Like the fond dove from fearful prison freed, Each seems to say, come let us try our speed; Away they scour impetuous, ardent, strong, The green turf trembling as they bound along; Adown the slope, then up the hillock climb, Where every mole-hill, is a bed of rhyme.

Then, panting stop; yet scarcely can refrain,— A bird, a leaf, will set them off again; Or, if a gale with strength unusual blow, Scattering the wild briar roses into snow, Their little limbs increasing efforts try; Like the tom flower the fair assemblage fly.

The Veterinarian

We cordially invite our readers to consult us when they desire information in regard to sick or lame animals, and thus assist us in making this Department one of the most interesting features of The Kansas Farmer. Kindly give the age, color, and sex of the animal, stating symptoms accurately, and how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply all letters for this Department should give the inquirer's postoffice, should be signed with full name and should be addressed to the Veterinary Department of The Kansas Farmer, Topeka, Kansas, or to Dr. C. L. Barnes, Veterinary Department, Kansas State Agricultural College, Manhattan, Kansas. If in addition to having the letter answered in The Kansas Farmer, an immediate answer is desired by mail, kindly enclose a 2-cent stamp. Write across top of letter: "To be answered in Kansas Farmer."

Puffs on Hock Joint.—I have a large colt, coming 2 years old, that has puffs on its hock joints. One is worse than the other. They are something like thoroughpin and go clear through. At times they become worse. They have been this way since late in the summer. I thought perhaps it was caused by stamping flies. The colt is not lame. What shall I do for it?

Liberal, Kans. **G. P. W.**
Answer.—I would advise you to secure from the firm of Haussman & Dunn a thoroughpin truss. Use it on your animal during the day and then at night. Use tincture of iodine over the affected part. Use the iodine every evening until it becomes sore, then stop using it.

Kidney Trouble.—I wish to get some advice from you in regard to a 2-year-old filly. Sometimes I noticed her dragging a little in the hind legs, also a little stiff over her kidneys. Her hair looked a little rough about October, and in November she began to show a little lameness. About December 1 she could not move about at all, for she was very lame in her right hind leg. She appeared as though stifled, so I applied a blister over her stifled but did not seem to help any. I noticed also that she was very wet in the mornings and was so weak that she could not get up without assistance. I treated her for kidney trouble and notice that she is very much better with the exception of being a little stiff in her back. Will you kindly advise me what to do for her?

Inman, Kans. **P. G. H.**
Answer.—In addition to what you have already done for your mare, secure from your druggist Sanmetto, which is a specific for kidney trouble. Give ½ ounce of the Sanmetto in 2 ounces of water with a syringe three times daily. You can easily open the mouth and with a syringe throw the medicine back over the base of the tongue which you have probably already done in giving medicine. In addition to giving the Sanmetto, apply a good stimulating liniment over her

loins and kidneys and I believe you will be successful in making her come out of the trouble all right.

Mare Has Kidney Trouble.—I have a 9-year-old mare that has been troubled with her water for over a year. At first she would urinate about every hour, but now it is quite seldom and at times it dribbles from her. What can I do for her? Was advised to feed alum and water but it did no good.

Zurich, Kans. **S. T. S.**
Answer.—I would suggest that you secure from your druggist a bottle of Sanmetto and give your mare ½ ounce of the Sanmetto in 2 ounces of water three times daily. I think you will see immediate relief from her trouble.

Thrush in Horses.—Thrush is a disease of the foot, which is recognized by an excessive discharge of ill-smelling matter from the cleft of the frog. Thrush is caused most commonly from the filthy condition of the stable in which the animal is kept. Mares are most liable to have the hind feet affected, when filth is the cause, while geldings and stallions develop the disease more readily in the fore feet. Hard work on the stony, hard, and rough road may start the disease, as may also the changing from dryness to moisture. Some animals are simply predisposed to the disease, especially if they have contracted heels, scratches, and vavicular disease.

The symptoms of thrush are at first simply a slight increase in the moisture in the cleft of the frog, the discharge being very offensive. The water discharge changes in a short time to a thick, pus-like material which soon destroys the frog, and the foot becomes extremely sore. The patient becomes lame and the foot feverish.

Treatment.—Thrush is treated best by cleanliness, the removal of any of the above causes so as to return the frog to its healthy condition; the diseased and ragged portions of the horn should be cut away; a pledget of cotton pushed down in between the cleft of the frog to remove the pus is very beneficial; then the cleft of the frog should be cleaned out with hydrogen peroxide, using it the full strength; after this pack the cleft of the frog with calomel, and if the calomel can not be retained by pushing some cotton in between the cleft of the frog, it may be necessary to put a bandage on the foot.

Preventive treatment consists in keeping the stable clean, free from the accumulation of litter and urine; keep the feet in a healthy condition by packing them from time to time in antiphlogistine or blue clay.

Gelding Has Itch.—I have a 2-year-old gelding that I think has the itch. His head, neck, and front quarters seem to be covered with pimples. Some hair is gone and his mane is nearly all rubbed off. He is biting all the time and rubbing himself against the fence. He has been this way all summer. Please advise me what to do with him.

Canton, Kans.
Answer.—In regard to the gelding that has the itch, will say that several preparations have been found for this trouble but that nothing is quite so good as the lime and sulfur dip. We are mailing you a press bulletin on the preparation and use of the dip, which I trust you can use on your animal, and would therefore recommend that you use the preparation every ten days until you have given the animal four applications. You can scrub the dip on the affected parts with a stiff cleaning brush, and I think you will be repaid for the trouble.

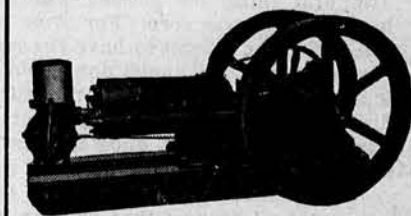
Chronic Indigestion.—I have a 12-year-old black mare that has been troubled with irregular sick spells ever since we bought her four years ago and probably before then. She has every symptom of colic but does not bloat. Will roll, lie down, and get up frequently. Will lay on stomach with feet out; also bite at stomach and lay stretched out on one side. Would like to know what ails her, and what to do for her. Have tried a good many remedies.

