

KANSAS FARMER

For the improvement of the Farm and Home

Volume 55, Number 7.

TOPEKA, KANSAS, MARCH 3, 1917.

Established 1863. \$1 a Year

SELLING PURE-BRED SWINE

A Business Which Involves More Than the Offering of Good Stock

THE successful man's business is naturally divided under three heads: first, his place of business—in this case the farm; second, his goods—in this case his hogs; and third, that mysterious personality known as self.

The country home approaches the closest to the ideal of God and is the cornerstone of our nation. The ideal country home I shall picture is the breeder's home. It must be well located as to shipping facilities, the soil must be deep and productive, and there must be running water. This home should be on a slightly building place, and if it is in Kansas it will be on a good road.

While it is not necessary to be a landscape gardener in order to equip a few farm buildings, artistic taste should be used in equal proportions with principles of usefulness, permanence and cost.

It seems easy for some to overbuild, but underbuilding is a common failure. Overbuilding increases the upkeep and decreases the net profits of the farm. Underbuilding permits losses that can never return. Good buildings on even a poor farm are a great asset when used in the breeding and selling of pure-bred swine, but from the farmer's standpoint the better the farm is the better buildings it will support.

A prospective hog buyer always sees the buildings and surroundings before he sees the hogs, and the owner who shows his hogs in shabby buildings amidst insanitary conditions, is working under a handicap that is very hard to overcome. A good background strengthens any picture and in order to sell hogs to men who visit our farms we must keep the background in harmony with our offerings and ourselves.

We are now ready for the second essential—the pure-bred hogs. I shall not advocate any particular breed or type, as all hogs look good to me. But from the breeder's standpoint there are a few points to be considered.

The first is uniformity of type, and every breeder should know what he is trying to produce and do nothing haphazardly. The great hogs are not freaks or accidents, but the natural result of selecting and mating superior individuals. We do not all favor the same type any more than we favor the same breed, but the man who will sell hogs to his honor as well as to his profit is the man who shows that he believes

*By F. B. Caldwell, Breeder, Before
Kansas Swine Breeders' Association*

in his judgment by selecting hogs that come nearest to conforming to his favorite type. That is, he must practice what he preaches.

The second point to consider in selecting hogs is utility. By this I mean that the hog must be useful and practical from the standpoint of the farmer and packer or all the types and fancies of the breeder are of no avail. Comparatively few men record hogs, but they are not the men who make or break the popular breeds. This is done by the grain belt farmer who applies the acid test in his search for a hog that will develop the most pork in the shortest time at the lowest cost. And be it said to the credit of the farmer who produces only pork, that he has never boosted a breed or sent one to oblivion unless from an economic standpoint, in which case he was justified. In a sense hogs are like laws—they may be on record, but it is left to the masses as to their popularity.

We are now to the third division necessary to success in business, which is the breeder himself. It is generally conceded, but often doubted, that a breeder is above his hogs. If he is above his hogs, it is because he uses a different code of morals and manners than those of his hogs. I believe the honest breeder tells the truth when he answers mail inquiries, but he often gets so circumscribed by the mists of egotism when he looks at the hogs he is describing that he fails to record the faults and defects and then is mad if the customer is not satisfied.

I believe that the honest breeder intends to furnish correct pedigrees for the hogs which he sells, but often through the loss of a record book or the destruction of an ear mark he is forced to rely entirely upon memory, and memory is not infallible.

I also believe that the honest breeder tries to tell the truth when he advertises in the breed papers. The lamentable thing is that it takes a two-page spread to convince the public that he is telling the truth, and really has something to sell.

There seems to be a movement among the breeders of swine to overcome some of these old practices and to raise the standard of the business, and there is

hope for us as there is always help for the repentant sinner.

If we are going to make a success of our business, we will have a better system of keeping records and use some simple system of bookkeeping. Lack of knowledge on the financial side of our business is to be lamented and condemned.

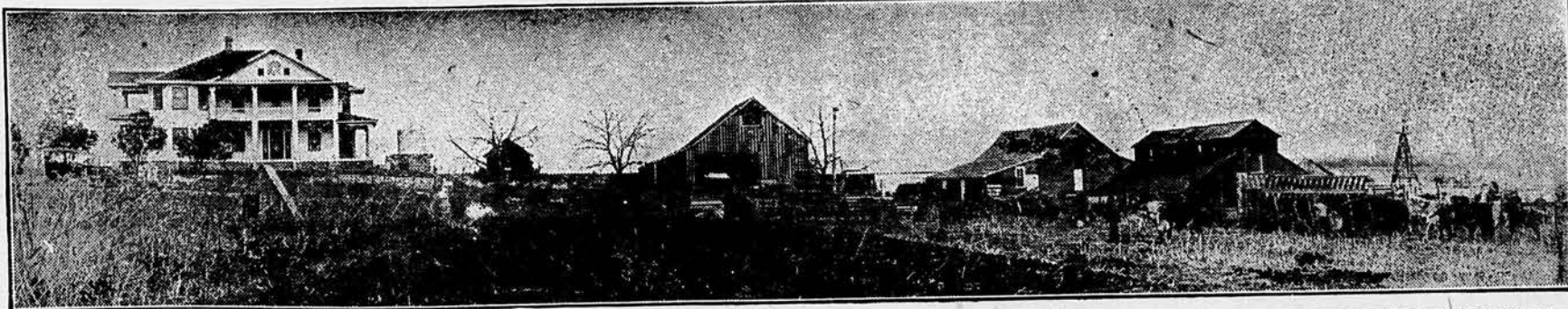
Perhaps one of the most annoying and the least justifiable habits of the breeder is the almost universal practice of delaying for weeks, and often months, in sending pedigrees to parties who have made purchases. The man who has bought his first pure-bred hog experiences a special thrill and if he has the papers before the thrill wears off he can be depended upon to give them careful study. As members of the different breeders' associations, and as breeders, we should give a recorded pedigree with every hog we sell, for if a hog is not worth the additional cost he should be sent to the packer.

Another thing we should watch is the guarantee. While we should be liberal in our guarantee, we should not say things that we do not expect to do. We should never do less than we guarantee.

And above all, we should cultivate a manhood that will accept the dictates of a free and justified conscience and in this way find a record—a personality that will draw men and business.

Summing up, we find that it is a great asset to have a good farm well located and well improved, it is a great credit to any breeder to have a herd that is uniform throughout and high class. But it is not the hogs or the farm that make or break the breeder—it is the power or lack of power to assert one's self.

The United States leads the world in the export of fruit, according to statistics just published by the U. S. Department of Agriculture in Bulletin No. 483. The fruit exports from this country were valued at \$18,505,000 in 1910 and \$34,230,000 in 1915. Fresh and dried apples comprised one-third of the value of these exports. Italy and Spain are second and third, respectively. During the five years from 1909 to 1913, the average value of the fruit exports from Italy was \$21,492,000, and from Spain \$21,353,000. Lemons constituted in value one-third of the fruit exports from Italy, and oranges one-half of those from Spain.



THESE BUILDINGS ARE LOCATED NEAR THE CENTER OF THE WALNUT BREEDING FARMS, WHICH CONSIST OF 1,200 ACRES OF WALNUT VALLEY LAND IN COWLEY COUNTY. PURE-BRED HEREFORD CATTLE, BERKSHIRE HOGS, SHROPSHIRE AND COTSWOLD SHEEP ARE BRED.—THE HOUSE HAS FOURTEEN ROOMS AND BATH, IS PLUMBED THROUGH-OUT, AND IS EQUIPPED WITH ELECTRIC LIGHTS AND CENTRAL HEATING PLANT.—LEON A. WAITE IS THE OWNER OF THIS ESTABLISHMENT

The Only Way to Buy Trees Direct From Grower to Planter

Why pay three or four profits to wholesaler, retail dealer, and agent, when you can order trees, vines and plants DIRECT FROM MY BIG NURSERY at lowest grower's prices? I deal with you instead of through three or four other people who must have their share before the stock reaches you—the planter.

Just suppose you give an agent \$20.00 for trees. He turns \$12 over to the retailer who in turn counts off \$5 for himself and hands over \$7 to the wholesaler. The wholesaler has sticky fingers, too, so he hangs onto \$2 and passes on exactly \$5 to the grower. In other words—the grower gets \$5 to fill your \$20 order and you simply donate \$15 in hard cash to three strangers. That's the OLD way—the money wasting way of buying nursery stock.

Now, my way is entirely different. You simply order from this page or my complete 1917 Catalog and you send me just

enough to cover my low grower's prices—not a red cent more. You save all middlemen's profits and expenses—you are sure of getting fresh stock.

Look where you will, you can't get better bargains in trees than I offer you right here. Compare my 'way down prices—compare the quality I offer and *absolutely guarantee* and remember that I save you all middle profits and I'm sure and certain that you'll say "Dunbar has the right idea—he gets my orders from now on."

Trees By the Million From Nursery to You—Saving all Middle Profits

APPLES				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.20	\$1.80	\$17.00	\$160.00
2 yr. 4-5 ft.	.15	1.40	13.00	120.00
1 yr. 3-5 ft.	.16	1.40	13.00	110.00
1 yr. 2-3 ft.	.12	1.00	9.00	80.00

Yellow Transparent, Grimes Golden, Delicious, Winesap, Liveland Raspberry, Early Harvest, Cooper's Early White, Jonathan, Rome Beauty, Gano, many others.

PEARS				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.30	\$2.40	\$20.00	\$160.00
2 yr. 4-5 ft.	.24	2.00	17.00	140.00

PEARS—15 LEADING VARIETIES				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.32	\$3.00	\$25.00	\$210.00
2 yr. 4-5 ft.	.25	2.25	20.00	170.00

CHERRY				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.40	\$3.75	\$30.00	\$280.00
2 yr. 4-5 ft.	.35	3.25	27.00	225.00
Extra 1 yr. 4-5 ft.	.36	3.50	28.00	230.00
Large 1 yr. 3-5 ft.	.34	3.30	26.00	220.00
Med. 1 yr. 2-3 ft.	.25	2.20	19.00	170.00

Early Richmond, English Morello, Montmorency, Wragg, and other standard sorts.

COMPASS CHERRY PLUM				
	Each	10	100	1,000
4-5 ft.	\$0.25	\$2.20	\$22.00	
3-4 ft.	.20	1.90	18.00	

PEACH				
	Each	10	100	1,000
1st class 4-5 ft.	\$0.20	\$1.80	\$15.00	\$140.00
1st class 3-4 ft.	.13	1.20	11.00	90.00
1st class 2-3 ft.	.10	.90	8.00	75.00

Mamie Ross, Alton, Elberta, Crawford's Late, Krummel's October, Red Bird, Carman, Champion, Chinese Cling, Heath Cling, Belle of Georgia, Elberta Cling, Late Elberta, and many others.

EARLY WONDER PEACH				
	Each	10	100	1,000
3-4 ft.	\$0.40	\$3.50	\$30.00	
2-3 ft.	.35	3.00	25.00	

PLUMS				
	Each	10	100	1,000
Extra 5-6 ft.	\$0.32	\$3.00	\$24.00	\$200.00
Large 4-5 ft.	.27	2.50	20.00	170.00
Medium 3-4 ft.	.21	1.90	17.00	130.00
Stocky 2-3 ft.	.15	1.40	13.00	110.00

Red June, Abundance, Burbank, Wickson, Wild Goose, German Prune, Lombard, Damson, Gold, and other standard sorts.

Note These Wonderful Bargains

10 Select Apples Trees—2 yr. 5 to 6 ft. trees. 1 Delicious, 2 Stayman, 1 Black Ben, 2 King David, 1 Jonathan, 3 Winesap. Agents ask \$5.00. Collection No. 1..... **\$1.50**

20 Select Apple Trees, extra size—2 year, 5 to 6 foot, Stayman, Black Ben, Winesap and other best varieties. Fine, big, extra heavy trees. Agents ask \$8.00. Collection No. 2..... **\$2.50**

10 Select Peach Trees—4 to 5 foot trees. 5 Elberta, 1 Chinese Cling, 1 Belle of Georgia, 2 Champion, 1 Carman. Agents ask at least \$3.00. Collection No. 3..... **\$1.25**

20 Select Peach Trees—3 to 4 foot. 10 Elberta, 3 Champion, 2 Mamie Ross, 5 Belle of Georgia, the cream of good varieties. Agents ask \$5.00. Collection No. 4..... **\$2.00**

20 Peach Complete Family Orchard 2 to 3 foot stock, well rooted. 2 Early Wonder, 2 Mamie Ross, 2 Champion, 7 Elberta, 3 Belle of Georgia, 2 Heath Cling, 2 Late Elberta. Covers all season latest to earliest. Agents ask \$4.50. Collection No. 5..... **\$1.60**

5 Apricot Trees—3 to 4 foot. 5 Moorpark or 5 Royal. Hardest and best. Agents ask \$2.50. Collection No. 6..... **\$1.10**

10 Select Pear Trees—2 yr. 5 to 6 ft. 8 Keiffer, 2 Garber, biggest money-makers for the middle west. Agents ask \$5.00. Collection No. 7..... **\$1.60**

10 Select Plum Trees—4 to 6 foot. Burbank, Abundance, Red June and Wickson, all fine, quick-bearing varieties. Agents ask \$5. Collection No. 8..... **\$2.00**

10 Select Cherry Trees—4 to 5 ft. 4 Montmorency, 4 Early Richmond, 1 English Morello, 1 Wragg. Agents ask \$6.50. Collection No. 9..... **\$2.90**

10 Choice Grape Vines—2 year. 1 Catawba, red; 3 Concord, black; 2 Niagara, white; 1 Moore's Early, black; 3 Worden, black. Agents ask \$2.00. Collection No. 10..... **\$.75**

25 Concord Grape Big Vines—Most widely planted black grape. Easily cultivated. Agents ask \$2.50. Collection No. 11..... **\$.90**

100 Everbearing Strawberries—Best variety Progressive. Bear till snow flies. Hardy, vigorous. Agents get \$5. Col. 12..... **\$2.00**

300 Everbearing Strawberries—200 Progressive, 100 Superb. Bear till frost. A wonderful bargain. Agents ask \$15.00. Collection No. 13..... **\$4.50**

RASPBERRIES				
	Each	25	100	1,000
Cumberland and Plum Farmer		\$0.07	\$0.80	\$2.50 \$18.00
Kansas and Cuthbert		.06	.70	2.10 15.00
St. Regis Everbearing		.10	1.00	3.00 20.00

STRAWBERRY PLANTS				
	By mail postpaid.	By express, charges collect, f.o.b. Ark.	25	500 1,000
Excelsior		\$0.30 \$0.65 \$0.80	\$1.50	\$2.25 \$4.00
Klondyke		.30 .65 .80	1.50	2.25 4.00
Senator Dunlap		.35 .70 .85	1.80	2.50 4.50
Warfield		.30 .65 .80	1.50	2.25 4.00
Aroma		.30 .65 .80	1.50	2.25 4.00
Gandy		.30 .65 .80	1.50	2.25 4.00

3,000 to 5,000 plants, 5% discount.
5,000 to 10,000 plants, 10% discount.
10,000 to 25,000 plants, 15% discount.
25,000 to 50,000 plants, 20% discount.

EVERBEARING STRAWBERRY				
	Prices postpaid	Prices f.o.b. Kansas and Iowa farms, charges collect	25	500 1,000
Progressive		\$1.00 \$1.50 \$2.50	\$4.00	\$8.00 \$15.00
Superb		1.00 1.50 2.50	4.00	8.00 15.00

GRAPES				
	Each	20	100	1,000
No. 1 Heavy Vines				
Concord		\$0.06	\$1.00	\$3.75
Moore's Early, Worden, Niagara, Agawam and other good varieties		.08	1.50	5.50

BLACKBERRY AND DEWBERRY				
	Each	25	100	1,000
Early Harvest, Eldorado and Dewberry		\$0.05	\$0.90	\$2.75 \$18.00
Mercereau		.06	1.00	3.00 20.00
Ward and Blower		.08	1.25	4.00 25.00

GOOSEBERRIES				
	Each	10	100	1,000
One year		\$0.15	\$1.00	\$8.00 \$70.00
Two year		.25	1.75	11.50 90.00

Houghton, Pearl Downing, Oregon Champion.

Big blocks of shade trees, all varieties, ornamental shrubs, roses, vines, peonies. Send for prices.

The Usual Way

You Pay Three
Extra Profits
← This Way

GROWER

JOBBER

RETAILER

AGENT

PLANTER

Read This Guarantee

Remember, if there is any risk, I take it, NOT YOU. If you don't find any and all stock you order from me just as described and exactly as I claim—your money will be waiting for you. I'll refund every penny without argument. You can't lose when you deal with The Planters Nursery Company.

Order Now—Right From This List—Order Today

FREE CATALOG—My Own and my best. Gives complete quotations, descriptions, etc., on all kinds of Trees, Vines and Plants. Just drop a postal now—I'll send it Free and Postpaid.

The number of collections I can ship at the above low prices is limited. If you act promptly you'll not be disappointed—if you delay, you will be. GET BUSY NOW. Let me save you all the go-between profits. You have no idea how much these are until you study my prices and see the stock I ship you DIRECT FROM THE NURSERY.

CHAS. DUNBAR, GROWER

PLANTERS NURSERY CO.

733 Harrison St.

Winfield, Kansas

The "Planters" Way

You Pay My
Small Grower's
Profit This Way →

GROWER

PLANTER

Editorial, Advertising and Business
Offices, Topeka, Kansas

Entered at Topeka Post Office
as Second Class Matter

Published Weekly by The Kansas
Farmer Company, at Topeka

KANSAS FARMER

THE FARM PAPER OF KANSAS

T. A. BORMAN, President and Editor
S. E. COBB, Vice-President

W. J. CODY, Secretary and Treasurer
G. C. WHEELER, Associate Editor

CHAS. C. YOUNGGREEN
General Manager

CHICAGO OFFICE:
T. D. Costello, Steger Building
MINNEAPOLIS OFFICE:
R. E. Ring, Palace Building

NEW YORK OFFICE:
S. E. Leith, Fifth Avenue Building
ST. LOUIS OFFICE:
C. A. Cour, Globe Building

Established by First State Board
of Agriculture, 1863

Member Audit Bureau of
Circulations

Member Associated Farm Papers

KANSAS NEEDS MORE TREES

People cannot be happy and contented where there are no trees. Kansas farms are the homes of the people as well as the source of the agricultural wealth of our state. The planting of trees will add much to the pleasure and comfort of the farm family. It takes time to grow a tree and perhaps many neglect to set out trees because they must look so far into the future in order to see any benefit from their effort to beautify their home and the surrounding country.

The past few years have been hard on trees in Kansas. In the introduction to a bulletin on tree planting in Kansas, just issued by the extension division of the agricultural college, attention is called to the fact that during the seasons of 1912-13-14 many trees in Central Kansas were killed as a result of the unusually dry weather and the attacks of insects. The trees originally planted were in many instances soft maple, boxelder, and cottonwood, all of which cannot be expected to live much more than thirty years on upland. These trees have just about lived their natural lifetime and little is being done to replace them.

Now is the time to replace these trees with better ones. One of the valuable lessons of the dry seasons is that the more valuable trees, such as black walnut, oak, sycamore, elm and hackberry, have shown a greater resistance than have the more common trees. We are therefore warranted in replacing the less valuable trees with these better and more permanent varieties.

Another encouraging observation is that in high and dry locations it is worth while to plant seeds where the trees are to stand. These better trees make a slower growth but the thought of permanence should be given more consideration in tree planting.

This work of tree planting should have proper guidance and we hope it will be pushed vigorously the coming spring. Kansas should not be allowed to become a treeless state.

Tree planting is a matter of community interest. If on all the farms in a neighborhood a systematic effort is made to plant trees and shrubbery, that neighborhood will in time be sure to become a much more attractive place in which to live. All the groups in the community—the school, the churches, the town commercial organizations, farmers' institutes, the local grange, farmers' union, and others—might well unite in a tree-planting campaign. Why not start such a campaign in your home community, and do it now? Communities wishing to do systematic work in promoting tree planting can secure the services of C. A. Scott, state forester, and Walter Burr, director of the rural service work of the agricultural college.

Let's plant trees in every country school yard in Kansas this year, whether we do anything else along this line or not.

SOIL BASIS OF PROFITABLE FARMING

At the live stock conference held in Fredonia last week, Prof. L. E. Call, of the agricultural college, gave some figures showing how various cropping methods affect soil fertility. It was shown that simply growing live stock is not an infallible remedy for soil depletion. Some of the worst soil robbers are live stock men.

A study of the charts shown made it evident that removing the whole corn crop as silage, depleted the soil of its nitrogen, phosphorus, potash and organic matter more rapidly than husking out the crop, selling the grain on the market and plowing under the stalks. It stands to reason that when the whole crop is hauled from the field more fertility is removed than when only a part is hauled away. The figures given showed exactly how much of the various kinds of plant food was taken from the soil by the different parts of the crop grown.

Live stock farming, to build up the soil, involves caring for the manure and getting it out onto the fields with as little waste as possible. Sometimes cattle can be fed various kinds of forage out over the farm, thus scattering the fertility themselves. It was

shown that manure loses its fertility very rapidly when allowed to leach for months in the barnyard before hauling to the fields.

The room in which Professor Call spoke was packed full and the numerous questions asked at the close of this talk on soil indicated that the farmers of South-eastern Kansas are keenly alive to the need of giving more consideration to the keeping up of soil fertility.

Live stock as a factor in farming was the central theme of this whole meeting, and the soil talk, with the discussion following, brought out most clearly that while producing live stock and live stock products makes it possible to retain a maximum of fertility on the farm, there must be systematic planning to get this back into the soil where it can become available for increasing crop yields.

While we have no definite figures on the condition of wheat in Kansas at the present time, it is undoubtedly far below normal. Some have estimated that wheat is not more than 50 per cent of normal, assuming 100 to represent a satisfactory stand and growth for the time of year. We know from experience that wheat can be "killed" a good many times and still make a fairly satisfactory crop. The soft wheats are more seriously affected than are the hard wheats.

In many instances that have come under our observation the crown is still alive even though the plants have all the outward appearances of being dead. If weather conditions are favorable, such wheat can be expected to come out and make good yields. The most serious danger comes from soil blowing. Reports have come to us that some damage has already occurred from this cause. Spreading strips of straw across the field at right angles to the way the soil is drifting will sometimes check the blowing. Disking strips across the field or running a few lister furrows will accomplish the same result. The straw will stick to the ground better and be more effective if a packer is run over it, thus mashing it down into the soil.

Kansas is rapidly coming to the front in pure-bred live stock. Nearly all the leading breeds now have state or sectional organizations. This year the first annual meeting of the Kansas Ayrshire Breeders' Association was held in Manhattan, February 6. A number of herds of this breed are being developed in the state. At the meeting L. E. Johnson of Waldron told of his experience with grade Ayrshires. His method of starting a herd is unique and well worth the consideration of those who have few females to start with. He got several of his neighbors to use his sire on their best milk cows and then he bought the heifer calves when dropped. In this way he obtained a good sized herd in a short time. This is a method that can be practiced with any breed of stock. The usefulness of a really high class sire should by all means be extended as widely as possible. A man full of enthusiasm for better stock can do much in his home community toward increasing the use of better animals on the farms of his neighbors.

FUTURITY HOG SHOW

Herd nominations for the futurity hog shows to be held at Topeka next fall close March 15. Both the Duroc Jersey and the Poland China record associations are planning futurity shows for this fair. Last year the Duroc Jersey Association conducted fourteen futurity shows. This year it is taking on a much larger program. Three kinds of shows will be held—a national futurity at Omaha, state futurities, and district futurities. Any Duroc Jersey breeder is eligible to register for the national, one state and one district futurity.

The time for making nominations is short, and breeders who have not already sent in their nominations must act quickly. The demand for good pure-bred hogs is certain to be strong the coming year, and breeders of Duroc Jerseys and Poland Chinas cannot

afford to neglect this opportunity to promote the cause of their respective breeds. The National Duroc Jersey Record Association at Peoria, Illinois, and either the American Poland China Record Association at Chicago or the Standard Poland China Association at Maryville, Missouri, will furnish full details concerning these shows.

Twenty nominations must be made to secure the show at Topeka. We would urge breeders to send in their nominations at once and begin to develop the litters selected in the best manner possible.

SCHOENLEBER LEAVES MANHATTAN

Dr. F. S. Schoenleber, who for twelve years has been Professor of Veterinary Medicine at the Kansas Agricultural College, has handed in his resignation to take effect at once. To Doctor Schoenleber must go much credit for the present condition and standing of the veterinary school of the college, which school was organized by him and has been built up into one of the strongest of its kind in the West. In addition to this, much research work has been conducted. A modern, sanitary hog-serum plant has been built, and a new and reliable method of protecting cattle against black-leg has been worked out and put on a practical basis.

Doctor Schoenleber has been interested in Ayrshire cattle and has developed a good herd of this breed on his farm near Linwood. It is with regret that we learn he has severed his connection with the college and experiment station.

The sale of stock in the twelve Federal Land Banks is now completed. The law required that the stock of each of these twelve Federal Land Banks should remain on sale for thirty days and at the end of that time the Government should purchase all of the remaining unsold stock. This thirty-day period ended with the close of business February 9, and the Secretary of the Treasury, acting for the United States Government, will purchase the unsold part of the \$9,000,000 capital stock of these twelve banks. D. F. Callahan, a prominent banker of Kingman, Kansas, has been appointed president of the board of directors of the Farm Loan Bank at Wichita. Miles Lassater of Oklahoma City is vice-president; T. J. Guilfoil, Albuquerque, secretary; Ralph Voorhees, Denver, treasurer, and W. P. Z. Gorman, Muskogee, Okla., registrar and attorney. T. A. Hubbard, a retired farmer of Wellington, Kansas, is one of the directors. The banks will soon be ready to issue charters to applying farm loan associations and then proceed with the business of lending money on first mortgages secured by farm lands.

When we buy tomatoes for 12½ cents a can, we pay at the rate of \$3 a bushel. The canning factory contracted for these at the rate of 25 cents a bushel. At this rate one pays 12½ cents for a little more than 1 cent's worth of food. If he buys the cheaper grades, he only purchases one-half cent's worth for his 12½ cents. No goods that have to stand manufacturing, transportation, jobbing, and retail spreads can be purchased as cheaply as they can be grown, and the farmer who makes that statement admits he does not figure closely. The next few years will be critical ones for the farmer who is following a one crop system.

On another page in this issue an article appears telling of the fight being made in Congress to throw down the bars so oleo can be colored and sold as butter. Do not fail to read this article, and what is more important, let your interest in the matter be known. It is not the philanthropic desire of the manufacturers of oleo to reduce the high cost of living, that inspires the Underwood amendment. It is to the "folks back home" that the congressman listens most attentively, so let him know what you think of making it possible to sell oleo as butter.

PASTURE IMPROVEMENT

Deferred Grazing System Practical Means of Maintaining Kansas Pastures

FOR every hundred acres of land cultivated in Kansas, forty acres are devoted to pasture. The total pasture area of the state amounts to at least twenty million acres. The value returned from these pasture lands is an important part of our agricultural wealth. Good pasture is almost essential to profitable live stock production. Care of pastures thus becomes a most important subject.

Two years ago at the District Farming Congress held at Emporia, W. M. Jardine, director of the Kansas Experiment Station, presented the question of pasture improvement, basing his remarks largely on what had been accomplished by the federal government in bringing back the pastures in the forest reserves by a system of "deferred grazing." We were present at that meeting and were much impressed with what Director Jardine had to say, as were also the cattlemen in attendance. We reproduced the substance of his address in KANSAS FARMER of April 10, 1915, and were much gratified to learn later that the way had been opened for the experiment station to do some work in solving the problems of pasture management and improvement. Last spring we gave a partial report of what had been accomplished and are glad now to be able to report still further progress in this important work. Ralph Kenney, associate professor in farm crops at the agricultural college, who has had direct charge of this work, practically lives in the big pasture being studied during the grazing season. During Farm and Home Week Mr. Kenney told of the work of the first two years, and we quote from his address as follows:

"Kansas is known far and wide for her tremendous crops of wheat and equally valuable crops of corn, but few persons realize that the grass lands of the state cover an area almost twice as great as the annual acreage of winter wheat and corn combined and represent a total value of approximately 500 million dollars.

"When the Kansas Agricultural Experiment Station at Manhattan began to study pasture management problems early in March of 1915, the native pastures of the state were fast entering a condition of low productivity. The land could not be used profitably for other crops and owners of pasture land were scarce who could make interest even on the valuation at which they purchased such land years ago. At that time gratifying results from certain methods of controlling stock and regulating the grazing season on national forest reserves in the Western States were being obtained by the grazing service of the Bureau of Forestry of the United States Department of Agriculture.

"Careful consideration of such methods as has been found most practical by these men who control herds of thousands of cattle and sheep convinced experiment station men that their work could be adapted to Kansas conditions. During the last ten years the forest service has developed what is called the 'deferred and rotation grazing system,' and this has been adopted here.

"Dan D. Casement proffered the use of whatever lands might be needed and two years' work have been completed on his pasture ten miles north of Manhattan in Pottawatomie County.

"Grasses grazed heavily in the fore part of the season have no opportunity to strengthen their roots and consequently produce either no seed or a few seeds that are weak in germinating power. By protecting a given area until seed matures, the roots of the plants are strengthened and vigorous seeds with higher germinating power are produced.

"Heavy grazing of the protected area after seeds are matured makes use of all forage grown that year. At the same time the seeds produced are scattered and more or less covered by trampling.

"During the second year of protection the grasses may be expected to mature seeds a little earlier than the previous year and to produce seeds of stronger vitality. When this area is grazed the second year some consideration must be given the seedlings established the previous year. For that reason, animals should not be allowed on it long enough to do any damage by trampling.

"After an area has been protected two or three years, another area should be protected during the early season and the pasture protected at first may be grazed at the normal rate throughout the season. The rotation thus started should be kept up indefinitely. The plan followed by the experiment station requires the division of the entire pasture into three parts, which are treated as shown in the table.

Year	Field 1 (Early)	Field 2 (Mid- season)	Field 3 (Late)
1916.....	First	Second	Third
1917.....	Second	First	Third
1918.....	First	Third	Second
1919.....	Second	Third	First
1920.....	Third	Second	First
1921.....	First	Second	Third
1922.....	Second	First	Third

"In adapting this system to Kansas conditions, take, for example, a man who owns 640 acres of grazing land in Lyon County. He can divide the tract into two fields of approximately 200 and 400 acres respectively, by means of two or three strands of wire fence, allow one of the fields to remain ungrazed until after most of the plants have set seed,

fect of grazing was to delay the production of seed stalks about two weeks later than on the protected area. On August 10 there were five times as many Side Oats Grama seed stalks to a given area on the protected side as on the grazed pasture, and three times as many Short Grama seed stalks on the protected side as on the other. On August 25 there were three times as many Big Blue Stem and four times as many Little Blue Stem stalks on the protected side as on the other.

"The season of 1915 probably produced more and better seed than all that matured in five years immediately preceding. Notwithstanding the most bountiful rains and sunshine with a general cool season which was extremely favorable to perfect development of grass plants, germination tests of several hundred samples of seeds gathered on the two pastures above referred to show very low vitality for all important grasses. Side Oats Grama averaged less than 20 per cent in germination; Big Blue Stem about the same; Little Blue

GRASS is fundamental to the live stock industry. It is the basis of profitable beef production. We must pay more attention to building up and maintaining our native pastures. Because of the difficulty of getting at the value of pastures in a concrete manner, we do not fully appreciate what good grass means to the beef business. There is no definite measure of its productive capacity and for that reason its importance has been overlooked.

To make beef production profitable we must pay more attention to grass improvement and the growing of forage crops. The development of a permanent and profitable system of live stock production requires good farming methods. No country has become noted for its live stock whose farms did not yield abundant crops, and live stock is essential to the maintenance of soil fertility. No breed of horses, cattle, sheep, or swine, of economic importance, has ever been produced on an impoverished soil.—W. A. COCHEL at Annual Meeting, Southeast Kansas Live Stock Association, Fredonia, February 20-21.

which will be some time in August, then turn all his animals in and graze it close, taking care only that they do not trample it badly. He can graze the other field in the ordinary way from the beginning of spring grazing. He would lose about three and a half months grazing on two hundred acres, but would finally graze off every bit of forage produced on it that year. Every grazier knows that grass in August and September is immensely better for putting fat on a steer's ribs than grass in May, June, and even July, while at the same time the ripe seeds are well tramped in and the other two-thirds of the pasture is doing nothing. It will not be necessary to divide the second and third areas until after the first is protected two or three years and is ready to be grazed first while another portion is protected.

"Under this plan of grazing the larger portion of the Casement pasture was grazed normally throughout the season. A smaller area of 140 acres was protected until September 2, 1915, when eighty cows and seventy calves were turned on this protected area. The protected area was then grazed continuously until November 5, a period of sixty-three days.

"The animals showed no particular choice of grasses during several days of close observation in the early part of this period. All ate the matured grasses with great relish and by November 5 it was estimated that 95 per cent of all seeds produced on the area had been scattered on the ground and pretty thoroughly tramped in. At the same time, in the large pasture, grazed throughout the season, 50 per cent of the seeds produced were on the stalks high above the ground with no opportunity of being covered and producing seedlings.

"Although many seed stalks and a considerable quantity of seed were produced on the large pasture, yet the ef-

fect of grazing was to delay the production of seed stalks about two weeks later than on the protected area. On August 10 there were five times as many Side Oats Grama seed stalks to a given area on the protected side as on the grazed pasture, and three times as many Short Grama seed stalks on the protected side as on the other. On August 25 there were three times as many Big Blue Stem and four times as many Little Blue Stem stalks on the protected side as on the other.

"Tame grass seeding on undisturbed native grass land has been attempted in thousands of instances in Central and Eastern Kansas and almost invariably results in failure. Seeds of our native grasses cannot be bought on the market, and even if they could be, it would be impossible for man to scatter and cover them as thoroughly as is done naturally by pastured animals. Mixtures of all the most vigorous tame forage plants have been scattered on the experimental fields and nothing but sweet clover has been able to make a stand as far as the records show."

It is common practice to burn pastures in the spring. Mr. Kenney's studies lead him to believe that under the burning system of pasture land management, the early growth of grass is left without any protection from the previous year's growth, which, with early grazing while the soil is damp, provides ideal conditions for the weakening of many plants and the total elimination of the choicest, tenderest of them sooner or later.

Some work has been done in mowing to control weed growth, pointed out Professor Kenney. Results to date indicate that weeds can be effectively controlled especially on the level areas where weeds are growing to the exclusion of all forage plants. Where the grass stand is good and weeds are few, mowing has been detrimental to the growth of grass even when cut as late as August 15.

Personal Credit

In Bulletin No. 409 of the Federal Department of Agriculture, entitled "Factors Affecting Interest Rates and Other Charges on Short-Time Farm Loans," its author, C. W. Thompson, gives the following discussion of the bearing that the borrower's personal characteristics have on his ability to obtain short-time loans on satisfactory terms.

The borrower who is known to be a man of honesty and integrity and who shows ability and judgment in the conduct of his farm business will ordinarily command the confidence of his banker and obtain credit on terms relatively favorable for his class of loans, whereas the individual who is uncertain in his personal character, erratic in his judgment, and irregular in his business habits will be considered a less desirable risk and, if he obtains a loan at all, usually must pay a higher rate of interest. In any case, if credit is to be extended wisely it is just as important to discourage its use among those who can not be trusted as it is to grant credit to trustworthy borrowers who will use the borrowed money profitably and repay it promptly.

Oftentimes the borrower may be honest and upright in his intentions, but may fail to appreciate the importance of being prompt in meeting his obligations. Possibly he thinks that a few days after the date of maturity is soon enough to make payment, and that a little delay is unimportant. He may not stop to consider that extra work and expense are involved when notice must be given of overdue paper, or that bank examiners do not take kindly to notes that are overdue.

Again, the business ability and business habits of the farmer are tested when the banker asks for a statement of the borrower's business. This information is needed by the banker as a basis for intelligent rating. If the borrower is in the habit of keeping accounts and can explain the nature of his resources and liabilities and thus indicate accurately his financial standing, the wisdom of granting a desired loan as well as the proper terms thereon readily can be determined. On the other hand, if this information is lacking and the banker is in doubt about the safety of a particular loan, he is likely to charge up his uncertainty to the borrower's account in the form of a higher rate of interest.

The requirement that a borrower shall submit a statement of his business is being applied by bankers in their dealings with merchants and manufacturers. Accordingly, business men in general have become more or less familiar with this requirement, and are prepared to furnish such a statement whenever it is called for. Some bankers, in inaugurating a similar plan in connection with their farm loan business, are supplying farmers with especially prepared blanks, or rate sheets, on which the farmers furnish the desired information.

Pure-Bred Stallions Increase

Six years ago when the Kansas stallion law became effective, 2,599 pure-breds and 3,766 grades and scrubs were licensed to stand for public service, according to the report, while during 1916 licenses were issued for 3,160 pure-breds and 2,130 grades and scrubs. This means that 43 per cent fewer grades and scrubs and 21.5 per cent more pure-breds were licensed in 1916 than in 1910. Rice County leads in per cent of registered stallions.

Other counties having fifty or more stallions in which a comparatively high per cent of pure-bred stallions were licensed to stand for public service during 1916, rank as follows: Mitchell, 74 stallions, 78 per cent pure-bred; Cowley, 92 stallions, 75 per cent pure-bred; McPherson, 86 stallions, 72 per cent pure-bred; Reno, 95 stallions, 71 per cent pure-bred; Sedgwick, 83 stallions, 71 per cent pure-bred; Pawnee, 54 stallions, 71 per cent pure-bred; Clay, 60 stallions, 70 per cent pure-bred; Butler, 90 stallions, 69 per cent pure-bred; Jewell, 97 stallions, 68 per cent pure-bred.

FARM POWER

Items of Interest About Automobiles, Engines, Tractors, and Motorcycles

EVERY persons who drives an automobile should be familiar with the working of the generator. In most cars nowadays, the generator is the primary source of all the current used in the car. It supplies the electricity to charge the storage battery, to ignite the charges of explosive mixture in the engine cylinders, and to light the lights, under certain conditions.

The generator consists of two essential parts, a revolving part, called the armature, and a stationary part, called the field. The armature consists of a frame of iron on the shaft, carrying windings of copper wire. These windings are all brought out to a device at the end of the armature, just inside of one of the end bearings, called the commutator. The electric current is generated in these windings, as they revolve, and led out to the commutator, from which it is collected by carbon brushes bearing upon its surface. These brushes are stationary, being generally fastened to the end bearing plate of the generator. From the brushes, the current is led out to the various parts of the automobile where it is to be used.

The field consists of a magnet, usually of the general shape of a horseshoe, between the poles of which the so-called magnetic field exists and the armature revolves. The current is generated as the armature conductors revolve in this magnetic field. The field magnets are usually electro-magnets; that is, iron with current-carrying windings of copper wire. These windings magnetize the field magnets to make them carry out their functions.

In connection with the standard automobile generator, it is an automatic switch which makes a circuit whenever the engine runs fast enough for the generator to operate properly, and allows the current to flow from the generator. When the speed drops below the operating point, the switch is again automatically opened so that current will not flow backwards from the storage battery into the generator.

Some machines have a separate generator for the ignition, called the magneto, which is entirely separate from the starting and lighting system, and the principle of the magneto is the same as that described for the generator furnishes exclusively, except sometimes for starting, current only for ignition. Above, but it generally has a permanent magnet for the field. In the regularly equipped Ford car, the magneto also supplies the current for lighting.

Some cars also reverse the generator function and also use the generator as a motor to start the engine, the generator automatically beginning again as the engine comes up to speed.—F. E. ANDREWS, Colorado Agricultural College.

Need Bridges and Culverts

"Much as we need improved roads," said W. S. Gearhart recently, "we need permanent bridges and culverts more. It is more important that all of the bridges and culverts be in good condition than that all the roads be kept in first class repair, for if the road is to be used at all, the drainage structures must be kept up. At the present time it is not practical, nor is it necessary, to surface all of the road, but a 'junk pile' of wood or tin for a culvert, or a 'scrap heap' of wood or steel for a bridge, is just as much out of place, and just as expensive to maintain, on an earth road as on a highly improved boulevard, for the bridges and culverts in the lane rot out and rust out and wash out as fast as on the most important state roads. It is not the traffic in most instances that destroys these structures, but the elements."

Daily use of public highways in Kansas has developed more rapidly than any other single activity within the state.

Ten years ago there were practically no automobiles, while today there are more than 114,000 in Kansas, or one for each three families, and more than one for each mile of road. This means that the highways of Kansas are carrying approximately 4,000,000 more horsepower than ten years ago. The auto truck and tractor business has scarcely been touched, but it is now generally recognized that this new form of traffic is

destined to more and more replace the horse on the highway.

These methods of transportation require new and adequate systems of road and bridge construction and maintenance. The condition of the roads and bridges are many years behind the traffic.

Our roads were planned for horse-drawn traffic, moving at a maximum speed of about ten miles an hour, and we have not even rounded off the right-angle corners, in most cases. Even the

weeds and hedges are not cut at these corners and we are only beginning now to talk about the elimination of the railroad grade crossings. The old drainage structures we call bridges and culverts were not designed in most cases to carry any given load. They were just built. Then fast driving signs were put on the bridges to prevent the boys, when out driving with their best girls, from rattling these old structures to pieces.