Hiawatha, Kans.
Answer.—I would advise your securing from your druggist 8 ounces of eucalyptol. Give 2 ounces of the eucalyptol in ½ pint of raw linseed-

NEWTON'S HEAVE AND CURE CURE
A VETERINARY SPECIFIC.
IS YOUNG OR OLD, ONE TO TWO CANS
will cure Heave. \$1.00 per
can. Of dealers, or express
prepaid. Send for booklet.
The Newton Remedy Co., Toledo, O.

WATERLOO VAPOR COOLED GASOLINE ENGINES

The only horizontal vapor cooled gasoline engine in the world. Absolutely frost proof and cannot freeze.



(Patented May 15, 1906.)

The king of all gasoline engines. Our catalogue will tell you all about them, also our power and sweep feed grinders. Send to-day.

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A scientific Account Book for farm bookkeeping. Specially prepared and adapted for all farm accounts. Contains 200 pages 10 to 13 inches with headings printed in for all farm and live stock accounts. Each account is accompanied by instructions as to what to charge or credit in that account—really an Automatic account book. Use this book and know what your expenses are and what you are making on each department of your business. Price \$2.00 prepaid to any part of the United States. Money back if you want it. Descriptive circular mailed on request. Ten cents in stamps will bring you a 50-page INSTRUCTOR in Business Writing and Lettering, regular price \$1.00. Address

H. G. PHELPS & CO.,
Bozeman, Mont.

Convulsion, Fits, then Epilepsy.

Dr. Miles' Restorative Nervine has been so successful in curing these brain-wrecking diseases that there is every reason to believe that even the most hopeless cases can be benefited, if not fully restored.

We will be pleased to refer any one thus afflicted to many who now enjoy the blessing of health, after years of hopeless suffering.

"I have a son that had brain fever when two years old, followed by fits of the worst type, and he was pronounced incurable. I spent hundreds of dollars for him, without relief. After about fifteen years he became so bad that we sent him to Longcliff hospital for the insane, at Logansport, Ind. He was there nearly three years, but he continued to grow worse, so we brought him home July 30, 1903, in an awful condition. He had lost his mind almost entirely. He hardly knew one of the family; could not even find his bed; was a total wreck. He had from 5 to 10 fits a day. We were urged to try Dr. Miles' Nervine, and before the first bottle was used, we could see a change for the better. We have given it to him ever since, and he has had but two very light spells since last August, 1903, and then he was not well other ways. We pronounce him cured, as he can work and go anywhere. If any one wishes to ask any questions concerning this, they are at liberty to do so."

M. H. BUNNELL, Lincoln, Ind.
Dr. Miles' Nervine is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails, he will refund your money.

Miles Medical Co., Elkhart, Ind.

FREE GOLD WATCH

This watch has a **SOLID GOLD** LAPDASH ENGRAVED on BOTH SIDES, American Movement, fully warranted to keep correct time; equal in appearance to Solid Gold Watch, **GUARANTEED 25 YEARS.** We give it **FREE** to boys and girls or anyone selling only 20 of our handsome jewelry articles each. Send your address, and we will send jewelry postpaid. When sold send us \$2.50 and we will positively send you our **SOLID GOLD** LAPDASH ENGRAVED WATCH FREE of Charge. **EAGLE JEWELRY CO., DEPT. 7 Denver, Col.**

oil every two hours until you have given two doses, when the animal shows these spells, then give every six hours until you have given the contents of the bottle. I think the trouble is chronic indigestion. You should feed carefully and at regular intervals. Do not give the horse exertion after a hearty meal.

Paralysis of Lip.—I have a pet horse that was taken sick during the night. The first thing we noticed was that her under lip was sore. For some reason she doesn't seem to have the right power over it. It hangs down, but as it has been so very cold we thought at first that it might be frost-bitten. Kindly advise me at once if there is anything we can do for her.

Waddington, N. Y. Mrs. E. J. O.
Answer.—I suspect that your animal that has trouble in eating is affected with paralysis of the lips. The nerve supply from the lips comes from the nerve that passes over the lower jaw bone, just back of the ear. If you will use some stimulating liniment upon the side of the neck and base of the ear I think you will be able to remedy the trouble.

Mare's Leg Swollen.—I have a 10-year-old mare that is in good flesh. She eats well and I work her right along, but from her knees to her ankles she is rather swollen. The muscles are swollen and have been that way since last fall. She seems to be knee sprung in one leg. Do you think anything can be done for her?

Vleits, Kans. J. M. J.
Answer.—I would advise you to secure the following liniment from your druggist: Tincture of iodine, 2 ounces; tincture of capsicum, 4 ounces; tincture cantharides 4 ounces; tincture arnica 8 ounces. Mix, put tablespoonful in a pint of warm water and apply two or three times daily. A little work will not hurt the mare, but do not work her too hard.

Lame Horse.—Gray horse, 9 years old, is lame in left front foot. The trouble is of about a month's standing. Has hole through, between bar and horn part of hoof. Is very lame.

Ellington, Mo. D. C. L.
Answer.—I would suggest that you secure some white lotion from your druggist and mix with water in order to make a paste and apply as a poultice to your animal's foot. Have a veterinarian use a seton underneath the shoulder in order to restore the muscles to their former usefulness.

Stallion With Heaves.—Can you tell me if there is any cure for a wind-broken horse? I have a bay stallion, about 13 years old, but don't know how long he has been wind-broken.

Bessville, Mo. W. A. B.
Answer.—Very little in the way of treatment can be given an animal that has the heaves. The best thing to do is to use very little hay and sprinkle it so that there will be no dust. Feed largely of grain. The following stock food for horses will be good for your horse that is not doing well: 1 ounce pulverized nux vomica; 4 ounces iron sulfate; 2 ounces pulverized capsicum; 4 ounces fenugreek; ½ pound sulfur; 4 ounces common salt; 8 ounces of glycyrrhiza root; mix with 15 pounds of oil-meal. Give heaping teaspoonful three times daily. C. L. BARNES.

Letters from Fellow Farmers.

There is nothing we believe that is more valuable to farmers than the interchange of ideas, experiences, and methods connected with the operation and management of their farms. It is a policy that ought to be encouraged and agitated in the farm press because it is one that is so fruitful of good.

If you, dear reader, have during the past season successfully overcome some disease among your stock; if you have by taking precautionary methods prevented a scourge getting foothold on your premises, even when it has been prevalent in your neighborhood, what better service can you render your brother farmer, though he may live a thousand miles from you, than to voice your experience in some way that he may be benefited thereby.