A great deal of trouble is caused in automobile motors by poor grades of fuel. The cylinders will miss explosions while the engine is cold, allowing the poor grade of fuel to remain in a liquid form in the cylinder. This fuel then works down past the pistons and gets into the crank case oil. This dilutes the oil and burned-out bearings result. The oil in the crank case should be drained

out and a fresh supply added every 500 or 1,000 miles traveled. This is very important, especially on new cars, which have their bearings fitted tightly.

At the head of all the sciences and arts, at the head of civilization and progress, stands not militarism, the science that kills, not commerce, the art that accumulates wealth, but agriculture, the mother of all industry, and the maintainer of human life.—Garfield.

A farmer living just over the line in Oklahoma, south of Caldwell, has adopted the parcel post to a new use. During the busy season on the farm he sends in two or three cases of eggs a week by the mail carrier. These cases hold thirty dozen eggs each and the cost, this farmer claims, is much less than taking the time to drive to town.

\$1150 F. o. b. Racine
Mitchell Junior—a 40 h. p. Six
120-inch Wheelbase

Mitchell
SIXES

\$1460 F. o. b. Racine
7-Passenger—48 Horsepower
127-inch Wheelbase

Now an \$1150 Six Much Like the Larger Mitchell

John W. Bate believes that efficiency requires two sizes in Mitchells.

A seven-passenger car, to be roomy, must measure 127 inches from hub to hub. And 48 horsepower is the proper power.

But a 5-passenger car will be just as roomy with a 120-inch wheelbase. And a 40-horsepower motor gives it power enough.

So, to meet both conditions, we this year build a Mitchell and a Mitchell Junior. You don't need to pay for room or power not wanted.

Every Penny Counts

The Mitchell advantages lie in making every penny count. John W. Bate, the great efficiency expert, has spent years here to attain that.

He designed this whole 45-acre plant to build Mitchell cars economically. He equipped it with thousands of special machines. Every part is built here at the lowest factory cost. On this year's output his methods will save us at least \$4,000,000.

There is no other factory like this building high-grade cars.

Hundreds of Extras

You see the result in hundreds of extras—all paid for by factory savings.

There are 31 features—like a power tire pump—which are practically unique to the Mitchell.

We have doubled our margins of safety. This year every vital part has 100 per cent over-strength.

Over 440 parts are built of toughened steel. Many parts are oversize. Many are built of costly Chrome-Vanadium.

In luxury and beauty the Mitchell excels any other car in its

class. The finish coats are fixed by heat, to give a deep, enduring lustre. A rare-grade leather is employed. This year we have added 24 per cent to the cost of these items alone.

See What Men Miss

See what men miss who buy cars without these extra features. See the 31 attractions, most of which are found in Mitchells only. See what luxurious bodies we can give you at these prices, because of our own body plant.

Then consider the value of this double-strength. It means a lifetime car.

See what it means in the Bate cantilever springs. In two years of use, on thousands of cars, not one of these springs has broken.

Those are the reasons why men are choosing Mitchells in such an ever-increasing way. This year our output is increased 2½ times over. Men don't want to miss these extras.

If you don't know the nearest Mitchell dealer, ask us for his name.

MITCHELL MOTORS COMPANY, Inc.
Racine, Wis., U. S. A.

TWO SIZES

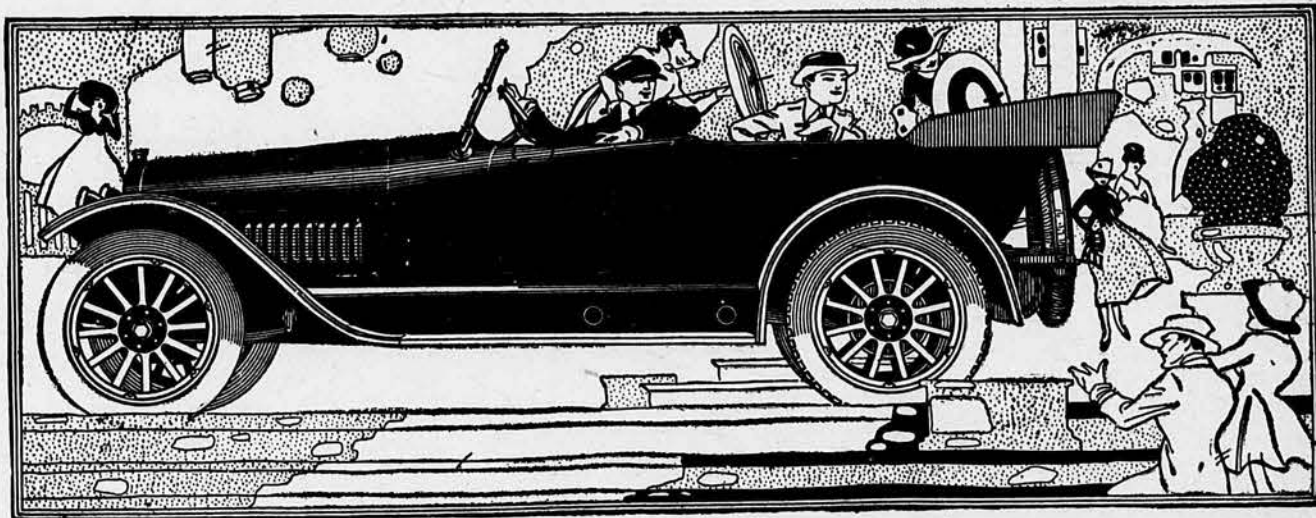
Mitchell—a roomy, 7-passenger Six, with 127-inch wheelbase. A high-speed, economical, 48-horsepower motor. Disappearing extra seats and 31 extra features included.

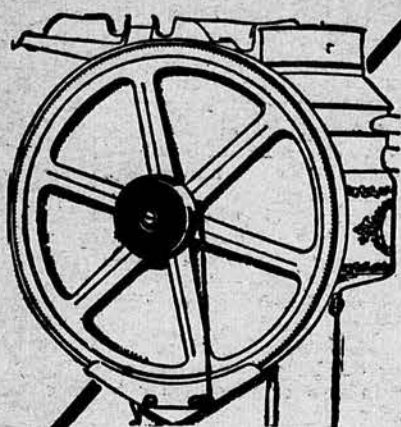
Price \$1460, f. o. b. Racine

Mitchell Junior—a 5-passenger Six on similar lines, with 120-inch wheelbase. A 40-horsepower motor—¼-inch smaller bore than larger Mitchell.

Price \$1150, f. o. b. Racine

Also all styles of enclosed and convertible bodies. Also demountable tops.





This "Warning Signal"

Insures proper speed on every NEW De Laval Cream Separator

NINE people out of ten turn the separator handle too slowly. Thousands of tests with experienced separator operators show this to be the case.

Other tests made by the highest authorities have shown conclusively that there is a big cream loss when the cream separator is not turned fast enough.

You will avoid such a possible cream loss if you buy the New De Laval. The Bell Speed Indicator on the New De Laval is a "warning signal" that insures proper speed at all times. No matter who runs your De Laval, this "warning signal" will tell you when the speed is not right. You hear it, and do not need to see it. This one feature alone may easily save you the cost of a cream separator in the next few months.

But that is only one of the big advantages of the New De Laval. Other advantages are greater capacity, closer skimming and easier turning, simpler bowl construction, and easier washing.

If you haven't the spare cash right now, that need not stand in the way of your getting a New De Laval right away. We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at the time of purchase and the balance in several installments—so that your De Laval will actually pay for itself while you are using it and getting the benefit from it.

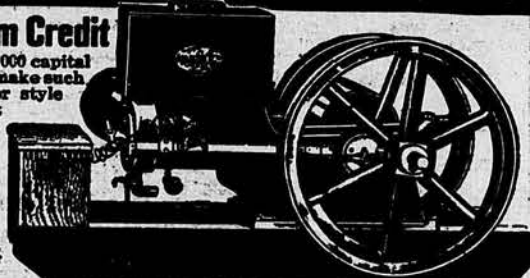
Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for any desired information.

The De Laval Separator Co. 165 Broadway, New York
29 E. Madison St., Chicago
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

No Money In Advance

Hartman's Special Farm Credit

Only Hartman's with their \$12,000,000 capital and over two million customers can make such an offer as this. Order any size or style. Majestic engine you want—no deposit—no C. O. D., or security. When the engine comes, work it 30 days, and if you are not fully satisfied with it, send it back at our expense and you will not be out one cent. If you are completely convinced that the "Majestic" is a wonderful bargain and just the engine you want, then keep it and pay one-tenth in 30 days, or one-sixth in 60 days, and balance in equal payments monthly or every two months—giving 10 months or



A FULL YEAR TO PAY

SEND FOR FREE BOOK and note the sensational price put on each engine. Book also tells how to judge an engine, how much to pay, how to pick out size and style engine best suited to your needs, and explains the Famous Farm Credit Plan. Get this valuable engine book at once. Send the coupon or a postal today.



THE HARTMAN COMPANY,
4025 La Salle Street,
Dept. 428 Chicago

The Great Majestic Engine

Most economical to operate. Fewest number of working parts. Perfectly balanced—just the right weight for its H. P. rating. Big improvements. Gives overlastingly good service without trouble or bother. Absolutely guaranteed by The Hartman Co., backed by its \$12,000,000 capital and resources. Fully described in our Book. Send for it.

THE HARTMAN CO., 4025 La Salle St., Dept. 428 Chicago
Without obligating me, send your Engine Catalog and particulars of selling plan.

Name _____
Address _____
P. O. Box _____
or R. F. D. _____
Town _____ State _____

160 ACRE FARMS IN WESTERN CANADA FREE



Canada's Liberal Offer of Wheat Land to Settlers

is open to you—to every farmer or farmer's son who is anxious to establish for himself a happy home and prosperity. Canada's hearty invitation this year is more attractive than ever. Wheat is much higher but her fertile farm land just as cheap, and in the provinces of Manitoba, Saskatchewan and Alberta

160 Acre Homesteads Are Actually Free to Settlers and Other Land Sold at from \$15 to \$20 Per Acre

The great demand for Canadian Wheat will keep up the price. Where a farmer can get near \$2 for wheat and raise 20 to 45 bushels to the acre he is bound to make money—that's what you can expect in Western Canada. Wonderful yields also of Oats, Barley and Flax. Mixed Farming in Western Canada is fully as profitable an industry as grain raising.

The excellent grasses, full of nutrition, are the only food required either for beef or dairy purposes. Good schools, churches, markets convenient, climate excellent. Military service is not compulsory in Canada but there is an unusual demand for farm labor to replace the many young men who have volunteered for the war. Write for literature and particulars as to reduced railway rates to Dept. of Immigration, Ottawa, Can., or to

GEO. A. COOK

2012 Main St., Kansas City, Mo.

Canadian Gov't Agt.

Kansas Farmer Dairy Club

Your Banker Is Your Friend

ARE you well enough acquainted with the banker who loaned you the money to buy your cow, to call him your friend? If not, you are missing one of the valuable experiences made possible by the Dairy Club work.

We should all know as much about business as possible, should know business men and their methods. Bankers should be—and usually are—the best type of business men, and for this reason you should talk to your banker as often as you go to the bank if he has the time to give to you. And most bankers will take the time to talk to a boy or girl who is anxious to learn about business, for the banker understands perhaps better than anyone else, the value of this knowledge. He sees men lose everything they have because they are poor business managers. Many times these losses come wholly from a lack of business training, and the banker realizes the need for this training and he makes it a part of his business to help people get it. He realizes, too, that the earlier in life this training is received the greater is the opportunity for success, and he is glad to see the boy and girl learning the value of business methods and money and you will find him glad to talk with you about these matters.

The bankers who are co-operating with us in the Dairy Club work have been faithful and we gladly give them credit for their important part of the work. They have not only loaned money for buying the cows, but in many cases have helped to find the cows. And we have not heard of a single banker who is sorry he showed this interest in you girls and boys. We have heard from several who are willing to loan the money for a second cow. This speaks well for both the banker and the girl or boy.

We are going to name here the bankers who are co-operating with you and with us in the Dairy Club work as we believe you will be glad to have this list of your business associates:

Wulfekuhler State Bank, Leavenworth; State Bank of Parsons; Fort Scott State Bank; Peabody State Bank; Oswego State Bank; Abilene National Bank; State Bank of Douglass; Thayer State Bank; Midland National Bank, Newton; State Bank of Kechi; Rawlins County State Bank of Atwood; De Soto State Bank; Sedgwick State Bank; Kipp State Bank; First National Bank, Oakley; Citizens Bank, Abilene; Colony State Bank; Security State Bank, Ottawa; First National Bank, Scott City; Bank of Topeka; Citizens State Bank, Scott City; Halstead Bank; State Savings Bank, Leavenworth; First National Bank, Norton; Berryton State Bank; Leon State Bank. Some of these banks loaned money to as many as seven boys and girls.

The Dairy Club has many other banker friends, too—those who offered to co-operate but who could not find boys and girls who were willing to take the responsibility of paying for a cow. Still others were willing, and found boys and girls, but they could not find the cows.

We feel sure that when our next Dairy Club is organized there will be boys and girls for all the bankers who are willing to loan them money for cows. We also feel sure that the men who own good cows will be willing to sell them to the boys and girls at prices which they can afford to pay, for these men have been watching your work and know it is well worth while. We know several men who did this for some of you.

As you milk your cow month after month and make your records, remember you belong to the first club of this kind and that the business training you are receiving will always be valuable to you. Remember, too, the banker and KANSAS FARMER are your friends and are watching and hoping for your success.

This Cow Enjoys Warm Water

I am sending you a picture of my cow getting a drink on one of these cold mornings. You will notice the tank has a heater in it and it also has a top. Since we got the tank heater I notice my cow has increased her milk flow about one-fifth.

I go to Sunday School nearly every Sunday and the nearest Sunday School is in Leavenworth, five miles away.

The Y. M. C. A. of which I am a member, has organized a junior and senior basket ball league. Two others of my Farm Boy Cavalier troop and I play on the Baptist junior team and we'll land second or third place, which isn't so bad considering the teams we had to play.

I would like to exchange letters or pictures with Dairy Club members.—PAUL STUDDARD, Route 4, Box 27, Leavenworth, Kansas.

The picture which Paul sent us is not clear enough to make a cut so we cannot show you his tank heater. But it is clear enough so we can see his cow is enjoying her good drink that is not cold enough to make her teeth ache.

Care of Milk

As we looked through the entry blanks sent in by our Dairy Club members for the state contest, we were pleased to note the care many of you had given your samples. Care has much to do with making a success of milking cows and you should remember this and consider nothing too hard to do that will help you produce more or better milk.

Two of the answers to the question, "How soon was milk cooled after being drawn from the cow?" attracted our attention particularly. One of these answers was "One hour," the other "Two hours." Both these members had cleaned their cows and the barns in which they milked and had made sure their clothing and hands were clean when milking. However, they did not seem to realize the danger of allowing the milk to hold the heat from the cow's body for this length of time. This heat permitted the development of many germs that were in the milk and thus lowered the score. If milk is immediately cooled to the temperature of good cold well water the development of any germs in it will be very much slower and the keeping quality will be much improved. Milk fresh from the cow with the animal heat in it, should never be set away in a closed vessel. If this is done, bad flavors will develop because of the growth of germs and the milk will remain sweet only a short time.

A good way to cool milk, if you do not have a regular milk cooler, is to set it in a tub of fresh well water and stir it thoroughly with a long-handled dipper, adding fresh water to the tub until the milk is as cool as the water fresh from the well. When it has reached this temperature it is safe to cover it. All this is as true of cream as of milk.

One authority on milk says that in twelve hours one germ will have multiplied ten times as fast in milk allowed to cool naturally as in that cooled with cold water.

There are a number of things that affect the quality of milk and cream as you will learn by studying the score card covering your sample entered in the contest. Many of these things you can control by using due care. When you produce milk you are producing human food and you should never forget this. With this thought in mind it will not be so hard to be careful.

Produces Good Grade Cream

My last shipment of cream tested 33 per cent, graded number one, and I received 38½ cents for butter fat.

The clover hay is good quality but my cow simply does not care for it. She never seems to get enough silage. You will also notice by my feed record that I did not feed oil meal the latter part of the month. This was because I was unable to get it. I bought cotton cake instead and she wouldn't touch it. However, I have received oil meal now and will again mix it in her ration.—THERESA O'MARA, Anderson County.

When you think that the feed which you are giving your cow seems expensive, remember that if she makes it into high-priced butter fat it will more than pay for it. Never think of the feed cost only but of the profit it will bring you through butter fat.

Harold Bentz, who won first prize in the market milk contest at Manhattan, had three-fourths of the expense of his trip paid as second prize in the corn club.

WHAT EVERY FARMER WANTS

Cheap and Efficient Transportation His Great Need—How It Can Best be Assured

THE present situation of the railroads presents two alternatives, efficient federal regulation or federal ownership.

The experience of other countries proves conclusively that government ownership of railroads is more costly and less efficient than the system of private ownership in this country. The railroads of the United States have the lowest freight rates, the smallest capitalization per mile, the highest operating efficiency and pay the highest wages of any railroads in the world.

High Rates on Government Roads

The charge for hauling a ton of freight one mile on the government owned roads of various countries and on the privately owned roads of the United States is shown in the following table:

	Average Freight rate per ton mile
Germany (Gov't Railways)	1.24 cent
France	1.30 cent
Australia	
New South Wales	1.59 cent
South Australia	1.75 cent
Switzerland	2.63 cent
Canada (Private ownership)	.76 cent
United States	.73 cent

No railway system under government ownership can show a record for cheapness and service approaching that of American Railroads under private ownership. What the railroad situation needs is the adoption of a system of national regulation that will encourage initiative and investment and enable the carriers to meet the growing requirements of American business.

Keep Railroads Out of Politics and Politics Out of the Railroads

It is to the interest of the railroads and the interest of the whole country that the railroads keep out of politics and that politics be kept out of their management.

Government ownership under our political system would make the control of the railroads a partisan issue at every election. It would bring political and economic disaster.

No man in the country stands to lose more by the adoption of a political system of railroad management than the farmer. None will profit more from efficient national regulation that will do away with the present conflicts and waste of local control and enable the railroads to make the extensions and improvements necessary to keep pace with the business progress of the nation.

We invite discussion of this question and shall be glad to answer questions and to supply information on request.

RAILWAY EXECUTIVES' ADVISORY COMMITTEE

61 Broadway New York City

FRANK TRUMBULL, Chairman
FRANCIS H. Sisson, Assistant
ALFRED P. THOM, Counsel

B. F. BUSH, Receiver Mo. Pacific Ry.
A. J. EARLING, Pres. C. M. & St. P. Ry.
HOWARD ELLIOTT, Ch. N. Y. N. H. & H. R. R.
W. J. HARRAHAN, Pres. Seaboard Air Line Ry.
WALKER D. HINES, Ch. A. T. & Santa Fe Ry.
HAILE HOLDEN, Pres. C. B. & Q. R. R.
L. F. LOREE, Pres. D. & H. Co.

R. S. LOVETT, Ch. Union Pacific R. R.
C. H. MARKHAM, Pres. Ill. Cent. R. R.
SAMUEL REA, Pres. Penn. Ry.
A. H. SMITH, Pres. N. Y. Central Lines
FRANK TRUMBULL, Ch. C. & O. Ry.
F. D. UNDERWOOD, Pres. Erie R. R.
H. WALTERS, Ch. Atlantic Coast Line R. R.

DANIEL WILLARD, Pres. B. & O. R. R.

Trees for Western Kansas

J. T. R., Rush County, asks what varieties of trees are best to plant in that section for yards and for wind-breaks or protective plantings.

Our correspondent is in a section of the state where the annual rainfall is less than twenty-five inches. There are many varieties of trees that will thrive under these conditions if given a fair chance. Of the evergreens suitable for either protective or ornamental planting, we would recommend red cedar, Chinese arbor vitae, Austrian pine, Scotch pine, and western yellow pine. Of the broad-leaved trees suitable for yard planting, the following will give good results in this section: Thornless honey locust, hackberry, white elm, green ash, Russian wild olive, Osage orange, Russian mulberry. It is advisable to plant only the non-fruiting variety of this mulberry.

The soil should be taken into consideration as well as the rainfall in selecting trees to plant. On heavy loam upland soil plant the red cedar, Scotch pine, Austrian pine, Western yellow pine, Chinese arbor vitae, white elm, hackberry, honey locust, Osage orange, Russian wild olive, green ash. For planting along water courses or ravines, black walnut, cottonwood and Kentucky coffee bean can be added to the above list. In very light sandy soil, such as the sand dunes or very sandy river bottom soil, plant the red cedar, the Austrian pine, the Western yellow pine, Scotch pine and jack pine.

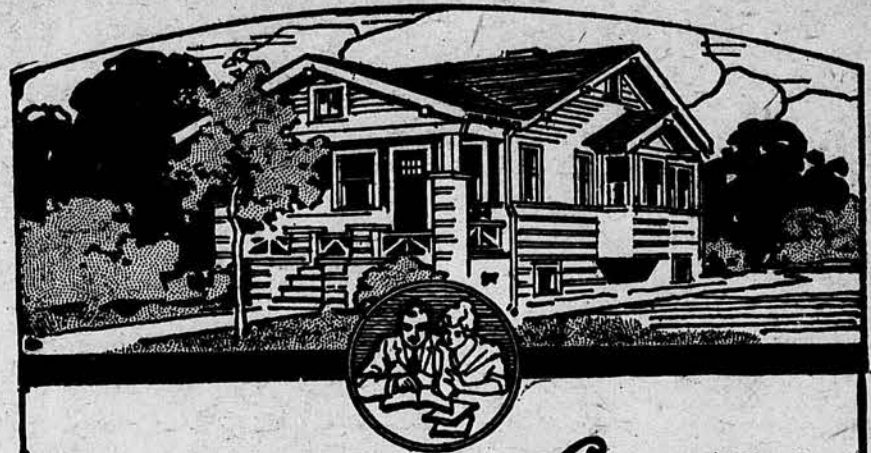
Such trees as boxelder, soft maple, Carolina poplar and others of the more rapidly growing varieties are not to be recommended because they are too short-lived in this section of the state. Even in Central Kansas many trees have perished during the past few years as a result of insect attacks and the unusually dry seasons that have prevailed. In planting trees to take the places of those that have died, more attention should be given to selecting longer-lived and more hardy varieties and such varieties as are reasonably free from insect attacks. A bulletin on tree planting in Kansas has been prepared by Prof. C. A. Scott, state forester, and Walter Burr of the rural service department of the agricultural college. This bulletin can be procured by addressing the extension division of the college, at Manhattan.

Stopping Soil Drifting

A. J., Lincoln County, asks if there is anything he can do to stop the soil from blowing on his wheat fields. The wheat made very little growth last fall owing to the dryness of the season, and the soil is drifting badly on windy days.

This is one of the serious things with which the Western Kansas farmer has to contend. When soil begins to drift, the momentum of the drifting particles increases in proportion to the distance they can blow or slide along without meeting with any interruption. The running of a series of lister furrows across the field at right angles to the direction in which the soil is drifting will help to check it. Sometimes running a disk across will produce sufficient obstruction to stop soil blowing. The thing to do is to prevent it from getting started across a big stretch of land and thus gaining momentum. Another method of preventing soil drifting is to spread straw across the field in strips. Of course it would have been better if the field had been all covered with a light dressing of straw last fall. This method has been very successful at the Hays Experiment Station. There a packer is run over the straw to press it into the ground so it will not blow away.

"Pleasure rides for cattle" is the way J. E. Payne of Oklahoma expresses the system of shipping stock from one place to another from the time the calves are weaned until they are ready to be slaughtered. The buyers ship the calves to a central market where they are kept a year or more on pasture. They are again sent to market, and again shipped to some feed lot for fattening. After fattening, the cattle take their fifth and last pleasure ride. They then go to the slaughter house. We often wonder if beef cannot be made without paying so much for car rides which must be anything but pleasant to the cattle, and which must cause much of the loss to the feeder. Many of the men who raise the calves could have enough feed on their farms to grow them out and in some years at least even fatten them for market.



"One Begins to Know How to Live at Seventy"

The author of that was not joking. It takes years to learn how to do an important thing well. For a little over fifty years we've been making good woodwork. Each year has brought its lesson, till now we know of no way to make CURTIS on woodwork mean more in Service and Quality.

The woodwork is selected and matched. It is fitted together like fine furniture. It is delivered on time.

But we do not stop with the material. We help you with your plans. We will send without cost the Home Books described below. They contain the best features of the thousands of better built homes we've furnished with

1866 CURTIS WOODWORK

"The Permanent Furniture for Your Home"

At your lumber dealer's you can see the new, big Curtis catalog. It pictures every Curtis design, each one the combined work of an artist and skilled workmen. Other makers will struggle to imitate and duplicate. Failing, they may offer you something called "just as good" with the lure of lower price. But not a price that's much lower—a mere handful of small change per year when distributed over the lifetime of your home.

THE CURTIS COMPANIES, SERVICE BUREAU

1453-1553 S. Second Street, Clinton, Iowa

Manufacturing and Distributing Plants at
Clinton, Iowa; Lincoln, Neb.; Minneapolis, Minn.; St. Louis, Mo.; Chicago, Ill.; Kansas City, Mo.; Detroit, Mich.; Topeka, Kan.
Eastern Offices at Pittsburgh and Washington

The makers of CURTIS Woodwork guarantee complete satisfaction to its users.
"We're not satisfied unless you are."

Window & Door
Frames
Storm Doors &
Screens
Screens Doors &
Screens
Screens
Screens
Screens
Screens
Screens



Your Choice of These Home Books—Free
"Better Built Homes"
Vol. II—\$2,700 and under;
Vol. III—\$2,700 to \$4,500.
Which shall be our gift to you?



Porch Balusters
Sideboards
Cabinets
Bookcases
Mantels
Window Seats
Wall Panels
Ceiling Beams
Mouldings
Porch Columns
Porch Rail
Everything in Woodwork

Clip and send coupon today for your choice of these two books.

THE CURTIS COMPANIES, SERVICE BUREAU
1453-1553 Second Street
Clinton, Iowa

Without obligation, please send me
Vol. II—Homes \$2,700 and under
Vol. III—Homes \$2,700 to \$4,500
Mark the book you wish

Name.....

R. F. D.....Town.....

State.....

GET MY PRICES

BEFORE YOU BUY Be sure and get my prices! Before buying a gasoline engine (manure spreader, cream separator or tractor) of any make, or kind, or price, please ask for and read Galloway's 1917 catalog—the biggest, most important book and greatest money-saver for my customers I ever put out! Get my proposition to you and compare it with all others; then be your own judge! We are actual manufacturers and sell direct to you from our factory. We specialize on the lines we offer. We were first to offer engines, separators, spreaders direct from the factory at one small profit. We have made the manufacturing and selling of these lines a life business. You can't afford to buy a gasoline engine or any of the other Galloway lines until you first get our prices and our proposition. Get my price before you buy! Cash or Time.

HERE'S THE REAL PROOF!

I can't give it praise enough. I had a 8 h. p. Galloway engine bolted to my 16 in. corn mill and it does the work where an 8 h. p. of another make did not. M. F. SHOOK, DECATUR, ILL.

It has not cost me one cent for repairs. Am now buying a 2 1/4 h. p. engine and washing machine for the home. Consider the Galloway simplest engine made. ADOLPH DRINOVSKY, TRASS, IA.

fourth the 16 h. p. Galloway simplest, most powerful, best governed engine I ever saw and \$225 cheaper. HENRY WISHAM, MILTON, WIS.

My 8 h. p. Galloway was 5 yrs. old this fall. Works perfectly—good for 15 yrs. yet. HAROLD W. BARNES, DELPHI, IND.

THE WM. GALLOWAY CO., 215 Galloway Station, Waterloo, Iowa

OLEO FIGHT IN CONGRESS

AS WE have many times pointed out, the producers of dairy products are vitally concerned in the matter of permitting oleo to be colored and sold in imitation of real butter, which costs much more to produce than the bogus article. The big fight in Congress to change the present law is on. What is known as the Underwood Bill has been introduced in the senate as an amendment to the revenue bill. According to G. L. McKay, secretary of the American Association of Creamery Butter Manufacturers, this bill is even more vicious than the one proposed in 1910. That bill required that oleo be sold in the original package and provided heavy penalties for breaking the seal of the package. It also provided that it be put up in from one-fourth to five-pound packages. The Underwood amendment permits the ten-pound package, which offers a greater temptation to sell the product as butter.

The whole proposition hinges around the matter of coloring oleo so that it will look like butter. The oleo interests in this fight are playing up the great benefit it will be to the people who must buy oleo, or have the tax reduced, thus lowering the price they will have to pay for the product. The Underwood amendment lowers the tax on colored oleo from ten cents a pound to two cents a pound, and provides that it may even be reduced to one cent a pound. It increases the tax, however, from one-fourth cent a pound to two cents a pound on uncolored oleo. Under the present law only 2½ per cent of the oleo sold pays the ten-cent tax.

No thinking person, however, should be misled by this arrangement, the intention of which is to convey the impression that all oleo sold is taxed ten cents a pound. James H. Maurer, president of the Pennsylvania Federation of Labor, has made exhaustive studies during the past six months into the labor interests of the oleo controversy, and has shown repeatedly that the poor man's interest lies in compelling oleo to sell on its merits and forbidding it to be colored in imitation of butter and sold at butter prices. In a letter addressed to Samuel Gompers, president of the American Federation of Labor, Mr. Maurer presents the results of his investigations as follows:

"Looking at the question from every angle possible, I can see but two reasons why some dealers and manufacturers want a law giving them the right to color their product in imitation of butter; one is to charge more for their product, and the other, to give them a monopoly of the butter market."

"Let oleomargarine and butterine and all other substitutes stand on their own feet and sell for what they are and not for what their manufacturers can make people believe they are."

The amendment is continually being referred to by the oleo interests as an act to reduce the ten-cent tax on oleo to two cents. The real facts are that the tax effect would be to increase the taxes paid on oleo 700 per cent. In the formal protest made by the National Dairy Union to the Finance Committee of the senate, this effect was clearly pointed out, but the misleading statements in the press continue and serve to deceive the public generally and place the opposition of the dairy interests in a false light. Here are the facts as presented by the National Dairy Union:

"Over one hundred and forty-five and three-fourths million pounds of oleomargarine paid only one-fourth of one cent tax this year, and less than three and one-half million pounds paid the ten cents tax. Reducing the tax from ten cents to two cents per pound on less than three and one-half million pounds, and increasing the tax from one-fourth cent to two cents per pound on over one hundred and forty-five and three-quarters millions, is not tax reduction."

"We call particular attention to Section 401 of the Underwood amendment relating to 'manufacturers' original packages.' This has nothing to do with revenue. In our opinion the effect of this section is to seriously modify the 'original package' safeguards of the present law by making it possible to sell colored oleo in the states having state laws forbidding the sale of oleomargarine colored in imitation of butter. The present law expressly provides that all oleomargarine shipped into any state, whether in original package or otherwise, shall be subject to the operation and effect of the state laws."

"The purpose of the Underwood

amendment is not revenue. It has no rightful place as part of an emergency measure to increase the federal revenue. Its purpose is to wipe out the governmental restrictions that prevent oleomargarine being colored to imitate butter and sold as such. The oleomargarine laws were designed to protect the public against fraud in its manufacture and sale. The Underwood amendment removes this protection. It increases the tax on honest oleomargarine—the poor man's oleomargarine and the kind used by the housewife in cooking, etc.—700 per cent and reduces the tax on the dishonest oleomargarine from ten cents to two cents.

"The dairy interests are not in favor of the tax on oleomargarine. If this country will follow the practice of the leading nations of the world and forbid its being colored in imitation of butter, the power to defraud the public or injure the dairy interests will be removed. Oleomargarine will then have to be sold on its merits, for whatever benefit it may be to the people who cannot afford to buy butter. To increase the tax on 97½ per cent of all the oleomargarine sold, and then call it a tax reduction amendment, is a gross misrepresentation."

Every man selling cream is vitally concerned in this fight to permit oleo to sell in competition with butter made from his product. With the tax on colored oleo reduced to two cents, all oleo manufactured will be colored and will enter directly into competition with real butter. This is bound to decrease the price received for the cream. Every dairyman should wire or write his senators and representatives at once, demanding that they recognize his interest in this oleo fight.

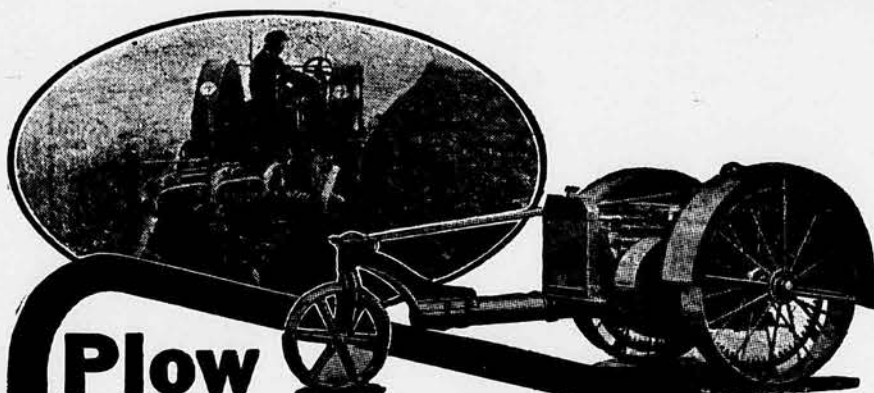
Soil Washing Steals Fertility

Soil washing by heavy rains is probably the most important cause of the loss of soil fertility on rolling upland farms. The amount of this loss is difficult to measure accurately. Figures obtained at the Missouri College of Agriculture during the last two years indicate that as much as 5 per cent of the really fertile soil may be lost in one year on a gently sloping field if the surface is left bare. This means that continuous cultivation for one generation may result in the loss of all the fertile soil on even gently rolling land unless some measures are taken to restore it. On steeper lands the loss is much more rapid.

Some idea of the loss of plant food may be obtained by considering the loss of nitrogen. The supply of this element in the soil is contained in the organic or vegetable matter present. Nitrogen is made available for the use of plants by the decay of organic matter. It is estimated that 2 per cent of the total amount present becomes available each year. It is this 2 per cent which may be removed by the crops, by leaching, and in the form of gas. As the availability of the other elements of plant food in the soil is closely associated with the decay of organic matter, it is evident that the washing away of that part of the soil richest in organic matter results in a lack of all the really valuable soil plant food. In addition to the loss of plant food, the poorer physical condition of the soil resulting from the removal of organic matter and the inconvenience caused by ditches in the fields are to be noted.

Practices tending to control erosion are systematic rotations containing fewer cultivated crops and more hay and pasture crops, the gradual deepening of soil by occasional deep plowing, the use of barnyard and green manures, winter cover crops such as rye and wheat, and prompt attention to gullies and ditches. Terracing and contour farming are coming into favor as preventive practices as lands increase in value. Tiling poorly drained sloping lands such as spouty hillsides, helps by opening up the subsoil and carrying part of the water off through the tiles.

As lands increase in value reclamation becomes profitable. Steep, badly washed hillsides may be set to hardy forest trees. Small ditches may be filled with litter and soil and seeded down to grass. Large ditches may be filled by obstructing with brush and coarse litter staked and weighted down, by planting willows, or by specially constructed dams protected by tile and so laid that most of the water passes under the dam while the sediment is deposited in the ditch.



Plow On Time This Spring

DON'T let a slow team hold up your crop. Get a La Crosse Happy Farmer Tractor and be ready with power that does not have to stop to rest—power that you can drive to the limit all day long, regardless of conditions, and repeat the same performance day after day until the work is done. You can get a La Crosse Happy Farmer Tractor for the price of two or three horses, and make it do the work of six or eight in the field. Write for catalog.

La Crosse HAPPY FARMER Tractor

Two Models—Honesty built of high class materials—Do honest work.

Model "A" pulls two plows—weighs only 3500 lbs. 88 per cent on drive wheels. 1500 lbs. guaranteed drawbar pull. Burns gasoline—or kerosene with special attachment.

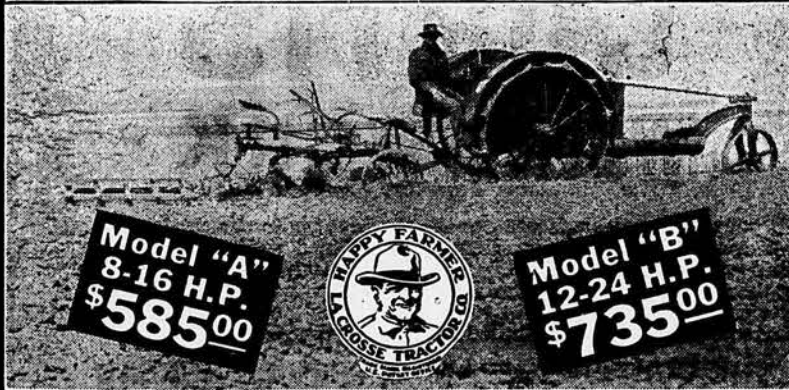
Model "B" our wonderful kerosene burner. Perfect combustion. One ton

drawbar pull. Twin Cylinders. Overhead Valves. Economical of Fuel. Completely Water Cooled. Automatic Oil—All gears steel cut and inclosed—every part easily accessible. One-piece unbreakable cast steel frame—contracting clutch—Hyatt Roller Bearings—universal hitch—self-steering—turns square corners, right or left. Also ask about La Crosse Tractor-Drawn Implements.

LA CROSSE TRACTOR CO., Dept. 6, MINNEAPOLIS, MINN.

Write for Catalog Live Dealer Agents Wanted

We have a Distributor in your vicinity for prompt service.



Cushman Light Weight Engines

4 H. P. 2-Cyl. on Hay Press—used for all other farm work.

4 H. P. Handy Truck—easy to pull around from job to job.

For All Farm Work—4 to 20 H. P.

Built for farmers who want an engine to do many jobs in many places instead of one job in one place. Weigh only about one-fifth as much as ordinary farm engines, but run even more steadily and quietly. No loud explosions—no jerky fast-and-slow speeds. Water circulating pump, driven by engine prevents overheating on all-day run. Don't buy any engine until you ask how much it weighs, whether it is the throttle governed and has a good carburetor.

CUSHMAN MOTOR WORKS, 822 North 21st Street, Lincoln, Nebr.

4 H. P. on Binder—fits any binder.

Throttle Governor gives plenty of steady power.

The All-Purpose Farm Engine.



GET MY PRICES

BEFORE YOU BUY BE sure and get my prices! Before you buy a manure spreader (gasoline engine, cream separator or tractor) of any make, or kind, or price, first get Galloway's 1917 catalog—the biggest, most important book and greatest money-saver for my customers I ever put out! Get my proposition to you and compare it with all others; then be your own judge! We are actual manufacturers and sell direct to you from our factory. We specialize on the lines we offer. We were first to offer manure spreaders, engines, separators direct from the factory at one small profit. We have made the manufacturing and selling of these lines a life business. You can't afford to buy a manure spreader or any of the other Galloway lines until you first get our prices and our proposition. Get my prices before you buy! Cash or Time.

UNDENIABLE PROOF! I saved \$29 by ordering a Galloway. I know it is a better spreader than I could have bought here for \$125. Geo. A. Kralik, Okla. City, Okla.

I consider it equal to a prominent machine sold for \$140. One neighbor who has used both says he would rather have the Galloway. W. O. Cracraft, Eckley, Colo.

I saved \$39. Believe I got a better spreader than was offered me here for \$128. A. T. Miller, Orelia, Neb.

It is as good a spreader as money can buy. I kept \$35.43 in my own pocket. A team that weighs 1,800 lbs. pulls it easily. W. H. Adams, Pound, Wis.

THE WM. GALLOWAY CO., 213 Galloway Bldg., Waterloo, Iowa



Hercules Triple Power Stump Puller

Get My New FREE Land Clearing Book Fortunes In Stumps

Here is the only real Triple Power, Portable Stump Puller ever built. Read how it is making money for owners.

A tremendous American story—how two workmen in a little western town built a vast business by making fortunes for others. Thousands of men are making big money now—every day—every month—with the Hercules. Find out how. Write for the story. It's human. It's real. It's true. Write today.

HERCULES Triple Power Portable STUMP PULLER

No stump too big. No land clearing job so tough but that it can be solved quickest and cheapest the Hercules way. More power than a tractor. 60 per cent lighter, 400 per cent stronger than cast iron puller. 30 days' free trial. Unlimited guarantee now to replace, free, all castings that break from any cause whatever. Double safety ratchets insure safety to men and team. Accurate turning means light draft.

Mail postal for free book showing photos and letters from owners. Tells how to turn stump land into big money. Special introductory price proposition will interest you.

Hercules Mfg. Company
1303 25th Street
Centerville Iowa

Unlimited Guarantee 30 Days' Free Trial Mail Coupon NOW

RUSH COUPON for Book and New Low Price

Mr. B. A. Fuller, Pres., Hercules Mfg. Co.
1303 25th St., Centerville, Iowa
Dear Mr. Fuller: Mail me your free book and special price and Unlimited Guarantee offer on the new Hercules All-Steel Triple Power Stump Puller.
Name _____
Town _____
State _____
Route No. _____

National Hollow Tile SILOS

LAST FOREVER
Cheap to install. Free from trouble.
BUY NO BLOWING IN EARLY FREEZING

Write today for price and information about the size silo you expect to build. Good territory open for live agents.
NATIONAL TILE SILO CO.
5511 R. A. Long Bldg., Kansas City, Mo.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

Rural Phone Switching Rights

We have the following inquiry from a subscriber concerning the rights of a rural telephone company in the matter of switching charges and regulations:

"We have some rural telephone lines built and owned by farmers, and having no switchboard of our own we have had our lines connected to a switchboard of an incorporated company and have been paying it switching charges. This company is now putting up lines of its own and would prefer to rent us 'phones instead of switching our lines. It is endeavoring to put into effect switchboard rules that would compel us to discontinue the use of our phones and lines and either do without or rent of the company. Does such a company have the right to switch some lines and refuse to switch others, and do they have the right to charge us as much for switching our lines as to rent us their own phones? What is the customary price charged by telephone companies for switching rural 'phone lines?"