We are glad to note that this custom is becoming more general, and in our advertising columns in this issue is an advertisement of a well known firm which is offering to send a "budget" of letters from farmers in their own words and handwriting telling their experiences in preventing and curing such diseases as scab, mange, eczema, etc., and ridding stock of lice, ticks, fleas, etc., which certainly make very interesting and instructive reading.

We have read some of those letters and can say without hesitation that they are worth hundreds of dollars to those who keep horses, cattle, sheep, and

hogs, for the reasons that they tell the actual experiences; how the writers have battled with, conquered, and overcome contagious diseases and pests among their stock.

One man tells how his pigs were dying off with sore mouth and skin disease and how he stopped the death loss.

Another tells how he cured Texas itch and lice among his cattle—in fact those letters cover every disease and parasite that is known among farm animals.

Another man writes how he cured a colt that was badly cut on a barbed-wire fence.

Certainly such information is of unusual value to farmers. What can be learned from the experience of others is more than clear gain for it will prevent a similar loss if the lesson it teaches is followed.

Just turn to the advertisement of the Marshall Oil Co., Marshalltown, Iowa, on another page and then send for this "Budget" of original letters. They will gladly send it free postpaid to any one writing for it.

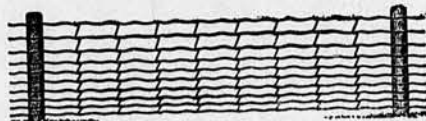
The Banner Cement Post.

This is an age of progress and improvement and the tendency is toward improvements that are permanent. At this time when timber is constantly becoming scarcer and dearer, the cement post is just what is needed to supply the universal demand for a fence-post that is permanent and not too expensive. Considering the fact that the wood post must be replaced every 8 or 10 years, the cement post is much the cheaper for it will last a lifetime, and the first cost is but a trifle more.

We call attention to the Banner cement post. Mr. George Hass, of Lyons, Kans., is advertising it in THE KANSAS FARMER. Its success has been so well demonstrated, its efficiency so well tested, its many points of excellency so well known, that it rests upon its reputation as the only post on the market, perfectly adapted to every condition and requirement.

The reinforcing device of the post consists of strands of twisted wire or twisted ribbon wire passing longitudinally through each corner, making a total of eight No. 9 wires in each post. The strength of Portland cement combined with sand and gravel in parts of three of sand to one of cement is enormous. It forms literal stone that hardens with age until it becomes like flint and capable of enduring a pressure at six months of 273½ tons per square foot. Can there be longer any doubt as to whether the Banner fence-post will endure the necessary strain of ordinary use?

The device of fastening the fence to these posts is a part of the patent and consists of a wire looped over the line wire, passing through a hole in the post and then around each side of the post and twisted to the line wire making a perfect rigid fastener, yet movable if desired. The ordinary farm post is made six inches square at the base and three inches at the top and of any desired length, being square and largest at the base. When set two and one-half feet in the ground, it is as rigid as a tree. Banner cement posts are not affected by heat or cold, moisture, frost, or fire, but will last for ages increasing in strength with age. It does not heave from the soil as other posts do—its shape and weight prevent this. Banner cement posts can be manufactured on the farm where it is needed with only small outlay to prepare for its manufacture. The Banner posts are fully protected by patent, but farm, township, and county rights can be purchased from Mr. Hass at a moderate cost. This is your opportunity to engage in a profitable business, or to use these posts and be convinced of their merit. Write George Hass, of Lyons, Kans., at once for full particulars and mention THE KANSAS FARMER.



Rickety Fences Depreciate Farm Property.

"The clothes don't make the man—but they help," says the old proverb. Good fences don't increase fertility, but they make the market price higher. Take two farms—one properly fenced—the other with gaping holes for stock to rush through to the neighbors' fields; with tumble-down posts and dilapidated boards, half up—half down; which will you buy? Which will bring the most at a forced sale?

Wise farmers are looking at all these outward appearances. They are discarding the old, decaying, profitless wooden fence. They are replacing it with one that is strong and durable like the Brown fence. This is a fence that farmers say is at least one-fourth heavier than most woven-wire fences; that it doesn't get "baggy or saggy"; that it is easily put up. One of the best things about a Brown fence is that it seldom needs repairs. It is so heavily galvanized, the wires are so solid and strong—being made of high carbon, hard coiled steel spring wire—that they can not rust for years and will successfully resist all the varying changes of frost and sunshine. The uprights are the same size as the horizontals. When a Brown fence is up, it is up "to stay up."

Two more good things that the Brown Fence and Wire Company, Cleveland, Ohio, do for the farmer. First, they send a free sample of the fence so that every man can examine it at his leisure. He can hammer it, file it, dip it in acid, heat it—test it any way he chooses. The sample will be no better than the actual wire sent him when he pays his money. Second, they pay the freight on all orders of forty rods and over. This is a great convenience. A man knows exactly what his fence will cost laid down at his home station. Prepaid freight usually is delivered sooner than the "bill to follow" kind. A 56-page catalogue gives a detailed explanation of 138 different styles of fences for poultry, hogs, horses, bulls, and stock of all kinds. It is sent free to any one.

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SPECIAL OFFER NO. 1.

The Greatest Magazine Bargain of the year. A saving of 40 per cent on the best you can buy.

Review of Reviews.....	\$3.00
Woman's Home Companion.....	1.00
Success Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular Price.....	\$6.00
Our Price Only \$3.75.	

SPECIAL OFFER NO. 2.

Another great offer which includes Country Life in America, the most beautiful magazine published.

Country Life in America.....	\$4.00
The Garden Magazine.....	1.00
McClure's Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular Price.....	\$7.00
Our Price Only \$4.75.	

SPECIAL OFFER NO. 3.

A splendid household magazine of special interest to the ladies is The American Queen.

The American Queen.....	\$1.00
The Kansas Farmer.....	1.00
Cosmopolitan Magazine.....	1.00
Regular Price.....	\$3.00
Our Price Only \$1.60.	

Pearson's Magazine, National Magazine, American Boy or Physical Culture Magazine may be substituted for the Cosmopolitan Magazine in this offer.

OUR GREAT OFFER ON DAILIES.