This company cannot make changes in its rates or rules regarding switching without the consent of the Public Utilities Commission. All questions affecting public utilities in Kansas come under the jurisdiction of this commission and rural telephone companies should take up with the commission such questions as come up affecting their rights. The law now in operation with reference to the making of changes in rates is as follows:

"No change shall be made in any rate, charge, rule, or classification or schedule of charges, joint rates, or in any rule or regulation or practice pertaining to the service or rates of any such public utility or common carrier, without the consent of the commission, and within thirty days after such changes have been authorized by said Public Utilities Commission, then copies of all tariffs, schedules and classifications and all rules and regulations, shall be filed in every station, office, or depot of every such public utility and every common carrier in this state, for public inspection."

If the rights of these rural telephone lines are being infringed upon, those interested should by all means make their complaints at once to the Public Utilities Commission, Topeka.

A bill has just passed the house which will make some changes in the law in case it passes the senate and becomes a law. This bill permits telephone companies and other utilities, with some few exceptions, to raise rates and make other changes and regulations by filing with the commission their intention and publishing in an official paper the proposed changes. If those affected make objections these are taken into consideration by the commission in acting on the case. The general tendency of the bill seems to be to restrict the powers of the commission and some of the farmer members of the house voted against it, believing that it was not to the best interest of their constituents.

Pruning and Spraying Pays

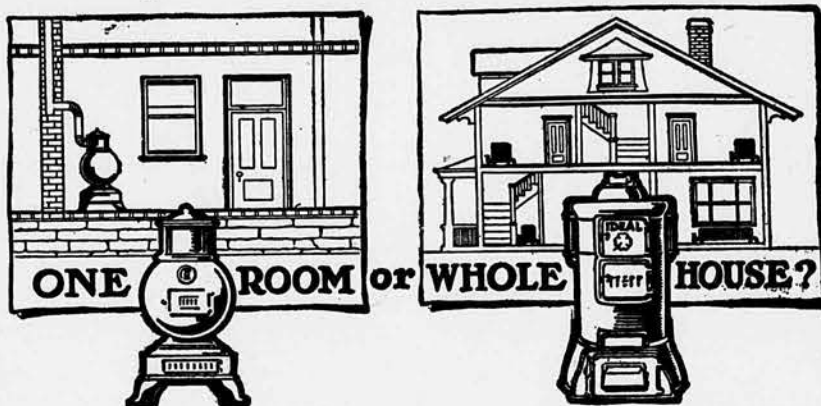
Does orchard pruning and spraying pay? The answer is found in the results of co-operative experiments conducted in forty Missouri orchards. These experiments extended over a period of three years. They show, first, that a neglected orchard is about the most unprofitable thing on the farm; second, that the best managed orchards in Missouri are producing more profit per acre than any other farm crop.

The average returns per acre of these forty orchards during the last three years has been as follows: Properly pruned and sprayed trees, total received, \$176 per acre; net profit, \$143 per acre. Untreated areas, total received, \$18 per acre; net profit, nothing.

In order to obtain records of the results part of each orchard was allowed to remain in its previous condition—not pruned and not sprayed. The experiments, in view of the results obtained, show conclusively the advantages of doing the right kind of orchard work.

A well worked out spraying system in the apple orchard, if thorough applications are made, will practically insure a clean crop of fruit when unsprayed orchards produce almost no marketable fruit. This applies to the small home orchard the same as to the large commercial orchard. We must spray and otherwise combat the insects and diseases of the orchard if we are to expect any returns. The day has passed when an orchard will take care of itself and produce crops of fruit free from worms and disease.

Do you want to heat—



You have fussed and shivered long enough—trying to heat your house with old fashioned methods which yield little comfort with great labor and many disappointments. Why not make your whole house just like June, even in below-zero weather? An IDEAL heating outfit will do this for you and will last as long as the building stands and never need repair or overhauling.

AMERICAN & IDEAL RADIATORS & BOILERS

The smallest cottage or largest building can be equipped at present attractive prices to suit anyone's pocketbook. These IDEAL outfits heat the whole house with one fire and require no more care-taking than to run a stove for one room.

IDEAL Boilers burn fuels of any locality, hard coal, soft coal, screenings, pea coal, slack, wood, slabs, etc., and give heating results that open up the whole house with good, healthful heat throughout chilly days or bitter cold nights—not necessary to have a cellar or water pressure.

The lasting heat that costs the least

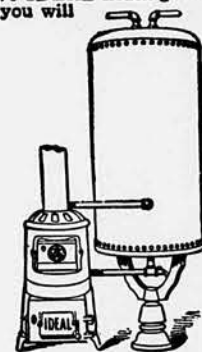
It is wise even to increase your borrowing at the bank in order to have IDEAL heating this winter for the comfort and savings that IDEAL heating will give you will make you more money than the bank interest you may pay.



AMERICAN Radiators and IDEAL Boilers change any house into a home.



A No. A30 IDEAL Boiler and 262 ft. of 38-in. AMERICAN Radiators, costing the owner \$210, were used to heat this farm house, at which price the goods can be bought of any reputable, competent fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions. The IDEAL outfit is the only feature of the house which is never worth less than you paid for it.



Our IDEAL Hot Water Supply Boilers will supply plenty of warm water for home and stock at small cost of few dollars for fuel for season.

Get this book about Ideal Heating

Don't put it off another day. Read up and get all the information as to comfort, cost, and fuel economy that an IDEAL Boiler and AMERICAN Radiators will give you. Write today and get a copy of "Ideal Heating." Puts you under no obligation to buy.

Sold by all dealers. No exclusive agents. **AMERICAN RADIATOR COMPANY** Write to Department F-14 Chicago

FARM SEEDS ---AT FARMER PRICES--- WE CAN SAVE YOU MONEY

on your Farm and Garden Seeds, if you will write us and tell us what you want. All our high grade seeds are sold subject to government or any state test. Don't pay two or three profits between you and the man that grows the seeds, but send direct to us and we will save you a lot of money in the purchase of your seeds. We offer attractive prices on Alfalfa, Red Clover, Sweet Clover, Timothy, Alsike and other Clovers and Grasses. Can also make you low prices on all the best varieties of Seed Corn, Spring Seed Wheat, Oats, Barley, Speltz, Cane, Kafir Corn, Billion Dollar Grass, Millets, Rape, Vetch and all kinds of Farm and Garden Seeds. Write us—give us a list of seeds and quantities wanted and ask for our Big Catalog. IT'S FREE. It tells you all about everything you want to know and should know, to make farming pay. Dig Mother Earth—you will never see this great prosperity again.

Address: JEFFERSON-RATEKIN SEED CO., Jefferson, Iowa.

ALFALFA CORN

My three machines saves price of an AUTO each 5 years. I am the inventor and maker. My "SURESTAND" Alfalfa and Clover Press Drill seeds in CORNFIELD at last cultivation. ONLY FIVE POUNDS to the acre needed. SAVES ONE-HALF SEED and all the (Corn) Nurse Crop. My "KLEEN CORN" BLIND PLOWING ATTACHMENT for Corn Planters, blind plows the corn as fast as planted. No more weeds or baked soil—Absolutely clean corn hills. My "BEST YET" Light self-cleaning "REVOLVING TOOTH" Corn Harrow is the LAST WORD in corn tools. I have farmed 60 years. I needed these tools, but they were not made. Postal brings catalogue, necessary pre-seeding instructions and "Alfalfa and Corn Hints," worth many dollars. **SHERWIN L., Brookings, S. D.**



PLANT ARMSTRONG'S PURE SEED CORN
Flourish stock of heavy yielding, early maturing, high test, pure bred seed corn ever offered. All grown in Famous Shenandoah Seed Corn District. **FREE SAMPLES AND CATALOG**
Originators of the seed corn business. Growers and breeders of high quality seed corn for 40 years. Make next season's crop a bumper crop. Plant Armstrong's Corn. Varieties adapted for your section. High Quality—Special Prices for Early Orders—Quick Service. Write **J. B. ARMSTRONG & SON, Box 152 SHENANDOAH, IOWA** SEED CORN ANNUAL

FREE BOOK ON TREES

Tells about large assortment of best trees and plants at lowest prices. Ask for Preferred Customer's Discount. No obligation. Book is free. Send for it now. Address **WELLINGTON NURSERIES, Desk G, Wellington, Kans.**

EVERGREENS

Nothing better for windbreaks and hedges. We grow all hardy tested varieties. Also a complete line of shrubs, fruit, etc. We are specialists. Write for free catalogue. **Evergreen Nursery Co., Sturgeon Bay, Wis.**

A LONG-LASTING PAD - MORE SERVICE-GREAT-ER SATISFACTION

This Form of Attachment Found Only on Pads Made by Us.



New staple and felt reinforcing device makes hooks stay on longer. Ask your dealer for Tapatco booklet. Shows pads in colors and contains many valuable horse remedies. If he hasn't it, ask him to write us direct.

The American Pad & Textile Co.
Canadian Branch: Chatham, Ontario
Greenfield, Ohio

16 ⁹⁵ ^{ON TRIAL}
^{Upward}
SEPARATOR
AMERICAN
FULLY GUARANTEED CREAM

A Solid Proposition to send new, well made, easy running, perfect skimming separator for \$16.95. Skims warm or cold milk; heavy or light cream. Different from picture, which shows larger capacity machines. See our plan of MONTHLY PAYMENTS. Bowl is sanitary, marries easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan. Western orders filled from western points.

AMERICAN SEPARATOR CO.
Box 4091
Salem, N. Y.

"How To Feed Silage" **FREE**

Special 36-page chapter from famous 264-page book "Modern Silage Methods." Write for copy. Get up-to-the-minute helpful suggestions free. Also get our free catalog on Silver's "Ohio" Silo Filler. 1917 revised edition of "Modern Silage Methods" 25c, covers entire silage subject—every type of silo—how to build, 41 crops used, feeding, 8-page index. 56 illustrations. Write now.

THE SILVER MFG. CO.
Box 352
Salem, Ohio

AMERICAN TILE SILOS

None Better—Warranted 5 Years.

10 x 35, 58 Tons.....	\$185.
12 x 35, 90 Tons.....	198
14 x 40, 138 Tons.....	258
16 x 45, 215 Tons.....	325

Thousands in use. Agents wanted. Also Climax Ensilage Cutters and Hoosier Roofs. Write today.

AMERICAN SILO SUPPLY CO.
219 Traders Bldg. - Kansas City, Mo.

\$15.00 Sweep Feed Grinder. \$19.00 Salvaged 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.,
Seventh St., Topeka, Kansas

MAKE YOUR BIKE A MOTORCYCLE

At a small cost by using our Attachable outfit. FITS ANY BICYCLE. Easily attached. No special tools required. Write today for **FREE BOOK** describing the SHAW Bicycle Motor Attachment. Motorcycles, all makes, new and second-hand, \$35 and up.

SHAW MANUFACTURING CO.
Dept 140 Galenburg, Kansas.

WITTE Engines

EVERY SIZE A BARGAIN. 2, 3, 4, 6, 8, 12, 16 and 22 H.P. Kerosene, Gasoline, etc.

WITTE ENGINE WORKS, 1601 Oakland Ave., Kansas City, Mo.

BIG BOOK FREE



Ayrshire Now Record Kansas Cow

ONE of the best Ayrshire herds in the country has been developed at the Kansas Agricultural College. A new dairy cow record for Kansas has just been completed by a cow of this herd. Canary Bell completed her year's work January 17, 1917, and produced during the year 17,406.4 pounds of milk containing 668.16 pounds of butter fat, which is equivalent to 786 pounds of average butter. This is the second highest record ever made in Kansas. Maid Henry, a Holstein cow, made the highest record when she produced 19,600 pounds of milk and 837 pounds of butter as a thirteen-year-old. Maid Henry is dead and therefore Canary Bell holds the highest record in the state for a living cow.

Last year Canary Bell produced six times as much butter as is produced by the average Kansas cow. The cow was purchased from Sam Jones of Wisconsin when she was six months old. She is now eight years old and consequently has been raised and developed by the agricultural college.

This record does not come as a surprise because Canary Bell has always been a good producer. Last year she produced 651 pounds of butter and with her first calf she produced 436 pounds. Her total production for life to date amounts to 63,903.6 pounds of milk and 2,801 pounds of butter, or an average of 560 pounds a year for the five years. In addition to this production of milk and butter, Canary Bell has produced three bull calves and two heifers.

Melrose Canary Bell, a two-year-old daughter of Canary Bell, also finished a splendid record last month. She produced 13,891.1 pounds of milk and 505.5 pounds of butter fat, equivalent to 589 pounds of butter. Melrose Canary Bell now holds third place in production among two-year-old Ayrshire heifers of the world. She was born and raised on the college farm and is sired by the senior Ayrshire herd bull, Melrose Good Gift. Melrose Canary Bell produced 131 pounds more butter fat than her mother did at the same age.

Another two-year-old Ayrshire heifer sired by Melrose Good Gift has just finished a record of 12,588.8 pounds of milk and 484 pounds of butter fat, equivalent to 566 pounds of butter. This heifer ranks seventh among the two-year-old Ayrshire heifers of the world.

The Ayrshire herd of the Kansas college has gained quite a reputation outside of the state. Prof. O. E. Reed tells us that the state universities of Missouri, Indiana and Minnesota have purchased Ayrshire bulls here to place at the head of their Ayrshire herds.

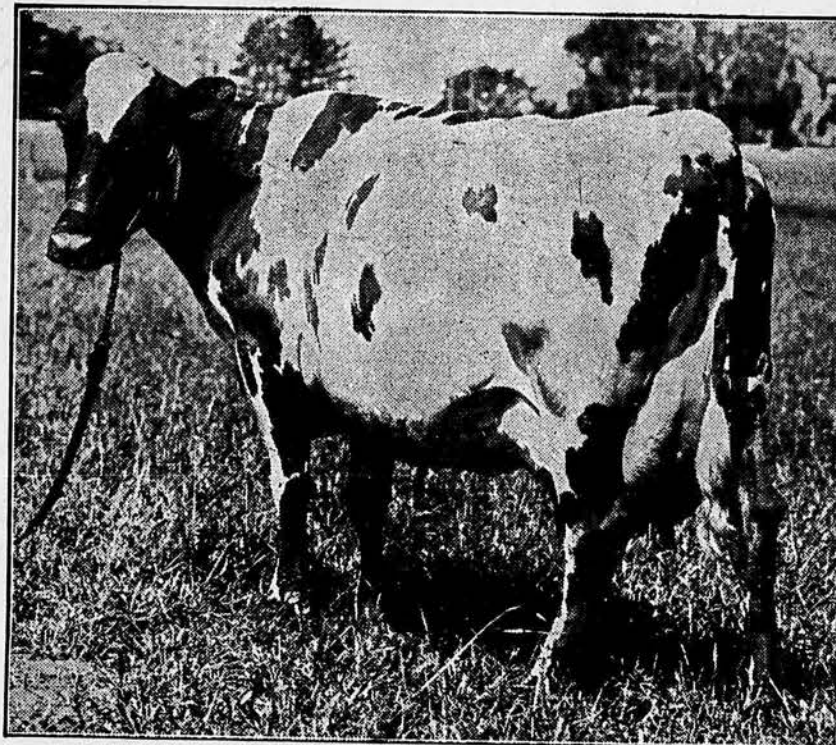
At the annual meeting of the Kansas Ayrshire Breeders' Association held on February 6, the following officers were elected: L. E. Johnson, Waldron, Kansas, president; H. H. Hoffman, Abilene, Kansas, vice-president; James W. Linn, Manhattan, Kansas, secretary-treasurer; and Drs. F. S. Schoenleber and E. E. Kubin, fourth and fifth members of the executive committee. Professors O. E. Reed and J. B. Fitch were elected to honorary membership in the association.

Champion Butter Blood

Breeders of Jersey cattle may well be proud of the records that have been made by such cows as Pogis Irene 2d 146435, and her even more famous daughter, Jacoba Irene 146443. Both of these cows hold world records for butter fat production. Pogis Irene 2d is a conspicuous example of the cow that continues her capacity for high production for cows over fifteen years of age. The last was 694 pounds 10 ounces of butter, the year's record ending when she was eighteen years and eleven months old. She will be twenty-one years old, May 28, 1917, and is still breeding and producing milk.

When this famous cow freshened the first time at the age of twenty-two months, the heifer calf she dropped was named Jacoba Irene. This heifer held for eight years the world's official record for a year's production—1,126 pounds 6 ounces butter, and 17,253 pounds of milk. She made a 37-months' consecutive record of 2,755 pounds of butter, producing during that time three living calves, and a 25-months' consecutive record of 2,053.2 pounds butter and two living calves, the world's greatest official record. Many breeders claim that a young heifer's first calf is of little value, but this remarkable cow was dropped when her dam was only twenty-two months old.

Jacoba Irene was a handsome cow, scoring 94½ by the official judges of the National Dairy Show. She has also made good in transmitting to her offspring high production. She is the dam of two sons, one of which—Irene's King Pogis—is the sire of twenty-nine cows with official year's records averaging 509 pounds of butter, the highest being 893. The average age of these daughters at the time the records were made was three years six months. This is a record which we believe is not equaled by any American-bred bull with daughters as young. Three daughters of this bull now on test bid fair to average 800 to 900 pounds of butter for the year's work. When his heifers are tested as mature



CANARY BELLE, EIGHT-YEAR-OLD AYRSHIRE COW.—TOTAL PRODUCTION TO DATE, 63,903.6 POUNDS OF MILK AND 2,801 POUNDS OF BUTTER.—THE MOTHER OF THREE BULL CALVES AND TWO HEIFER CALVES

DREW STALLS



All Steel
Indestructible
Convenient

Reasonably priced. Economical because durable and trouble free.

Drew Steel Stalls are better because they're equipped with a sure-stop on each side to guide the animal's head into the open stanchion.

Another important feature about the new DREW Stall is that the stanchion lock is always connected. Even when the stanchion is open there is still a solid connection between lock and arm. Every sanitary feature, every time, labor and money saving device that has proven best in cow stall construction has been included in the new DREW Stalls and Stanchions.

Your cows will be healthier, your barn work easier, your satisfaction and profit greater, if you fit out with Drew Stalls. Complete line of other Barn Equipment.

WRITE for large illustrated book on Dairy Barn Equipment. DREW CARRIE CO. Dept. 123 Waterloo, Wis.



E-B Disc Harrow

ALWAYS FITS THE GROUND

The quick-acting lever lets you instantly level the cut whether in hard or soft ground. Saves time. Leaves the ground in fine shape. Low hitch and Emerson improved hardwood bearings reduce the pull on the horses. Dust proof bearings. All styles of disc and spike tooth harrows. Write for catalog. Look for the trade mark. It's our pledge and your guide to quality.



Emerson-Brantingham Implement Co. (Inc.) 31 W. Iron St., Rockford, Ill.

Please send me free literature on articles checked:

Plows	Hay Tools	Tractors, Horseless
Harrows	Discs	Engines
Discs	Box Engines	Steam Engines
Mowers	Wagons	Trucks
Spreaders	Engines	Care Stalls
Drills	Auto Trailers	Saw Mills
Planters	Potato Machinery	Baling Presses

Name _____
Address _____

BRAVE THE WIND AND STORM

TOWER'S FISH BRAND in the best wet weather togs ever invented

the **FISH BRAND REFLEX SLICKER**

(PATENTED) \$3.50

and **PROTECTOR HAT '85'**

Dealers everywhere

Our 80th year.

A. J. TOWER CO. BOSTON

SELF-OILING WINDMILL

With INCLOSED MOTOR

Keeping OUT DUST and RAIN - Keeping IN OIL

SPASH OILING SYSTEM

Constantly flooding Every Bearing With Oil, Makes it Pumping The Lightest Breeze And Prevents Wear

OIL SUPPLY REPLENISHED ONLY ONCE A YEAR

DOUBLE GEARS - Each Carrying Half the Load

Every feature desirable in a windmill in the **AUTO-OILED AERMOTOR**

WHITE AERMOTOR CO. 2500 12TH ST. CHICAGO

10 1/2¢ A ROD

164 Styles. YOU save money by ordering direct at wire mill prices. Shipment from Kansas, Indiana, Nebraska, Texas, Colo., or Calif. CATALOG FREE. Write today.

OTTAWA MANUFACTURING CO.,
110 King Street, Ottawa, Kansas.

cows, the records will all without doubt be considerably raised.

Jacoba Irene's Premier, the other son, is just starting on his career. His first heifer to be tested qualified with a record of 406 pounds 13 ounces of butter in a year.

Three of Jacoba Irene's daughters have made remarkable records, and four of her granddaughters have higher records at an average age of six years and seven months than ever reached by any other cow of equal age. Jacoba's Loretta, now coming eight years of age, has produced 3,321 pounds of butter and five living calves to date. Jacoba's Mona and Jacoba's Corinne at the age of six and a half years have produced five living calves each, and 2,316 and 2,428 pounds of butter, respectively. Jacoba's H. L. K. Devila at the age of six years and five months had produced 2,203 pounds of butter, four living calves, and a fifth calf is due in about three months.

It is evident that the outstanding characteristics of Jacoba Irene are being transmitted to both her sons and daughters. Every breeder has observed how a single individual often becomes the founder of a strain or family.

Itinerary of Lecture Train

The Santa Fe dairy and poultry demonstration and lecture train will make its first stop at Sedgwick, Kansas, at 8:20 a. m., March 6. The complete itinerary of the train for the first eleven days is given below:

Tuesday, March 6—Sedgwick, 8:20 to 10:15 a. m.; Newton, 10:45 a. m. to 12:35 p. m.; Halstead, 12:55 to 2:40 p. m.; Burrton, 3 to 4:45 p. m.
 Wednesday, March 7—Hutchinson, 8:30 to 10:15 a. m.; Darlow, 10:30 a. m. to 12 m.; Pretty Prairie, 12:25 to 1:55 p. m.; Kingman, 2:20 to 4:05 p. m.; Carvel, 4:25 to 5:55 p. m.
 Thursday, March 8—Norwich, 8:30 to 10:15 a. m.; Viola, 10:40 a. m. to 12:10 p. m.; Peck, 12:40 to 2:10 p. m.; Goddard, 3:25 to 4:55 p. m.; Cheney, 5:20 to 6:50 p. m.
 Friday, March 9—Mulvane, 8:30 to 10:30 a. m.; Udall, 10:50 a. m. to 12:20 p. m.; Oxford, 1:05 to 2:45 p. m.; Wellington, 3:20 to 5:20 p. m.
 Saturday, March 10—Anthony, 8:30 to 10:15 a. m.; Harper, 10:40 a. m. to 12:10 p. m.; Danville, 12:35 to 2:05 p. m.; Argonia, 2:20 to 3:50 p. m.; Mayfield, 4:15 to 5:45 p. m.
 Monday, March 12—Arkansas City, 8:30 to 10:05 a. m.; Winfield, 10:35 a. m. to 12:10 p. m.; Burden, 12:55 to 2:25 p. m.; Grand Summit, 2:55 to 4:25 p. m.; Moline, 4:55 to 6:15 p. m.
 Tuesday, March 13—Severy, 8:30 to 10:15 a. m.; Eureka, 11 a. m. to 12:45 p. m.; Hamilton, 1:25 to 3 p. m.; Madison, 3:30 to 5:15 p. m.
 Wednesday, March 14—Toronto, 8:25 to 10:15 a. m.; Fredonia, 11 a. m. to 12:45 p. m.; Longton, 1:25 to 3:10 p. m.; Elk City, 3:35 to 5:20 p. m.
 Thursday, March 15—Benedict, 8:25 to 10:15 a. m.; Erie, 12 m. to 1:30 p. m.; Walnut, 1:50 to 3:20 p. m.; Girard, 3:50 to 5:35 p. m.
 Friday, March 16—Thayer, 8:30 to 10:10 a. m.; Chanute, 10:45 a. m. to 12:30 p. m.; Humboldt, 1 to 2:30 p. m.; Iola, 2:45 to 4:15 p. m.; Calton, 4:35 to 6:05 p. m.
 Saturday, March 17—Yates Center, 8:30 to 10:15 a. m.; Neosho Falls, 11 a. m. to 12:45 p. m.; Garnett, 2 to 3:45 p. m.; Richmond, 4:05 to 5:50 p. m.

Cow Test Report

The number of cows in the Dickinson County Cow Testing Association producing more than forty pounds of butter in a month is becoming so large that we are here printing the records of only those making forty-five pounds of butter or over in one month.

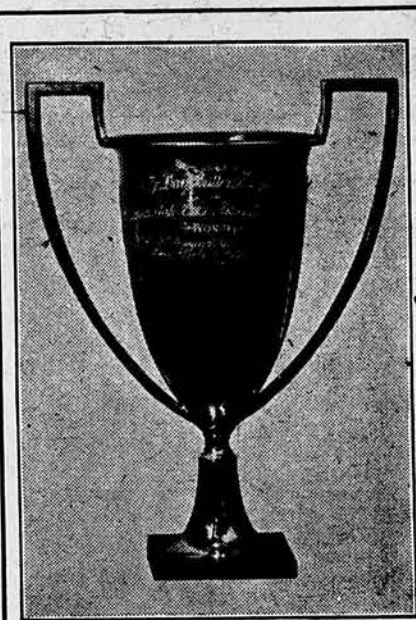
The increase in production is evidence of the value of cow testing work. The standard of production among the herds of the members is becoming higher each year.

The following is a record of the cows reaching the forty-five-pound mark for the month ending November 30, 1916:

Owner	Pounds Milk	Per Cent Fat	Butter 80%
Smeltz & Gish, H.	960	3.8	45.6
Ira Zercher, H.	1,605	3.2	61.7
Hoffman Bros., H.	1,088	3.5	47.5
Hoffman Bros., H.	873	4.8	52.4
Hoffman Bros., H.	846	4.6	49.9
George Lenhart, H.	1,089	3.7	50.4
Harry Engle, H.	990	4.1	50.7
Harry Engle, H.	1,074	3.7	49.6
Harry Engle, H.	1,185	5.0	74.1
Harry Engle, H.	1,191	3.5	52.1
D. S. Engle & Son, H.	936	4.3	50.3
D. S. Engle & Son, H.	1,050	4.2	55.1
D. S. Engle & Son, H.	1,041	3.6	46.9
D. S. Engle & Son, H.	1,251	4.0	62.5
D. S. Engle & Son, H.	1,110	3.3	45.8
A. B. Wilcox, H.	1,116	4.1	57.3
A. B. Wilcox, H.	1,566	4.0	78.3
J. A. Engle, H.	1,071	3.9	52.3
E. S. Engle & Son, H.	1,365	3.4	59.7
E. S. Engle & Son, H.	1,530	3.5	67.0
E. S. Engle & Son, H.	1,644	4.2	86.2
E. S. Engle & Son, H.	1,038	3.5	45.4
J. R. Collins, H.	1,113	3.4	47.3
J. R. Collins, H.	867	4.4	47.6
The following is the record for the month ending December 30, 1916:			
Hoffman Bros., H.	927	4.7	54.5
H. S. Engle, H.	1,215	3.1	47.1
H. S. Engle, H.	1,014	4.2	53.3
H. S. Engle, H.	1,026	3.8	48.8
H. S. Engle, H.	597	6.1	45.5
H. S. Engle, H.	1,176	4.2	61.8
H. S. Engle, H.	1,182	4.3	63.5
D. S. Engle & Son, H.	1,095	3.4	46.5
J. A. Engle, H.	1,257	3.1	48.8
J. A. Engle, H.	1,452	3.0	54.5
J. A. Engle, H.	948	3.8	45.0

J. A. Engle, H.	1,263	3.1	49.0
J. A. Engle, H.	1,080	3.9	52.6
A. B. Wilcox, H.	1,062	4.1	54.4
A. B. Wilcox, H.	1,164	4.5	55.5
A. B. Wilcox, H.	1,437	3.8	71.8
A. B. Wilcox, H.	1,820	3.9	93.6
A. B. Wilcox, H.	1,895	4.6	80.3
A. L. Eschelman, H.	753	4.8	45.1
E. S. Engle & Son, H.	1,461	3.2	58.5
E. S. Engle & Son, H.	1,629	4.0	81.5
E. S. Engle & Son, H.	1,629	3.7	75.3
George Lenhart, H.	1,488	3.8	70.6
George Lenhart, H.	1,230	4.2	64.6
George Lenhart, H.	1,281	3.5	56.0
George Lenhart, H.	1,653	3.0	62.0
George Lenhart, H.	1,434	3.3	59.1
George Lenhart, H.	1,044	3.5	45.6
George Lenhart, H.	1,030	3.6	48.6
Smeltz & Gish, H.	1,272	3.6	57.3
Almah Smith, H.	1,050	4.1	53.9
Almah Smith, H.	960	4.9	58.8
Almah Smith, H.	1,047	4.4	57.6
J. A. Weisshar, H.	1,161	3.4	49.4
J. A. Weisshar, H.	1,104	3.3	45.5
Hoffman Bros., H.	1,035	4.2	54.4
Hoffman Bros., H.	951	4.1	48.8
Hoffman Bros., H.	1,011	3.8	48.0

For several years a three-day butter fat test has been held in connection with the Topeka Fair. This competition is open to both pure-bred and grade cows and the awards are placed on a basis of butter fat production. In 1916 there were fifteen \$10 prizes offered—\$150—



KANSAS FARMER'S SILVER CUP AWARDED
U. S. INDIAN SCHOOL, GENOA, NEB., IN
THREE-DAY BUTTER FAT TEST AT
TOPEKA FAIR, 1916

besides this special KANSAS FARMER prize.

In 1916 the winning cow was Lady Abbeckerb Golden 2d, a four-year-old registered Holstein owned by the Federal Indian School at Genoa, Nebraska. Her record for the seventy-two hours was 111.6 pounds milk, testing 4.75 per cent, or a total of 5.29 pounds of butter fat.

Time to Prune Fruit Trees

February and March are the best months in which to prune fruit trees, because the wounds are then exposed to the elements but a short time before they begin to heal.

The pruning saw which is found now in the best orchards is one made especially for the pruning of trees. It has an arched frame similar to that of a meat saw. The blade is narrow, about fourteen inches long as a rule, and will turn at any angle. This swivel action will allow the operator to cut in any direction, irrespective of the position of the frame, and he can thus get the blade into tight crotches and make a smooth clean cut that does not leave a stub. Owing to the narrowness of the blade, there is little friction and therefore the saw will cut easily and quickly. The saw is not expensive. It will repay its price many times, not only by doing better work than any other saw, but also by saving time. It is a good plan, too, to have a regular carpenter's saw for use in cutting large limbs that are four or more inches in diameter.

Next to a good saw, a person should have a pair of hand pruning shears. These should be strong and otherwise of good quality, as poor shears give no length of service and are likely to do poor work.

The average farmstead can well afford a good planting of evergreen trees, both for shelter purposes and for landscape effect. If properly planted and cultivated they will soon make good shelter and greatly add to the comfort and satisfaction of the farm home.



More and Better Corn



Moline Four-Wheel Planter
has gained the favor of farmers throughout the corn belt, because it always increases the yield per acre where other conditions are right.
Has a reliable drop—no bunching or scattering. Deposits every kernel at uniform depth. Four wheels cover the seed evenly and pack the moist earth around it leaving the top of the ridge open and loose to insure quick germination.
Operator has clear view of the work at all times.

Flying Dutchman Planter
has a record of planting 3550 perfect hills to the acre. Plants corn to suit your soil—2, 3 or 4 kernels to a hill and with unvarying accuracy—change the drop while the machine is in motion. Plates for edge drop, flat drop or drill are supplied with each machine. Every machine must stand a rigid test for accuracy and efficiency before it leaves the factory.
Ask your Moline dealer about these corn planters or write us for illustrated literature.

Moline Plow Co.,
Dept. 10 Moline, Ill.

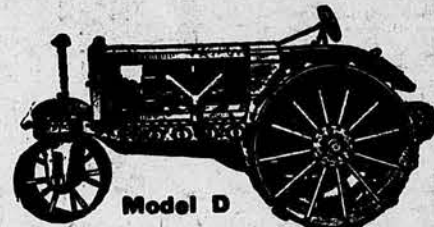
THE MOLINE LINE INCLUDES
Corn Planters, Cotton Planters, Cultivators, Corn Binders, Grain Binders, Grain Drills, Harrows, Hay Loaders, Hay Rakes, Line Sowers, Listers, Manure Spreaders, Mowers, Plows (chilled and steel), Reapers, Scales, Seeders, Stalk Cutters, Tractors, Farm Trucks, Vehicles, Wagons.

DEPENDABILITY OF WALLIS TRACTORS and CASE PLOWS

Not the first year — nor the second year, but many years service determine the ultimate economy of a tractor or farm implement. Long, dependable, economical service is "built in" Wallis Tractors and Case Plows.

Wallis "Cub" TRACTOR

Mightiest of the Medium Weights

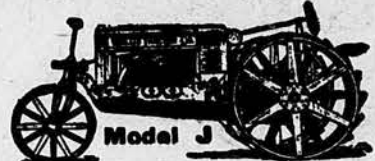


Only our high standards could make possible the wonderful records established by this premier tractor. The amazing speed records—and astonishing durability proved in our "1000 mile cross country run" are being duplicated on farms everywhere.

Tremendous power! Big reserve! Wonderful endurance! Amazingly low upkeep! These things the "Cub" gives you. And these things mean real economy!

Wallis "Cub" "JUNIOR"

"Like the Cub Only Smaller"



After having proved conclusively the constructional superiority of the "Cub" our engineers built the Junior—the greatest small tractor achievement of the day. Practically develops a draw bar pull equal to its own weight. In reduced proportion it duplicates every feature that has made the Wallis "Cub" the leader in its class. Great reserve power! Absolute Dependability! Wonderful Durability! Low Upkeep! All these you find in this mechanical marvel. It positively meets the demand for long, efficient, carefree service for the small farm.

Mail Coupon at Once!

Get our catalog. Learn the facts about these two great "quality" tractor successes. Save your dollars by buying wisely the first time. Mail the coupon now.

J. I. Case Plow Works

1028 W. Sixth St., Racine, Wis.

Minneapolis, Minn. Sioux Falls, S. D. Dallas, Texas
Kansas City, Mo. Omaha, Neb. Oklahoma City, Okla.
Baltimore, Md. St. Louis, Mo. Indianapolis, Ind.

Name.....

Town.....

State.....

Write for Book Today



FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in colors.

ELECTRIC WHEEL CO., 34 Elm Street, Quincy, Ill.

Enthusiastic Meeting of Hogmen

THIS year's meeting of the Kansas Swine Breeders' Association was pronounced by all as the best swine breeders' meeting ever held in Kansas and was considered one of the best association meetings of the Farm and Home Week. It was held on February 6.

At this meeting Prof. C. M. Vestal, who has charge of the nutrition work with hogs at the Kansas Experiment Station, gave a short summary of the experimental work with self-feeders. The results will soon appear in bulletin form. Senator F. B. Caldwell, of Howard, Kansas, gave a very interesting paper on "The Business of Selling Pure-bred Swine." Mr. Caldwell brought out the importance of having the buildings, lots, and surroundings as well as the hogs in the very best condition. Prof. E. N. Wentworth gave a talk on "Inheritance of Size of Litter in Swine." Prof. J. M. Evvard, associate chief in the animal husbandry department of the Iowa State College, Ames, Iowa, gave the principal talk on the subject, "Feeding the Pure-bred Pig." His talk was very instructive and brought out very forcibly the importance of feeding some protein supplement to brood sows before farrowing. He showed some figures obtained at the Iowa station where sows were fed alfalfa, tankage, and other protein feeds in connection with corn, with the result that the litters were larger, the pigs heavier and stronger, and the cost of the ration less than where corn alone was fed. He also took up the matter of the self-feeder for fattening hogs, and showed that by the use of the self-feeder or free choice system of feeding, hogs put on gain faster and with less grain than where fed by hand.

He also brought out the fact that brood sows could be successfully fed by the self-feeder if enough ground alfalfa hay was mixed with the ration to make it bulky so the brood sows would not get too much corn.

We gave in our issue of February 17 the names of the new officers of this association. The secretary, Carl P. Thompson, who is connected with the extension department of the agricultural college, expects to do considerable work for the members of the Kansas Swine Breeders' Association during the coming year, and would be glad to receive any information that the members can give. Every breeder of swine in Kansas is urged to send 50 cents for membership to the secretary-treasurer and help make the Kansas Swine Breeders' Association the largest and best breeders' association in the state.

Pigs That Pay

We have all been doing about the same thing in the hog business. We have been selling the tried brood sow because of her great value on the market. Now we are breeding a bunch of gilts. A litter of pigs from an old sow is worth much more than a litter from a gilt. They are stronger and there are generally more of them. A strong pig has a good possibility of developing into a growthy, profitable hog. A weak pig is a hard proposition. They frequently develop into runts which are an abomination to the hog man. We must calculate on having a bunch of weak pigs coming this spring. Besides this, we are about 20 per cent short on brood sows. We cannot possibly have as many pigs, and they are not likely to be as strong. Besides this, we are marketing our hogs while still under size.

If all of the above statements are true, we estimate that we will be short about one-third on pork supply the coming year. Then how about the demand? Greater than ever before. Some are glad that they haven't many hogs because corn is so high. But pork is high, too. Hogs sold in Kansas City last week for \$13 a hundred.

It would bankrupt any one to raise hogs on corn alone, though the price of pork is high, but there is a way out. It is Nature's path, the pasture route. It does not cost much more to raise alfalfa and Bermuda and rape than it did when corn sold for 25 cents a bushel. On this farm we never would think of raising hogs without alfalfa. We never pasture alfalfa, however, as hogs will kill it. We cut it for the hogs and feed it to them in racks either green or as hay. They will eat it in any form. They will not eat all of it, nor do they have to do so to make it profitable. We used to think we could not raise alfalfa

on our upland prairie soil, but we find that we can; not as much per acre, but of a better quality for hogs.

It is not best to raise hogs in a close pen, though they might be supplied with alfalfa in the rack. Hogs want to move about and be in the open field upon soil more recently turned. It's their nature to root, so give them the opportunity.

We need a pasture grass and for this section we have it in the big Bermuda grass. It can not be killed by the rooting or tramping or grazing of the hogs. It never gets too hot nor too dry nor too wet for Bermuda. It will graze from twenty to fifty hogs per acre, depending upon the size of the hogs and the fertility of the soil and the humidity. It will last for a generation. It is the nearest to a perfectly balanced ration of any of the grasses.

We plow our Bermuda hog pasture

every February. Upon the sod we sow two bushels of oats and five pounds of rape per acre. The oats will pasture the hogs until in June. Upon the Bermuda and rape they will graze until freezing weather. Bermuda grows better for being plowed. This thirty-acre hog pasture was on our poorest land, but it is becoming our best. From it we receive our best returns.

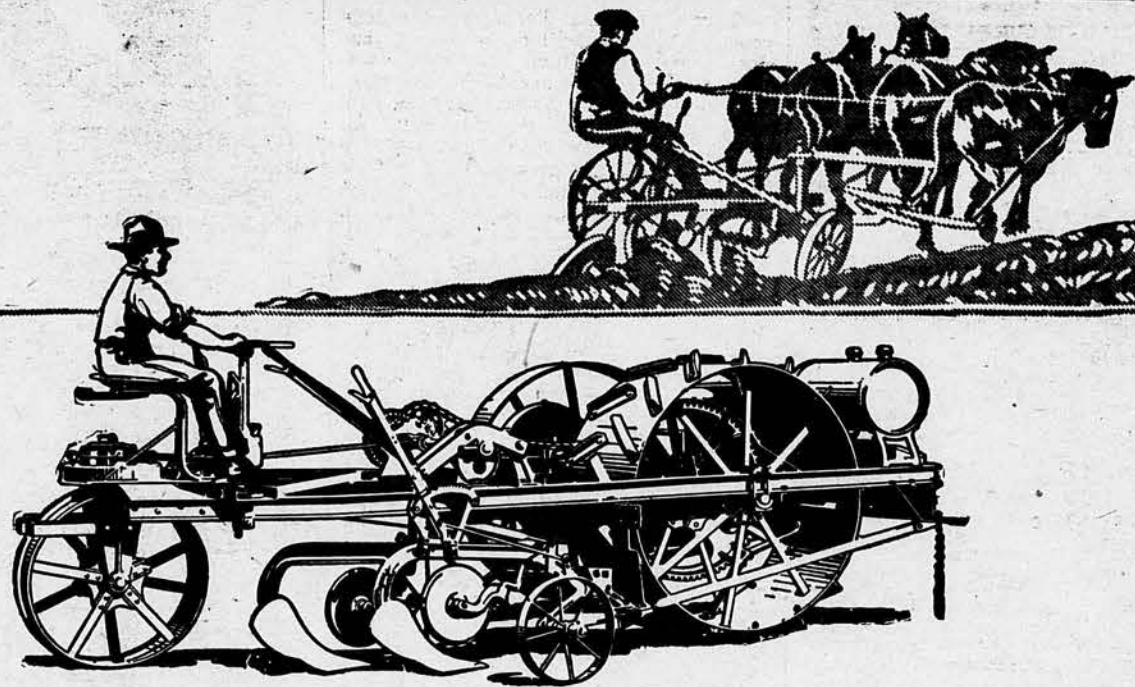
A pig grazed upon Bermuda has stamina. He develops into a big-boned well-muscled hog. When he is big enough in frame and strong enough inside to digest all the corn he can eat, we open the gate and he walks into the fattening pen. Here he finds a self feeder filled with corn. The hog fills himself as he empties the feeder. We keep filling the feeder so the hog never gets empty. When he is well filled with corn we fill the tankage self feeder and he eats some tankage and then gets a drink, eats some more corn and gets another drink. Then he sleeps, dreaming angel-haunted dreams, as he is in hog paradise. He will eat every few hours and eat slowly, thoroughly masticating his

corn, as he has learned that there is plenty, and while he is making a hog of himself, it is not necessary that he should be piggish about it. This is Nature's way and these are the pigs that pay.—"BERMUDA" MITCHELL, Chandler, Okla.