The Kansas Farmer one year and any one of the following dailies for the price of the daily alone:

Topeka Daily Capital.....	\$4.00
Topeka Daily State Journal.....	3.65
Topeka Daily Herald.....	3.65
Kansas City Daily Journal.....	4.00
Kansas City Daily Star and Times..	7.00
Kansas City Daily World.....	2.00

Our Clubbing Offers on Weeklies Cannot Be Excelled

The Kansas Farmer one year and any one of the following weeklies for the price named below:

Breeders Gazette.....	\$2.00
Scientific American.....	4.00
The Commoner.....	1.50
Hoard's Dairyman.....	1.50
Inter-Ocean.....	1.00
New York Tribune & Farmer.....	1.00
Western Swine Breeder.....	1.00
American Swine Herd.....	1.00
The Helpful Hen.....	1.00

A BOOK FOR EVERYBODY.

The Kansas Farmer has just bought a number of The Busy Man's Friend for its subscribers. This is a book of 250 pages of things that every one should know. It is a compendium of Legal and Business Forms. A Fund of Practical Information for Every-day Life. It contains the Busy Man's Code; The Hows of Business; Points of Law and Legal Forms; Digest of Laws; Practical Information for Busy Men; The Busy Man's Digest of Facts; Computations at Sight. The book is illustrated and bound in cloth. Any old subscriber who will send us \$1 for two new subscriptions will receive this book postpaid, as a present. This offer is good as long as the book lasts. Order early and get "The Busy Man's Friend" absolutely free.

—ADDRESS—

The Kansas Farmer Co.
TOPEKA, KANS.

PLYMOUTH ROCKS.

BUFF PLYMOUTH ROCKS—Vigorous, farm-raised; bred for size and laying qualities; eggs \$5 per 100, \$3 per 50, \$1 per 15. Sunny Slope Poultry Farm, Box 406, Effingham, Kans.

INCUBATOR EGGS from prize-winning White Rocks and White Wyandottes at \$5 per 100. W. L. Bates, Topeka, Kans.

FOR SALE—40 White Plymouth Rock cockerels, 150 one M. B. gobbler. J. C. Bostwick, Hoyt, Kans.

175 CHOICE BARRED AND WHITE ROCKS—Hawkins and Bradley strains. Cockerels \$2 up, pullets \$1 up; eggs \$2 for 15, \$5 for 45. Chris Bearman, Route 9, Ottawa, Kans.

BARRED ROCK COCKERELS—Bradley strain. Few exhibition. Also breeding cockerels and pullets. Write for prices. Mrs. W. A. Scheler, Argonia, Kans.

BARRED ROCKS my specialty; a fine lot of cockerels from prize winners for sale reasonable. Peter Reber, Neosho Rapids, Kans.

College Hill Barred Rock and Scotch Collie Farm.

Many first prize winners in Kansas and Oklahoma. 12 females scoring 91 to 91½ by McClave, Emery & Helmlock. Hens and eggs to order. Pedigreed Collies from imported prize winners. Fine young stock for sale. Mrs. J. T. Woodford & Son, 3800 E. Central, Wichita, Kans.

FOR SALE—Pure-bred B. P. Rock; few left, \$1.50 each; pullets \$9 per dozen, \$5 half dozen; eggs in season 50 cents per sitting of 15, \$3 per 100. Hill Crest Fruit and Poultry Farm, North Central Avenue road, Topeka, Kans., independent telephone 4351. Address A. C. Merritt, R. F. D. 4.

WHITE PLYMOUTH ROCKS.

Largest and whitest in the west. Line bred for heavy egg production; Kansas State Show '07 I won 1st cockerel, 2d pen, 3d, 4th hen; Anthony, '06 1st cockerel 96½, 1st pen 91½, 1st hen 95½, 1st pullet 96½. Write for egg prices. Chas. C. Fair, Sharon, Kans.

BARRED ROCKS A SPECIALTY

Also Nine Other Leading Varieties. If you want to win at the poultry shows, or make a success of poultry on the farm, we can supply you with stock. Circulars free. Write your wants. A. H. Duff, Larned, Kans.

LINDAMOOD'S BARRED ROCKS

Will surely please you. High scoring prize-winners. Pens mated now. Send your orders early. No eggs after May 15. [Pens \$2 per 15, from flock \$3 per 100. Send for circular. Long distance phone Walton. C. C. Lindamood, Walton, Kans.]

BARRED PLYMOUTH ROCKS

EXCLUSIVELY—

EGGS { \$3 per 15 | Get the Best
 \$5 per 30 | Start Right
S. T. Divinia, R. 2, St. Joseph, Mo.

ANOTHER CLEAN SWEEP.

Steel Blue Barred Rocks again lead the Barred Rocks, two years in succession carrying off the prize of all prizes, First Grand Pen at the Kansas State Show held at Topeka 1906, Wichita 1907. Write me or other winners; this is simply a gentle reminder of where the good birds may be found. Prices reasonable. Orders booked for eggs now; try them. Satisfaction guaranteed on all orders. JOE B. MOORE, originator and breeder of the renowned Steel Blue Barred Plymouth Rocks, Mexico, Mo.

White Plymouth Rocks EXCLUSIVELY.

Good for Eggs, Good to Eat, and Good to look at. W. P. Rocks hold the record for egg-laying over very other variety of fowls; eight pullets averaging 90 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96, and as good as can be found anywhere. Eggs only \$2 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College. Address THOMAS OWEN, Sta. B, Topeka, Kans.

WYANDOTTES.

BROWN'S White Wyandottes; ahead of everything; stock for sale; eggs in season. I also have the English Fox Terrier dogs. Write me for prices and particulars. J. H. Brown, Clay Center, Kans.

WHITE WYANDOTTE

\$1.50 for 15 from choice pens, \$5 per 100 from selected free range stock. Indian Runner duck eggs \$2.50 for 11; Mammoth White Holland turkey eggs \$2.50 for 9; White African guinea eggs \$1.50 for 17; a pair of guineas yet for sale. Order now. Mrs. D. Arnold, Enterprise, Kans.

Hammer's White Wyandottes

35 cockerels for sale at \$1.50. These are high scoring birds. My strain is noted for eggs. Lewis A. Hammer, Clearwater, Kans.

POULTRY BARGAINS.

White Wyandotte cockerels \$1 each. White African Guinea \$2 pair. Indian Runner Ducks \$2.50. Mr. Choice farm-raised stock. Some prize winners. L. D. Arnold, R. F. D., Enterprise, Kans.

WHITE WYANDOTTES.

If you need the highest quality for breeders or for birds at reasonable prices write me. Cockerels now ready for shipment. Illustrated catalogue free. Address G. A. Wiebe, Box A, Beatrice, Neb.