There are few farm operations that pay better in proportion to the time required than does the testing of seed grain. A few hours spent now in testing the germination of seed to be planted may mean the difference between a 20 per cent crop and a 90 per cent crop. For even a much less difference than this, it pays to test the seed to be planted.

Co-Operate in Selling Horses

About a year ago Dr. C. W. McCampbell, secretary of the Live Stock Registry Board, suggested that a Kansas Percheron breeders' consignment sale be held in Manhattan during Farm and Home Week. He felt that such a sale would offer the small breeder an opportunity to sell his surplus Percherons at



Plows Like a Horse Gang—Does Double the Work

IT'S just like sitting on a two gang sulky to plow with an Advance-Rumely "8-16"—and just as easy to handle. The plows are right in front of you where you can see what's going on—full control is at your hand.

Then consider the work—6 to 8 acres in an average ten hour day can be plowed with our "8-16"—clean, even plowing at the right depth. With the Advance-Rumely you can back up with your plows, make short turns and cut square corners.

But a tractor must do more than plow to make a profit for you. The Advance-Rumely will handle your draw bar jobs—discs, drills, binder, etc., also your belt work, silo filler, sheller, small separator, with a reliable, steady, economical power. The removing of two pins detaches the plows for other jobs than plowing.

Burns Cheap Kerosene

As a kerosene burner the Advance-Rumely "8-16" is noticeably superior.

It not only operates efficiently on kerosene at full load, but runs on this cheap fuel under variable loads or even continuous light loads.

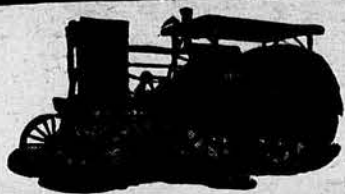
When you get the catalog notice the powerful four cylinder motor, the efficient oiling system, protection to parts, strength of construction and balance—Bennett air cleaner on the carburetor, Hyatt Roller Bearings in transmission. The "8-16" is completely equipped—plows and everything. The same model is built in three plow size—the Advance-Rumely "12-24."

This new one-man outfit is Advance-Rumely built throughout—the same as the famous OILPULL tractor—Ideal Separator, engine plows, etc.

Ask our nearest branch for catalog.

ADVANCE-RUMELY THRESHER CO.
LA PORTE (Incorporated) **INDIANA**

Address the branch nearest you
Kansas City, Mo.—Wichita, Kan.



Flour City Tractors

17 YEARS IN THE FIELD

A PRACTICAL DESIGN
CAREFULLY DEVELOPED.

SIMPLICITY IS ITS BEAU-
TY, STRENGTH AND POW-
ER ITS STRONG POINT.

ITS SUCCESSFUL CAREER
HAS BUILT OUR FACTORY
AND MADE OUR BUSINESS

THE FLOUR CITY IS BUILT
IN SIZES SUITABLE FOR
ANY FARM.

BUY ONE BIG ENOUGH
TO DO YOUR WORK.

CATALOG ON REQUEST.

KINNARD-HAINES CO.
846 44th Ave. No. MINNEAPOLIS, MINN.

FERTILE KANSAS LAND CHEAP

Those who located in Central Kansas 20 years ago are the big farmers today. Their land has made them independent.

Your chance now is in the five Southwestern Kansas counties adjacent to the Santa Fe's new line, where good land is still cheap.

With railroad facilities this country is developing fast. Farmers are making good profits on small investments. It is the place today for the man of moderate means.

Wheat, oats, barley, speltz, kaffir and broom corn, milo and feterita grow abundantly in the Southwest counties referred to. Chickens, hogs, dairy cows and beef cattle increase your profits.

You can get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually, interest only 6 per cent—price \$10 to \$15 an acre.

Write for our book of letters from farmers who are making good there now, also illustrated folder with particulars of our easy-purchase contract. Address

E. T. Cartledge,

Santa Fe Land Improvement Co.,
1902 Santa Fe Bldg., Topeka, Kansas.

A windbreak will stop a lot of snow which largely soaks into the ground when it melts. This makes a good place for a garden and for small fruit. The roots from the trees will extend out to a distance at least equal to the heights of the trees, which means that the strip next the trees will not be good for most crops. But beyond this strip there will be four or five rods in width and in many cases more which will have a better moisture supply than if there were no trees. The windbreak will also protect whatever is grown in this belt. This protection enables crops to grow better and especially vegetables and fruits. If your garden does not have a windbreak, plan to set one this spring. Red cedar or Chinese arbor vitae are good varieties to plant.

There are so few cockerels for sale this spring that breeders are asking much higher prices than usual. It has cost considerable more to winter birds on the high-priced grains. Many breeders are going to find it extremely difficult to get cockerels for the utility flock.

better prices than he could otherwise command. This suggestion appealed to a number of Kansas breeders and eighteen of them consigned forty-two head of Percherons to the Kansas Percheron breeders' sale held at the college pavilion on February 9. The fact that these horses, including the weanlings, sold for an average of \$503.16, proves the value and advantage of such sales. It was demonstrated in this sale that there is a keen demand for good, sound, useful Percherons, and that the small breeder can raise just as good Percherons as the larger breeder.

When brought together in numbers sufficient to attract as many buyers as attend the larger breeders' sales, the small breeder's Percherons sell for just as much money as those of the large breeder.

In any sale a horse must be fat to sell to the best advantage. Several fat and well fitted horses sold for more in this sale than others that were better but in poorer condition.

Such a sale is a great advertisement for the consignor. Nearly every consignor took buyers home and made additional sales.

Another Kansas Percheron breeders' consignment sale will be held next year during Farm and Home Week the afternoon following the meeting of the Kansas Horse Breeders' Association. Entries for this sale must close at least two months before the date of the sale in order to properly catalog and advertise the horses consigned. All Percherons offered for this sale will be inspected by a representative of the horse breeders' association and only good, useful, sound Percherons will be accepted.

Stallions from one to four years of age, and mares from two to six years of age that have been bred early sell best at public auction. If you contemplate entering Percherons in next year's sale, select them now and feed and grow them to the limit for the next twelve months. It will pay you to bring them to the sale as big and fat as possible.

No charge is made for the use of the barns and pavilion or for personal services in planning and conducting this sale.

Putting Down Wells

In the shallow water districts a battery of wells is used almost exclusively as a water supply. These wells are ordinarily located at right angles to the general direction of the valley and are placed about forty feet apart. The large open well which was attempted in the early days of irrigation experiments is now entirely abandoned and the 15-inch casing and strainer is used in the water-bearing stratum and the well pit is made three feet in diameter. The more modern plants have the well pits lined with concrete blocks. A battery of three to twelve wells is most often used. These are connected to a common suction line and pumped with a centrifugal pump located in a central pumping pit.

The 15-inch casings are usually located in the first and second water-bearing strata. These casings are settled through the water-bearing material by the sand bucketing method. In the deep well districts the hydraulic process is still used for sinking the 24-inch deep-well casings and strainers. This is an expensive method of construction but at present represents the most practical type of well for deep-well installations.

In the neighborhood of Scott City some very promising wells have been constructed by excavating the well pits down to the water-bearing material and then sinking the casings into the gravel by the sand bucketing method. In other words the battery of wells is being used to some extent where the depth to water is over fifty feet.

The demand for pure-bred beef cattle far exceeds the supply. This is true of all the beef breeds. It is a most encouraging condition, for live stock farming is essential to the building up of run-down land. We note that the registrations and membership enrollments in the Angus Association have increased over 50 per cent since the International Live Stock Show. Angus breeders are especially proud of the fact that this breed just recently won grand championship honors as feeders at the Western Stock Show held at Denver. The load of cattle winning this prize sold at \$14.50 a hundred. They went to Iowa, where they will be fitted for the 1917 International.

Test all field and garden seed now. It doesn't pay to plant dead seed. It costs little to make tests.

I MET HIM ON THIS VERY SHIP!

It was within an hour of sailing time. I was on my way home from Europe five years ago. The Mauretania lay beside her Liverpool wharf. Everybody was hurrying to get on, as we were to sail at five o'clock. Suddenly, without warning—without a propeller turning—she commenced to pull away from her moorings. The gang planks creaked—broke loose—and there was quite a commotion as the mighty Mauretania tore loose from her moorings and floated out into the water. In the excitement I met a man who was leaning over the rail who looked at me and we laughed together. Then we just naturally got acquainted like people do when they are traveling. He was J. I. Berrigan of Orange, New Jersey, the famous cream separator expert and inventor. I had never seen him before but I had heard of him. I told him I was from Waterloo, Iowa, and he said, "You are Galloway." I soon found out he was the great cream separator expert and a man I was glad to meet. Naturally

"Read this little story. It was my turning point as a manufacturer of cream separators."—Wm. Galloway.



WE BECAME WELL ACQUAINTED

He told me what he had done in perfecting cream separator patents and improvements. I told him he was just the man I was glad to get acquainted with. After the Mauretania had been lashed to her wharf again, the excitement was over, and we pulled out of Liverpool several hours later. Berrigan and I began to talk cream separator, and every day after that we spent several hours together visiting. I told Mr. Berrigan that we were perfecting what I thought was the best cream separator ever produced, and I also told him if he would come to Waterloo and put on the finishing touches, go over the separator, test it, criticize it, and fault with it wherever he could, and suggest any possible improvements. I would pay him well for his time. In a few days after we landed in New York he did come to Waterloo. He said our separator was one of the finest designs he had ever seen, and with the few recommendations which he made, he pronounced it O. K.—good as the best—and better than many of the separators on the market today. Our engineers, designers and separator builders had produced a machine with graceful lines, simplicity of construction, combined all the good features and left out all the faults. Mr. Berrigan commended us on the work and immediately put his stamp of approval upon this machine. That's why I say

WE PERFECTED THIS SEPARATOR

before we offered it on the market. We put out in the hands of farmers and dairymen enough of these separators to know that they would stand up under any test, whether operated and used in the kitchen, the milk house, the creamery or elsewhere, and used two or more times per day, every day, week after week, month after month. I just want you to try it. If you like it, buy it. If you don't, send it back. We pay freight both ways. If the New Galloway Sanitary Separator is as good as I say it is you can't afford to buy any other kind. If it is not as good as I say it is, I could not afford to guarantee it for ten years.

Get My New Low Prices AND READ MY 1917 BOOK ABOUT CREAM SEPARATORS

It tells of how we took four years to design and perfect this separator, to build into it every good cream separator feature and retain its beautiful proportions. How we did not build it down to a price, but built it up to a high standard in our own factories right here in Waterloo. It tells how we build Galloway Sanitary Separators from the ground up. How they are designed and many other separator secrets and facts. A meaty, exact, concise, truthful book about cream separators, gasoline engines, manure spreaders, tractors and other implements we manufacture. Why, by selling direct, I can make a machine as good or better than any high priced separator sold through other systems. These are a few of the reasons why I want you to get this book. It tells the whole story. It tells the truth. It tells the facts. Ask for it today. A postal gets it. Don't delay. A reading will save you dollars in buying.

Indisputable Proof!

Have operated several different kinds of separators. We know it skims close. It paid for itself. Wm. S. Galloway Sanitary skims. Brower, Farnum, Idaho. as close and runs lighter. It is easier running and than any. J. E. Ricketts, more easily cleaned than others. We made a saving of \$23. I wouldn't exchange it for any high priced separator. E. F. Louthan, Carthage, Mo. Your No. 9 separates perfectly at rate of 800 lbs. per hour. (Only guarantee for 750 lbs.) S. S. Brockway, Greenville, Pa.

Try a Galloway Sanitary Cream Separator

In Your Dairy for Ninety Days. Stand it side by side with cheaper machines and you will see the difference in material and workmanship. design and skimming qualities. Stand it beside the highest priced machines, test them together for months! Higher priced machines will not run any easier or skim any closer and cannot be more perfectly sanitary or better built. We want you to be the judge—we will take your decision as final. Separators shipped from Waterloo, Council Bluffs, Kansas City, St. Paul, or Chicago, whichever is nearest to you.

Wm. Galloway, President
WM. GALLOWAY COMPANY
213 Galloway Station, WATERLOO, IOWA



Note these few strong, simple, sanitary parts. Easy to wash clean—no rough edges—no sharp corners. Bowl catches any foreign matter in the milk. Only two shafts in the whole casing—both of high-carbon steel in long, perfectly fitted bearings. All gear shaft and both bowl spindle bearings supported by one casting—the gear case. All the working parts run spray of oil. Simple, effective driving clutch on crank shaft.

4 Good Sizes
From 375 to
950 lbs. Capacity per hr.

FARM SEEDS

Better than any you ever bought. Guaranteed absolutely highest germination and purity. Subject to test—money back if not satisfied.

Seed Corn Prize Winner at Ames College exhibit, also first on largest yield per acre with 139 and 116 lbs. to acre. Every ear tested before shipped. Also choice lot of famous Ames College 135 Oats, Alfalfa, Rape, Millet, Clover and other farm seeds.

Master Seed Grower. That's what they call me because my farms I raise only the finest quality bumper crops. Write for my Free Catalog before you buy. It's a different—makes seed buying safe. No disappointments. Write ZELLER SEED CO. 420 McKinley St., Jefferson, Iowa.

FREE ENGINE BOOK

Before you buy any Engine—Read my Book, "How to Judge Engines." Tells how to distinguish a High Grade Engine by the difference in cylinders, pistons, valves, ignition, etc., with less cost for fuel, up-keep and repairs. Book Sent Free together with my LOW "Batteries" 90-day trial offer, etc. Address

Save Half
ED. M. WITTE,
WITTE ENGINE WORKS,
2, 3, 4, 5, 6, 8,
12, 16 and 22
H-P. Sizes. Pittsburgh, Pa.

Kills Prairie Dogs, Ground Squirrels, G. Hogs, Pocket Gophers. Saves alfalfa. Experimental stations approve. 1400 tablets, P. P. 41.55. War-ranted. Mole Tablets. 75c. Ask Druggist or send direct. Booklet Free. Ft. Dodge Chem. Co., Ft. Dodge, Ia.

There are scores of fruit-bearing ornamentals that can be planted. Many of these are not only ornamental, but furnish quantities of food for birds. Plant more of these in thickets about the home.

If on the market for pure-bred stock, read KANSAS FARMER live stock advertisements. You will find what you want.

Biggest Hatches Strongest Chicks

That's what you will get with my Hatching Outfit—and I can prove it. Order direct from this advertisement—test the machines 90 days. Then if you are not thoroughly satisfied, I will order them back and refund your money. If you keep them as you surely will—I guarantee them for 10 years more. Over 524,000 satisfied users, all bought on this plan. With this outfit you can make a big income—and

**\$8.55 Still Buys
140 Egg Size
World's Champion
Belle City Incubator**

Double-walled—Hot-water—Copper Tank—Self-regulating—Thermometer Holder—Deep Nursery. The Prize Winning World's Champion Model with Paragon Fibre Board Construction that has led the field for 10 years—same as used by Uncle Sam—leading Agr. Colleges—America's most successful Poultry Raisers. When ordered with my \$4.88 Hot-water—Double-walled 140-chick Brooder both cost only \$12.50.

Freight Prepaid East of Rockies
Satisfaction Guaranteed

You can also share in my

\$1,000 Cash Prizes

Conditions easy to get Biggest

Prize. Start early—order now.

With this wonderful hatching

outfit and my complete guide

book for setting up and oper-

ating, you are sure of suc-

cess. And with it comes my

"Big Catalogue"—"Hatching

Facts", or I will send this book

Free for the asking. Write me

today. Jim Rohan, Pres.

Belle City Incubator Co., Box 18, Racine, Wis.



"Kaw Chief" Corn

For Record Breaking Crops.

Grown on our own Kansas pure seed farm. We have been working on this variety for 32 years, constantly selecting and improving the strain. All the nearly 50 years of our experience selling seeds backs our judgment that KAW CHIEF is our

FINEST YELLOW CORN

Matures in 95 to 100 days. Yields regularly 75 to

80 Bushels to the Acre Does fine on up-

land or bottom land. We guarantee highest ger-

minating power. Send for sample and information

about Big Prize Contest.

BARTEDES SEED CO. Largest seed house west of the Mississippi.

207 Massachusetts St. Lawrence, Kansas.

WANTED MEN!

\$75 TO \$300 A MONTH!

Demand for capable

automobile and tractor men far exceeds the

supply. Our graduates secure good paying positions

as Salesmen, Demonstrators, Factory Testers, Gar-

age Managers, Drivers and Tractor Experts.

\$50 Course FREE

Only six weeks required to train you in this great

school. Most complete instruction. Instructors

all experts. Enroll now and receive \$50

Course in Tractor and Lighting Knowledge

Free. Write today for our Big Free Book

and \$50 Free Scholarship Certificate.

RAHE'S AUTOMOBILE TRAINING SCHOOL

Largest Auto Training School in the World.

11095 Locust St., Kansas City, Mo.

Stack Your Hay

The Easiest Way—The Jayhawk

Stackers and Sweep Rakes

MAKE YOUR HAY-STACKING EASY—

with the Jayhawk Stacker. Time money

and men saved. Lightest in weight—

easiest to operate—delivers hay in

where no ropes or pulleys could

tip—fully guaranteed. Made of

wood or steel. Sold direct.

Manufacturers price.

WRITE QUICK FOR

CATALOGUE

PRICE LIST.

F. WYATT MFG. CO. 910 N. 5th St. Salina, Kans.

Join Our MONEY-MAKERS

with "Successful" INCUBATORS

AND BROODERS

Twenty-three years leader-

ship. Poultry lessons free to

every buyer. Booklet, "How

to Raise 48 out of 50 Chicks"

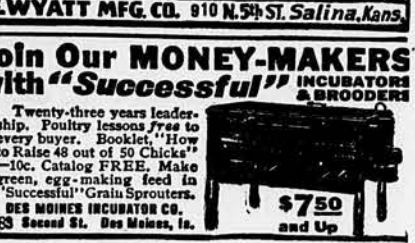
—10c. Catalog FREE. Make

green, egg-making feed in

"Successful" Grains Sprouters.

DES MOINES INCUBATOR CO.

83 Second St. Des Moines, Ia.



How Old Are Your Hens?

AT WHAT age should a hen be sold? In other words, how long will a hen be profitable? The general opinion among poultrymen is to sell all hens when two years old. On a plant where a thousand hens are kept, 500 are pullets and 500 one-year-old hens. This makes it necessary to reproduce one-half the flock each year. This is the most practical plan where hens are kept in large flocks for commercial purposes.

In numerous experiments it has been found that a hen lays a greater number of eggs in her pullet year than in any year following. If hens are forced for egg production in their pullet year, they are seldom profitable even the second season.

At the Kansas Agricultural College poultry farm where the hens are not forced but are given such care as any person can reasonably give his poultry, numerous hens have produced as many and in some instances more eggs in their second than in their first season. Especially is this true of the egg breeds such as the Leghorns. The heavier breeds are more prone to put on fat after their pullet year.

This matter of age in the farm flock is most commonly neglected. Nature has provided no means whereby the exact age of a hen can be told. There are no teeth to examine, no horns with their annual rings, or no gray hairs to give them away. There must be some artificial means of telling what year they were hatched. A very practical way to mark them is to punch a small hole in the web of the foot as soon as the chick is hatched. A punch for this purpose may be purchased for 25 cents. The first year punch a hole in the outer web of the left foot, the second year in the outer web of the right foot, the third year in the inner web of the left foot, and the fourth year in the inner web of the right foot. In this way if a hen is especially valuable for any reason, she may be kept for four years. If some such plan is followed, as soon as a hen is caught its age can be told. It is a wise plan to make a record in a book of the system of marking. If this is not done one is quite likely to forget which mark was for a certain year.

Ordinarily a hen must lay six dozen eggs to pay her board for a year. Very few of the general purpose breeds will lay more than this number after their second season. As most of the farm flocks are of these breeds, it will be readily seen that few hens will be profitable after this period.—N. L. H.

Eggs for Hatching

It is seldom necessary and never desirable to use eggs for hatching from all of the fowls on the farm. A sufficient number of the choicest fowls should be selected for use as breeders. The breeding fowls may be separated from the main flock two or three weeks before it is necessary to begin to save eggs for hatching. They should be housed in a temporary pen and yarded at one end of the regular poultry house or in portable colony houses and returned to the main flock as soon as the breeding season is over.