WYANDOTTES—Pure white. Young stock at \$1 each. L. E. Brown, Norton, Kans.

WHITE WYANDOTTE COCKERELS—Show birds or choice breeders at \$1.00 to \$5.00 each. S. W. Larned, Kans.

Silver Laced Wyandottes

We pay all express charges. Eggs from stock ranging from 90 to 98 points by Rhodess; \$2 for sitting fifteen; choice farm range \$5 per hundred. Good stock guaranteed or eggs replaced.

E. Kroth, Soldier, Kans.

SCOTCH COLLIES.

SCOTCH COLLIE PUPS for sale from registered parents. Address W. R. Dawdy, Jewell, Kans.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

Poultry Notes.

It is the universal experience of poultry-keepers that while it is comparatively a simple matter to make a large profit from a small flock, it is quite another thing to keep a large flock with commensurate results.

With poultry as with other stock, there never was a time when careful selection failed to give good results and especially so when extra attention is given to the selection of the male.

The shape of egg has nothing to do with the life germ. The air-cell and germ are in the broad end and if this part is smooth and even, and if the germ is fertilized, that is all that is necessary so far as shape goes.

One of the greatest difficulties in the management of fowls is to properly feed them for the best results. Not that one may not know the kinds of food to give, but to so feed them that they will be induced to exercise and not take on a surplus of fat.

In making a success with poultry, a great deal depends on the pleasure one takes in feeding and care for them. Whenever attending to their wants becomes a drudgery, it had better be given up, for neglect soon follows, which breeds disease.

Oats is a very useful poultry food, as it stimulates without enervating or fattening. It forms a good diet to reduce the fat of hens too fat to lay. Ground oats with boiled potatoes has been found an excellent food for producing fertile eggs and vigorous chickens.

Cornmeal fed to poultry will be much improved if mixed with boiling water, which partially cooks it. A mistake is often made in feeding it, if given too wet and soft, in which state it is often injurious, compelling the fowls to take more water than their nature requires.

If any of the hens are set early, care must be taken to make the nests as warm as possible and then if the weather is cold, feed and water them in the nests. As a rule, whole corn is the best ration for sitting hens. When the weather will admit, they should have an opportunity to get off the nests, but even then it will be best to have food and water convenient.

In raising poultry for market, usually the profit lies in hatching early, pushing the chickens forward as rapidly as possible and marketing them early. Spring chickens at spring prices pay better than fowls sold later on, when, though the fowls weigh more, there is not only the lower price, but additional feed for perhaps two or three months must be taken into consideration.

The Incubator.

Of course, the incubator usually gets the blame when the hatch falls short, or the chicks die soon after coming out. Usually if you put chicks hatched by the hens in with those incubator chicks, you find them dying just the same as the incubator-hatched chick, and, therefore, the fault does not lie in the hatching, but in something due to lack of the right care on your part, or weak breeding stock.

Once in awhile I believe that the incubator and owner are at fault (in cahoots) in this matter of chickens dying so soon after coming out. The heat is very great and the nursery entirely too low, and the chick's brain is literally cooked, while the owner looks on, and despite the fact that the chicks are gasping within for a breath of pure air, the operator will not take them out because the maker of the incubator says not to. After all, the maker of the incubator may not know so much as you and I, who have worked with chickens for years and years. Anyway, gasping chickens must come out right away. An over-

heated baby chick, like a canary bird, is a dead bird. More than one canary bird have I killed by letting the room get too hot. Do what I would when I found it gasping, it would die. Cooling off did not help it.

What is the first thing a baby chick does when it clears itself of the shell and gets on its feet? Simply sticks out its head and gets some cool air into its lungs. Knowing this, I never hesitate to unload chickens from out of a hot place and give them free room in a basket by the stove, well covered, but where air can get to them. A chick has to fight for its life after hatching on account of its lungs. They are partially aquatic, partially aerial. Before hatching it breathes like a fish in water, after hatching it must gradually, for the first three or four days, adapt itself to the breathing of air. If forced to breathe it too hot or too cold, and too much at a time, it dies as a fish dies out of water. Just as soon as hatched give it conditions as nearly like the mother's breast as possible, a place where it can huddle under with enough air, yet not too much; a place from which, after its sleepy spells, it can put out its head and try its lungs for a brief space. This matter, if watched closely, might show just why a large percentage of incubator chicks die, though they come from the nursery all sound. The brooder air may not be just the kind of air it gets under the hen.

Sometimes the machine goes on a strike and the eggs get too cold; then again they roast. A good machine, and you doing your part by it, will do neither, although a poorly constructed machine may. If the lamp is a poor one and smokes too much, that means a ruined lot of eggs. In fact, the smell of coal-oil will kill the chicks in the shell, and a smoky lamp always smells. Insist on a good lamp, and then keep it good by keeping it clean, full of oil, and neatly trimmed.

The first hatches in the spring are usually poor hatches for at least two reasons—many of the eggs are pullet eggs, and many are gathered too cold. A badly chilled egg is usually an unhatchable egg. It may be fertile, and life may start, but it will die along about the twelfth or fourteenth day.

Sometimes, when the chicks insist on dying after coming out, it is not because the breeding stock was ropy or the hens too fat that laid the eggs, but just because they are chicks from pullet eggs, and are not strong enough to live.

One experiment that I have made is this: I have marked the pullet eggs and found the chicks in them, especially of the large breeds, the male bird being large and mature, slow in coming out. The egg shell seems to be too small for the big chick to turn around in. It must turn before it can hatch. If it is slow coming out of the egg, it is almost sure to die of exhaustion. So give the eggs due blame and not the incubator.

Often the reason for first poor incubator hatches is the low temperature of the room. It must not run below sixty. Better a little too high than too low. Notice the best hatches are when the thermometer runs reasonably high in summer. Testing eggs in a cold room is not a good plan, either. But after all, no one ever bought an incubator that was not satisfied with the hatching part. It is in the after hatching that the trouble comes. This the incubator does not stand for. Its work is to hatch, yours the rest.—Ida M. Shepler, in Successful Farming.

Chicken Hatching.

The incubator plays a most useful part nowadays in the hatching of chickens, but by far the greater number, after all is said and done, chip their shells through the good offices of mother hens. For those who prefer the old method, and particularly those who are just thinking of starting to keep poultry, the following remarks may be useful, and there is plenty of time to study them, and so be prepared before next hatching season.

To hatch the largest possible number of chickens from any setting, follow natural methods as closely as possible. When a hen steals her nest away from some sheltered corner, and is

LEGHORNS.

S. C. WHITE LEGHORNS. Stock and eggs for sale. Eggs \$1 per 15. Prize winning egg stock. Leghorn egg man. W. C. Watt, Walton, Kans.

CHOICE PURE-BRED R. C. Brown Leghorn cockerels and pullets at \$1 each. Eggs \$1 per 15. Mammoth Pekin duck eggs \$1 per 15. Reduced price on large orders. Mrs. J. E. Wright, Wilmore, Kans.

SINGLE COMB BROWN LEGHORNS—Best laying strain in the world. Eggs \$1 per sitting, 3 sittings \$2.50, \$5 per 100. Everett Hayes, Hiawatha, Kans.

FOR SALE—S. C. B. Leghorn cockerels, pure-bred, from high scoring stock. Have raised Leghorns exclusively for 20 years. Single birds \$1; satisfaction guaranteed; order soon. Thos. D. Marshall, Modoc, Kans.

PURE SINGLE COMB BROWN LEGHORN eggs, 30 for \$1, 100 for \$3. J. Candwell, Wakefield, Kans., successor to F. P. Flower.

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FOR SALE—Single Comb White Leghorn cockerels. Wyckoff laying strain. Price, 75 cents and \$1. Henry Martin, Newton, Kans.

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STANDARD-BRED SINGLE-COMB BUFF LEGHORNS—Headed by first prize pen Chicago show 1905 and took six first prizes and first pen at Newton 1904. Eggs \$3 for 15. S. Perkins, 301 East First street, Newton, Kans.

SINGLE-COMB WHITE LEGHORN cockerels, \$1 each; two or more 80 cents each. Fine white pure, thoroughbred birds. Also a few Barred Plymouth Rock, barred to the skin—fine, pure and vigorous; hens, cocks and pullets, \$1 each; two or more, 80 cents each. All of our customers are very well pleased. We will make reductions on large lots. Meadow Poultry Farm, Centerville, Illinois.

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Pure-bred S. C. cockerels \$1 each, six for \$5. J. A. Reed, R. 3, Wakefield, Kans.

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Won 18 prizes and silver cup at Kansas City, Mo., Poultry Show 1907. Birds and eggs for sale. Also B. P. Rock eggs, best strains. Send your orders now. Eleanor Fruit and Poultry Farm, Centralia, Kans. A. Oberndorf, Proprietor.

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R. C. White Leghorns and White Wyandottes; 30 prizes in three shows. Stock for sale. Eggs \$1.50 and \$2.

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Examine any fowl bought of us at the express office. If not satisfied return and get your money, less express charges one way. Our fowls are strictly tops. Buff Black and White Langshans, five varieties of Leghorns, and many other breeds to select from. Get busy or your choice will be gone. Write J. A. LOVETTE, Prop., MULLINVILLE, KANS.

BLACK LANGSHANS

which will please you at prices that will satisfy you. Bred from stock from such breeders as Mrs. M. A. Smith, Ben S. Myers, Ashe, Hettich, King, etc. Write for prices and descriptions.

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BUFF ORPINGTONS and **BUFF LEGHORNS**—Won first pen State Show; catalog free. W. H. Maxwell, 1924 McVicar Ave., Topeka, Kans.

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SALMON FAVEROLLES.

Salmon Faverolles

are up called as "laxated" and "laxated" broilers on account of early maturity and quality of flesh. Weight, hens to 7 lbs., cocks 7 to 8 lbs. Eggs \$2 for 15. A. B. Answorth, Newton, Kans.

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FOR SALE—Light Brahma cockerels, price \$1 A. J. Hewly, Lebo, Kans.

LIGHT BRAHMAS.

Prize winners—two firsts, two seconds at State Poultry Show 1907. Cockerels \$2, eggs \$1.50. John Lichte, Route 1, Oatville, Kans.

Light Brahma Chickens
Choice pure bred cockerels for sale. Write or call on Chas. Foster & Son, Eldorado, Kas., Route 4

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CORNISH INDIANS.

Good for eggs, good for the table; early maturing, and quality of flesh unexcelled. Weight, hens 6 to 7 lbs., cocks 8 to 10; eggs \$1.50 to \$2 for 15. S. Otto Westor, Newton, Kans.

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MAMMOTH BRONZE TURKEY EGGS for sale. Three for \$1, or 35 cents each. From choice stock; rearing tom weighs 40 pounds. Mrs. A. D. Watts Route 2, Hallowell, Kans.

FOR SALE—White Holland toms \$3.50, White Wyandotte eggs \$1 per sitting, \$5 per hundred. Mrs. E. F. Ney, Bonner Springs, Kansas.

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AGENTS—to sell and advertise our Poultry Compound; \$35 weekly; rig furnished. Franklin Manufacturing Company, Norwalk, Ohio.

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SHOEMAKER'S BOOK on POULTRY
and Almanac for 1907 contains 220 pages, with many fine colored plates of fowls true to life. It tells all about chickens, their care, diseases and remedies. All about incubators and how to operate them. All about poultry houses and how to build them. It's really an encyclopedia of chickendom. You need it. Price only 15c. C. C. SHOEMAKER, Box 1233 FREEPORT, ILL.

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SAFETY HATCH

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CLAY CENTER INCUBATOR CO.,
CLAY CENTER, KANSAS.

not interfered with further than providing her with a sufficient supply of food, she usually hatches every fertile egg, or almost every one. An examination of the nest she has made for herself—say among the long grass, under the shelter of a hedge, and its surroundings—will convey much information as to how the artificial article should be gotten up.

How many eggs should be given to a hen to hatch? It depends upon the size of the hen, the size of the eggs, and also upon the season of the year. In the very early part of the year, when winter is severe, it is always better to give her a moderate number of eggs, so that she will be able to cover and protect all the chickens nicely which she may hatch. Nine chickens are about enough for a hen to do full justice to during cold weather—that is, if she is a hen of good size; a small bird will do better with rather less. As the season advances she may have a dozen or thirteen, if she can manage to bring as many out of the eggs given her.

It is very desirable to get a hen with keen sitting propensities, when her incubating offices are required, particularly if she has to be brought from a distance. The latter condition often upsets the broody instinct of many birds, the strangeness of the new surroundings making her forget everything else. It is very provoking to find that a hen has left her nest after being intrusted with valuable eggs. These are mostly birds with a certain proportion of non-sitting blood in them, such as half-bred Minorcas, Leghorns, Anconas, etc. Since the Buff Orpington became fashionable, good sitters in the early part of the year have not been so scarce, and such birds, when they once go broody, can usually be depended upon to do their duty throughout. Buff Orpingtons crossed with any other sitting breed are also excellent, and the same may be said of Black Orpingtons, Plymouth Rocks, Wyandottes, Indian Game, and Dorkings, either pure or crossed with each other, are also very reliable.—California Cultivator.

Poultry Pointers.

A large per cent of the egg is water, hence the importance of clean, pure drinking water.

Time is money, and labor is scarce on the average farm. How to get effective results with poultry from the least amount of labor is a live question for the farm poultryman.

Buying and setting eggs is a cheap way of getting a start of pure-bred poultry. Many who are now prominent in the poultry world started in this way.

Of late years roup has become common. It is doing much damage to the poultry industry everywhere. A well-known poultry writer says: "No fowl is ever really cured of roup, and the disease is spread by the use of these apparently cured fowls as breeders." This is a disease that I know very little about from personal experience, and hope we will never have a siege with it as many I know have had. I wonder why it is that colds that developed into roup were unknown a good many years ago, when chickens fared worse as a rule than they do now.

Our capons will soon be ready for market. Ten days' liberal feeding works wonders with a bunch of these big lazy fellows. They are so peaceable while confined in their fattening quarters, one never finds them "scraping." They do well and have increased in weight rapidly on boiled corn as the main grain ration, with cooked peelings, table scraps, and all the sweet milk they will drink. Think we will try the capons again next year. They are profitable if we do have to keep them a good many months.

How to get rid of the sly, cunning rats is a question that concerns many poultry-raisers at this season. Where the farm stables and cellar are overrun with rats, much loss in the poultry-yard may be expected from the pests unless means are adopted of thinning their numbers. I hope the readers who have combatted rats and

INCUBATORS AND BROODERS.

INCUBATORS AND BROODERS.



Let Me Quote You a Price on a CHATHAM Before You Buy an Incubator

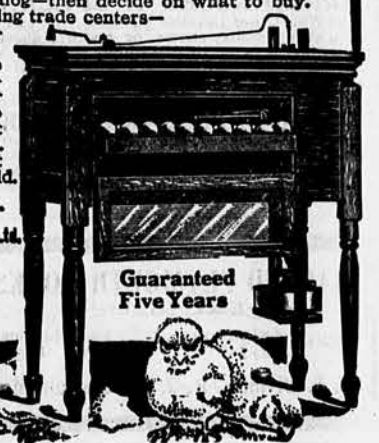
It will take one penny for a postal, and a minute of your time, to write for Special Prices on 1907 Chatham Incubators and Brooders. No matter what kind of a machine you have in mind—no matter where you intended buying, or when—TODAY you should send me a postal and get my catalog and prices.

My book will tell you how good Incubators are made—will tell you what you ought to know about poultry business—will tell you about brooders—will post you on the best way to make money out of poultry—and my prices on Chatham Incubators and Brooders will show you how to start in the poultry business for a small amount of money.

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freight prepaid—guaranteed 5 years. That's the story of the celebrated Chatham Incubator. We sell them on trial, pay the freight, and guarantee them for 5 years. With proper care, they last a lifetime. I am going after the incubator business of the country this season, and I intend to get it on great, big value in the machine and a very low price. Chatham Incubators are the best possible to make. They are tested, and known to produce the largest percentage of strong, healthy chickens. We have two immense factories—one in Canada and one in the United States—and run our own experimental station where a battery of Chatham machines are in operation every day in the year, under the care of expert poultry men. If you are most ready to buy a machine now, put it off for a day or two—until you can get my prices and catalog—then decide on what to buy. We have warehouses in all the leading trade centers—where Chatham Incubators and Brooders are kept in stock—insuring prompt delivery. Depend on this:—With the immense amount of money—\$500,000—that we have invested in the incubator manufacturing business, we are sure to give our customers every improvement worth having in the Chatham Incubator. We can afford it, because that is what brings us the largest business in the world. That is all I can say in an advertisement. I invite you to write for my prices and book. Address me personally.

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That's what every one says who has seen it. We want to send one of these free books to you. You can't afford to be without one if you have chickens on the place or a place to have chickens. We have spent a lot of money and a great deal of time on it, to make it far and away the best book on incubators, brooders and poultry raising. The result is that we have made a book that really ought to sell for \$1.00 a copy—but we send a copy free, postpaid, to every reader of this paper who asks for one.

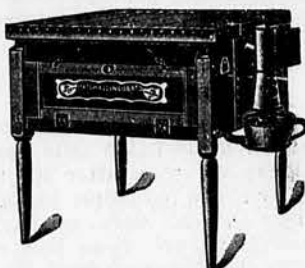
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the greatest incubator success of the age, is summed up in the Sure Hatch Book. Sure Hatch Incubators won their world-wide fame by making the highest hatching records on the lowest selling prices. They run themselves and pay for themselves with one hatch. Sold under a Five-Year Guarantee. Built to last a lifetime. We pay freight. Send postal NOW for the free Sure Hatch Book with our very low prices.

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will last, are easy to run, have deep nurseries, triple walls, solid copper tanks, and if they don't work we take them back. You run no risk because they have been tested in every state in the union.

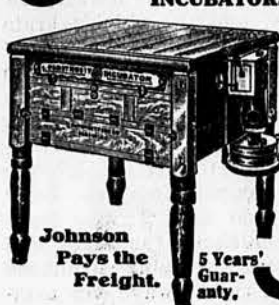
Look in Kansas Farmer of Dec. 27, where we take a full page to explain these machines and how they are made.

THE 1907 CATALOGUE NOW READY. Don't hesitate to ask for it. We are glad to send it.

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The Easiest to Operate Because It Runs Itself.



Made of the best materials—and so the most durable. Patented copper-pipe heating system that gives the only perfectly even radiation of heat to all parts of egg chamber. Regulator so perfect that you might run it without a thermometer. Sold on

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Highest quality, fairest prices, fairest terms. No matter where you live, Johnson, the Incubator Man, can save you money in prices and in results, and save you chicken troubles.

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is the one which contributes 150 eggs or more in a year, toward the family grocery bill. The sure way to have such hens, eggs in abundance, and a lot of ready cash is to give a little of

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with the morning feed every day in the year. Dr. Hess Poultry Pan-a-ce-a is a tonic, the sole purpose and action of which, is to assist nature in the performance of necessary functions. It aids digestion, prevents disease, and sends the proper proportion of each food element to the organ most in need. It also contains germicides which destroy bacteria, the usual cause of poultry disease. Poultry Pan-a-ce-a is the prescription of Dr. Hess (M.D., D.V.S.), and is a guaranteed egg-producer. Endorsed by leading poultry associations in United States and Canada. Sold on a written guarantee, and costs but a penny a day for 30 fowls.

1 lb. 25c, mail or express 40c.
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Can be operated by anyone, anywhere. Automatic regulator, copper tank, white pine case, double walled, nursery. Built to last 20 years. Don't buy until you read our remarkable Incubator Book, written by the man who made the Racine. When you learn what he knows, you will want his machine, we think. The book is free. Write for it. Address Racine Hatcher Co., Box 88, Racine, Wis. Warehouses: Buffalo, Detroit, Kansas City, St. Paul.

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The Great Western Incubator has the best hatching record. It is the easiest to operate. It is the lowest priced Good hot water incubator made.

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Make Your Hens Pay

Big Profits by getting Big Hatches and hatch chicks that live. Beginners, as well as experts, do this with the latest Pattern CYPHERS Incubators and Brooders with their Patented Improvements possessed by no others. 90 days' free trial with Money Back Guarantee. Get 24 page Guide to Poultry Profit FREE to you. CYPHERS INCUBATOR COMPANY, BUFFALO, New York, Boston, Chicago, Oakland, California, Kansas City.

7.50 Incubator

Everybody's Incubator holds 125 eggs. Self regulator, needs no moisture, powerful double heater, egg tray and new removable sanitary nursery tray. Has everything high-priced hatchers have. Four walls, packed, not heated by heat or cold. Cat. free. Governor Incubator Co., 811 Main Street, Governor, N. Y.

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Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatchers made. GEO. H. STAHL, Quincy, Ill.

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evolved a successful method, plan, or scheme for their suppression will tell us about it.

The military tactics of the sly, cunning rodent are good. He fortifies himself in a trash pile or under a building that has a floor near the grounds, and the unlucky chick that ventures too near this place of vantage is a "goner." There are too many hiding places for rats on many farms. —Fannie M. Wood, in Inland Farmer.

The Early Chick.

Where eggs are wanted in winter, when they bring the highest prices, it is quite important to have early-hatched pullets. April will do pretty well for this, while those hatched later will furnish a supply later on. The early ones when well cared for should commence laying in October and November and continue through the winter.

As to the breeds, choose those that promise best in any locality, or for which there is an individual preference. We keep the Rhode Island Reds and find them to make excellent winter layers, as well as during the rest of the year. There are several breeds that excel as general-purpose fowls for the production both of eggs and poultry. It is better not to mix the breeds. Choose the kind that is preferred, then by proper selection of breeding stock, getting fresh strains from that breed, keep them well up in the points of excellence. Proper quarters, care, and feed are close seconds to the best breeds. Indeed, little can be accomplished without all being combined. —E. Towle, in Successful Farming.

Salmon Faverolles.

No exhibit attracted more attention at the Kansas State Poultry Show at Wichita than A. R. Ainsworth's Salmon Faverolles not only on account of their variety, but also because of their attractive appearance. The Faverolle is a general-purpose fowl, possessing many good qualities. First they are good layers, both in winter and summer. It is a matter of indifference whether the mercury stands at zero or 60°, for they are dressed as warm as Esquimaux and the daily production of eggs is uninterrupted. Second, Faverolles chicks are unequalled by any known breed as broilers. They are the most rapid growing youngsters in existence, and on an average pass the pound and one-half mark before they are two months old. Third, the texture and flavor of their meat is superior to other breeds, being more juicy and fine grained with plenty of meat on the breast. Their plumage is beautifully marked, giving them a very attractive appearance. The cocks will weigh from seven to eight and one-half pounds and the hens from six to seven pounds.

If you want to breed poultry for profit, try the Faverolles. Write A. R. Ainsworth, Newton, Kans., whose advertisement may be found in the poultry department of THE KANSAS FARMER, to send you a sitting of eggs.

Cornish Indians.

Cornish Indians are a breed of fowls that are attracting much attention on account of their many excellent qualities. They are good layers, and for table use they are unexcelled, for their flesh is very fine flavored and juicy, they mature quickly and attain a weight of from 6 to 7 pounds for hens and 8 to 10 for cock-birds.

They are also very hardy and are easy to raise on that account. S. Otto Wester, Newton, Kans., raises Cornish Indians. His advertisement can be found in the poultry department of THE KANSAS FARMER. Write him for a sitting of eggs and raise some of these profitable chickens.

THE KANSAS FARMER has just received a copy of the Silver Jubilee catalogue of The Reliable Incubator and Brooder Company, of Quincy, Ill. This book is very handsomely gotten up in commemoration of their twenty-five years of successful business and of the fact that they are the largest poultry supply house of America. The book is filled with valuable information for the experienced poultry-raiser as well as for the beginner. It is handsomely illustrated with pictures of the gold medals and diplomas won at the World's Fair and elsewhere as well as of the incubator and brooder in all their parts and a complete life history of the chicken, together with brief notes about all the different breeds of poultry. It is a mine of information and is worth a place in the library of any farmer or breeder. It contains letters from satisfied customers from many different parts of the world, among which we notice letters from Mexico, Honolulu, Cuba, Belgium, Jamaica, South America, Germany, France, Norway, Sweden, Bermuda, South Africa. A letter addressed to The Reliable Incubator Company, Quincy, Ill., will bring you one of these books.

Powellson Bros., Wesley, Iowa, write: "We have used the ten-foot pulverizer and two riding cultivators two seasons and consider them the best to be used for raising corn that we have seen. We raise 150 acres of corn every year and find the Tower Surface Cultivators are far ahead of the shovel plow. The Tower Pulverizers are also the best to be used for preparing the ground that we ever used or ever saw."

INCUBATORS AND BROODERS.



Missouri Queen

Incubator-Heating System absolutely the best. Record of hatches unequalled. Only machine made that has heat in the corners. Try it for 90 days and if you are not satisfied return and get your money. Catalog free. Write today. Reference: Any bank in Princeton.

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