No matter how carefully the breeding stock has been selected, it will usually be found advisable to make a careful selection of the eggs to be incubated, basing the selection on their size, shape, color, condition of shell and uniformity. The first three of these characters are hereditary and a careful selection of

eggs of good size, shape and color continued through several generations will result in greatly improving the average quality of the eggs produced by the flock.

Use of Incubators Increases

In a circular from the Colorado Experiment Station C. S. Anderson points out that the modern hatching of eggs is getting to be almost exclusively an incubator proposition. There are no large commercial poultry plants or specialized poultrymen conducting businesses of any consequence that are not using artificial incubation. The number of side-line poultrymen and farmers buying incubators is rapidly increasing. In fact, it is a question whether even the city poultryman, with a few hens in his back yard, can afford to be without one. To meet his need, there is the small electric-heated, fifty-egg capacity machine successfully operated in most any room in the house, or even on the back porch. Going to the other extreme, the mammoth commercial hatchery machine of 5,000 to 10,000 egg capacity is not uncommon.

Between these two extremes is the 250 to 300-egg machine, the kind best suited to the needs of the farmer-poultryman. The initial cost of a reliable machine of this size will vary between five and ten cents per egg capacity. To operate a 300-egg incubator for three weeks will cost approximately 75 cents for gas, oil, or electricity, and ought not to require more than ten minutes a day for attention. This represents the work of twenty hens for three weeks, and at least half that many hens for a six weeks' brooding period. If these hens were all kept at work during this time they would lay at least 500 eggs. Valued at only 15 cents a dozen, these eggs would amount to between six and seven dollars, and if sold for hatching, could easily bring \$50.

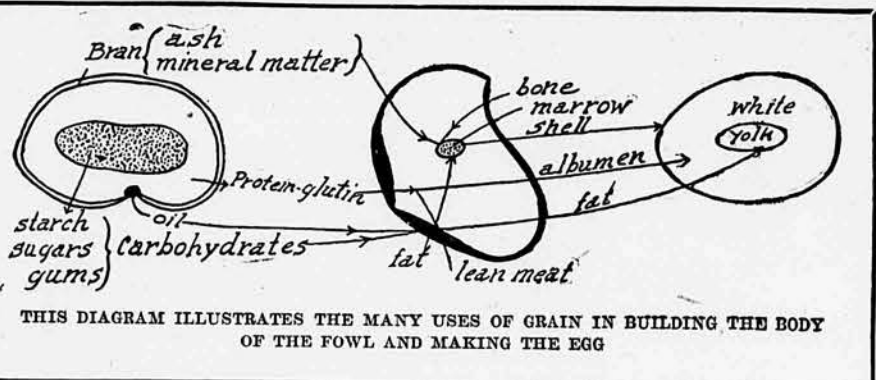
Looking at artificial incubation from this viewpoint, can you afford to be without a good dependable incubator?

Hints on Growing Geese

In a recent circular from the Washington Experiment Station some useful suggestions are given on the handling of geese. In this circular it is stated under favorable conditions geese are the easiest of all domestic fowls to handle. They do best and are grown at least cost when they can have good pasture.

Geese do not breed well if moved just prior to the breeding season. After a breeding flock is once established it can be maintained for several years without change. In mating, young geese generally pair. As the ganders grow older they will mate with from one to four or even five females. When once mated geese are generally faithful to their mates and if separated often refuse to mate again for a long time. After the fowls have been mated a large flock can be run together in one pasture, but an unmated gander or goose can make no end of trouble in the flock. While access to a large bathing pool or running stream is an aid to fertility, good results may be obtained without it.

Geese breed best on pasture with water accessible. They make valuable scavengers if turned into an orchard after the crop has been harvested. They not only destroy the insects and worms that would infest the next crop, but they turn to profit the leavings of fruit.



THIS DIAGRAM ILLUSTRATES THE MANY USES OF GRAIN IN BUILDING THE BODY OF THE FOWL AND MAKING THE EGG

**20 New
Improvements
Positively As-
sure Record-
Breaking Hatches**

Five new 1917 im-
provements—20 ex-
clusive X-Ray patented
improvements in all X-Ray
Gas Arrestor—ingenious device
that prevents lamp fumes entering egg chamber;
X-Ray Nursery Tray, new feature that assures
sanitation; protects little chicks; X-Ray Egg
Tester, most perfect, handy tester ever conceived;
New Handy Height; New 1917 Quick Cooling Egg
Tray. All new, exclusive X-Ray features that
make poultry success sure. And—nev-
ertheless the price of the 1917

X-RAY Incubator

has not been advanced a
penny. Learn all the details
of this marvelous hatcher.
Express Prepaid to prac-
tically all points. Write for
**BOOK OF STARTLING
Money-Making FACTS**

Ask for
Book
No 64

FREE

X-RAY

INCUBATOR CO.

Box 64

Des Moines

Iowa

Go South BEFORE SPRING

Go now, before Spring work begins,
and visit the

Highlands of Louisiana

where the whole district is rapidly settling
up with good farmers from the Northern
states—where Winter is Springtime and
the planting season is weeks ahead of the
land of snow and ice. A trip now will
open your eyes; it will show you the possi-
bilities of a country where the climate is
with you instead of against you.

**Book FREE On
More Acres for Less Money**

Write today for this book, "Where Soil
and Climate Are Never Idle", with informa-
tion about low excursion rates from your
town, and a map of Louisiana in full colors.
A postal card will bring them all—MAIL IT.

Long-Bell FARM LAND CORPORATION

425 R. A. Long Building
KANSAS CITY, MO.

Lice-Proof Nests

WRITE QUICK FOR CATALOGUE

Nests won't cost you 10

cents if you order them

from us now.

You will get 20 to 50

per cent more eggs with

KAUSON

Sanitized steel

Lice Proof Nests

These wonderful sanitary

nests last a lifetime. Safe

factory—Unlimited Guarantee.

The illustration shows

our leader—5 Nest Set.

Cost Less Than Wood Nests.

Don't Wait. Make Big Money on Poultry.

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

Write

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

Write

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

Write

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

Write

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

Write

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

Write

KAUSON Mfg. Co., Box 147 St. Joseph, Mo.

Order

25000

IWAN POST HOLE AUGER

Digs post holes faster than the man be-

hind can set posts, without hard back-

breaking labor. Digs wells also.

The two interlocking sharp crucible

steel blades easily cut through any soil.

DIGS QUICK AND EASY

and saves time and trouble. Don't be

imposed upon. Refuse the poorly made,

dimmy imitations. A poor tool is dear

at any price. Reliable dealers sell the

original, patented, "guaranteed Iwan"

for only \$2. It pays for itself in one

day's work.

WRITE FOR FREE BOOK

about Iwan Post Hole Diggers, Pickle Edges,

Hay Knives, Ditching Spades, Drain Cleaners,

File Hooks, Chimney Tops, Ventilators, Etc.

IWAN BROTHERS

1527 Prairie Ave., South Bend, Ind.

KEROSENE ENGINES

OTTAWA LATEST DESIGN

Durable, Powerful, Reliable, Mas-

sive. Built to last; to do hard,

heavy work. Uses Cheapest Fuel.

Pull 4 to 1/2 horse-power more than

rated. 3 Months Trial. Easy Terms. Sized

1/4 to 22 H.P. Easy to start. No Cranking. No

batteries. 10 Year Guarantee. Most practical engine

ever built. Engine book free. A Postal brings it.

THE OTTAWA MANUFACTURING CO.,

561 King Street, OTTAWA, KANSAS.

They require little grain if the pasture is abundant. If the pasture is short they should be fed mostly on cut clover, alfalfa, cabbages, raw beets, turnips, or potatoes, with some oats or barley and bran added. Corn is generally considered too fattening for breeding stock. Those breeders who recommend a mash use equal parts, by weight, of shorts and corn meal, with 10 per cent of beef scrap added and mixed with cold water to the consistency of a stiff dough. Grit should be freely provided as well as fresh drinking water.

Geese usually begin to lay in March and if not allowed to sit will lay from twenty to thirty eggs each. The first goslings should not be hatched until the grass begins to come in green. A hen will cover not more than five goose eggs, while the mother goose may hatch from twelve to fifteen. The period of incubation varies from twenty-eight to thirty-three days, but averages thirty days.

In hatching under hens three points should be noted:

Since the time for hatching is once and a half as long as for hen's eggs, only hens that are in good condition and kept free from lice and properly fed will stay on the nest long enough to bring off a good hatch.

Since the first goslings may appear as early as the twenty-eighth day and the last one not until the thirty-third or even the thirty-fifth day, it is a good plan to remove the goslings from the nest to a warm, flannel-lined basket as fast as they hatch or else the hen will become restless before the hatch is finished and leave the nest.

It is not wise to assist goslings from the shell. Let Nature take her own time but see that the eggs are kept moist.

In hatching in an incubator these points should be noted:

All non-fertile eggs should be tested out on the sixth day.

Goose eggs need more cooling than hens' eggs.

After the tenth day the eggs should be sprinkled daily with luke-warm water, and from the fifteenth to the twentieth day they should be dipped in luke-warm water for thirty seconds every other day and every day for the last ten days of the hatch.

Bring off the hatch at a temperature of from 105 to 106 degrees.

When cooling after the fifteenth day reduce the temperature to from 80 to 85 degrees.

Do not feed the goslings until forty-eight hours old, but give them tender, finely-cut grass and water. If with a hen, give her a box large enough so that the goslings can get out from under her and move about, and yet not large enough for them to wander off and get chilled. Their first feed should be rolled oats or stale bread slightly moistened with water. Some breeders recommend bran, corn bread, or chick food. In any case, tender grass or green shoots from oats or rye or barley cut very fine

should form at least three-fourths of their ration. Over-feeding or lack of grass will cause leg-weakness and probably death. After goslings are a week or ten days old they may be safely turned out to live on good pasture, while fresh drinking water should be supplied at all times. Under no circumstances should goslings be allowed in the water before their breasts are fully feathered. When quite young they should be kept under cover on wet mornings and in case of rain, and green food should be liberally supplied. If rapid growth is desired for quick marketing, grain may be added to their ration. Goslings reach marketable age when twelve weeks old and if well-grown should average eleven pounds.

What is the best breed of poultry? "There ain't no sech thing." There is much more in the breeding than in the breed. As an illustration: In one pen of birds that have been trap-nested for the past two years there are two hens of the same breed. There has been no difference in the care or feed of these two individuals. One has laid 413 eggs. The other one has actually produced three eggs in the two years. The difference is in the breeding. With the one, every effort has been exerted to secure heavy egg production. The breeding for generations has been in this direction. With the other no attention was given to egg production. No amount of feed or care will secure eggs from a hen that has not been bred for egg production.

Under the federal regulations there is a closed season from February 1 to September 6, inclusive, each year throughout the United States on water fowl and other migratory game birds; the season for hunting is further restricted in various parts of the country to periods not exceeding three and one-half months. The open season on water fowl in the states of Ohio, Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri, is from September 16 to December 31, inclusive, and it is unlawful to hunt or kill water fowl in those states at any other time. Persons committing violations of the regulations may be prosecuted at any time within three years after an offense is committed.

Not many had the nerve to set the incubator with 30 and 40-cent eggs. This will make the crop of early broilers scarce. Will this have a tendency to cause the price of late-hatched chicks to be more attractive than usual?

At a public sale recently hens sold at \$12 a dozen, or \$1 each. This seems like a big price to pay for hens, yet it will only take a short time for a hen to lay a dollar's worth of eggs at the present prices. Most of us can remember when 25 cents was the usual price for a hen and we paid from 50 cents to a dollar for our breeding cockerels. "But then, times are not what they used to be."



Get a Good Stand of Corn

To get an even stand of corn—2, 3, or 4 sturdy stalks in each hill and no hills loafing through the summer—use an **International or C B & Q corn planter**.

They plant corn accurately whether used with edge drop, flat drop, or full hill drop plates; whether the corn is checked or drilled. The drop clutch can be changed, while the planter is working, to drop 2, 3, or 4 kernels to a hill. The tongue is easily adjustable to the height of the horses. A handy foot drop lever makes head row planting easy.

When you look over the **International or C B & Q planter**, don't miss the **automatic marker**, a handy feature that saves a lot of work and time. There are fertilizer attachments if you want them, combination pea and corn-planting hoppers, open wheels or closed—your planter will be equipped just as you want it. You can plant rows 28 to 44 inches wide by 2-inch adjustments, with four distances between hills.

These planters are so good you will want to know all about them. Drop us a line and let us send you full information.

International Harvester Company of America

CHICAGO

(Incorporated)

U S A

Champion Deering McCormick Milwaukee Osborne Plano

Ironclad Wins in the Two BIGGEST HATCHING Contests Ever Held

Why take chances with untried machines when for only \$11 we guarantee to deliver safely, all freight charges paid (East of Rockies) BOTH of these big prize winning machines fully equipped, set up ready for use! Why not own an **Ironclad**—the incubator that has for two years in succession won in the greatest hatching contests ever held. In the last contest conducted by Missouri Valley farmer and Nebraska Farm Journal, 3000 machines were entered, including practically every make, style and price. With the **Ironclad**—the same machine we offer with Brooder, freight paid, for only \$11, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in the last contest.

Both for \$11
Freight Paid East of Rockies

30 DAYS' FREE TRIAL
Money back if not satisfied.

MADE OF CALIFORNIA REDWOOD
150 Chick Brooder

IRONCLAD INCUBATOR COMPANY, Box 147, RACINE, WIS.

WHY CHICKS DIE IN THE SHELL

We want to tell you how to prevent chicks from dying in the shell just at hatching time, how to save them from White Diarrhoea or Bowel Trouble; how to build the best **Home Made Brooder** in the world from an ordinary box or change your old one.

Above information absolutely free, for names of five to eight of your friends that use incubators. Send names today.

RAISALL REMEDY COMPANY, - BLACKWELL, OKLAHOMA

RIFELS GIVEN AWAY

Kansas Farmer is going to give away hundreds of the celebrated Hamilton 22-Caliber Rifles to wide-awake, hustling boys.

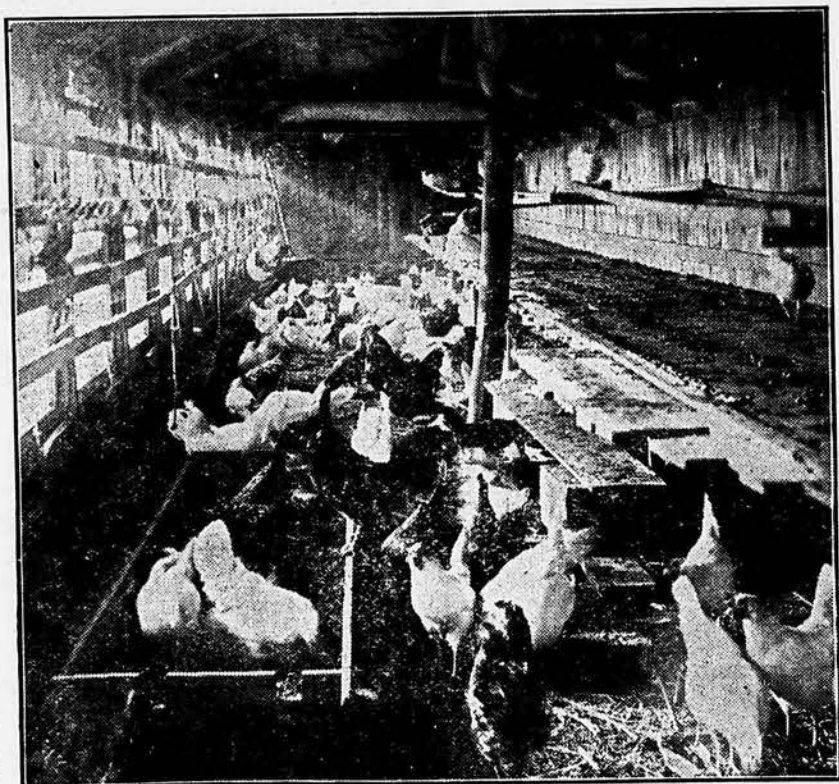


This rifle has automatic ejector, solid breech-block, tip-up round barrel, accurately tapered and rifled, fitted with knife front and adjustable rear sight, blued steel butt plate, stained walnut stock and forehand plate, shoots 22 short or long rim fire cartridges.

Any boy can earn one of these rifles in one afternoon without costing him one penny.

You have been wanting a good rifle. Why not get one free?
For full information write

KANSAS FARMER RIFLE CLUB
Topeka, Kansas



INTERIOR OF LAYING HOUSE ON FARM WHERE HENS FILL THE EGG BASKET DURING THE WINTER

SUDAN GRASS



Practically every farmer in the West now knows this valuable crop. Withstands dry weather and produces a fine crop of hay that is superior to Millet and equal to Timothy. Under ordinary conditions it yields from two to four tons of hay per acre and under irrigation reaches as high as eight to ten tons per acre.

Plant Barteldes' Sudan Grass

Our seed is pure—cleaned and re-cleaned. Seed is very scarce and we are fortunate in having a good stock of Sudan seed on hand. Our FREE CATALOG of field and garden seeds sent postpaid on request—also special weekly price list. This is our 60th year of successful growing of the finest seed. Lowest quotations on quality seed.

The Barteldes Seed Company,
307 Massachusetts St., Lawrence, Kansas.
307 Sixteenth Street, Denver, Colorado.
307 Main Street, Oklahoma City, Okla.



Beebe's Early Prolific

Wonderful tomato, about 3 weeks earlier than any other. Bears until frost. Fruit is large, almost perfectly smooth, of superb quality, dark red with few seeds, splendid keeper for shipping. Stands hot dry weather. J. S. Anderson, Buffalo, Okla., wrote: "I planted the Dwarf Champion and the Kansas Standard and neither did any good, while Beebe's were heavily loaded. I can't say too much for them. You won't regret planting Beebe's Early Prolific. You cannot obtain seed elsewhere. Full sized package, 25c. Catalog free. Also all kinds of Trees and Seeds that grow."

GERMAN NURSERIES & SEED HOUSE
80 Court Street, Beatrice, Nebraska

FREE 1917 BOOK

FLOWER AND GARDEN SEEDS
Good seeds are always the cheapest. Lincoln Brand Seeds is the new trade name we have given Griswold Quality Seeds. It stands for good service, too. Let us send you a FREE copy of our new 128-page Seed Annual. Tells BEST time and how to plant. BEST soils for growing. BEST seeds for different sections, etc. A seed book worth having. Send for FREE copy today.

10 ASSORTED SEED PACKAGES ONLY 10c
A fine selection of vegetable and flower seeds best adapted to your locality. A big value. We offer it to make you better acquainted with Lincoln Brand Seeds and Griswold service. A great combination packed by thousands of satisfied customers and 27 years still. Write also for our Bee Supply Catalog. Griswold Seed and Nursery Co., Dept. F-141 Lincoln, Neb.

GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE
Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses. R. H. SHUMWAY, Rockford, Ill.

FETERITA

Barteldes Feterita is specially grown for western planters. Well adapted. Pure, clean and re-cleaned. We make a specialty of Feterita, Dwarf, Milo, Moline, Dwarf Kaffir and all varieties of Cane seeds and Brood Corn. **FREE CATALOG.** Big new book. Send for it at once, also special pink price list giving lowest prices on field seeds in quantities.

THE BARTELDES SEED COMPANY,
607 Massachusetts St., Lawrence, Kansas.
607 Sixteenth Street, Denver, Colorado.
607 Main Street, Oklahoma City, Okla.

Buy Trees At Wholesale

and Save Agents' and Dealers' Profits.

Apple trees \$7.00 per 100; Peach \$7.00 per 100; Cherries \$11.00 per 100; Concord Grapes \$2.00 per 100; Dunlap Strawberries \$2.25 per 1000; Everbearing Strawberries \$2.50 per 100. Everything in Fruit trees, Plants and Ornamentals a money saving. **FREE CATALOG** in reply. Send for our **FREE CATALOG** in reply. Send for our **FREE CATALOG** in reply.

HOLSINGER BROTHERS NURSERY,
BOX 100, ROSEDALE, KANSAS.

HYDE'S SUDAN

Hyde's Sudan is tagged—Showing exact purity and germination. Why take a chance? We ship direct from farm to farmer. Hyde Pays the Freight and refunds your money if not entirely satisfied. **FREE CATALOG** and Price List sent postpaid—Write at once.

HYDE SEED FARMS,
300 Hyde Bldg., Pattonsburg, Mo.

As Nearly Perfect As You Can Procure

Clover, Alfalfa, Sweet Clover, Timothy and all kinds of grasses and seed grain of highest quality. Samples and special price list free. **PROTECT YOUR FIELDS** Iowa Seed Co., Des Moines, Iowa

SEED CORN

Three Leading Varieties. P. U. R. Kherston Oats, Clover Seed.

PLAINVIEW HOG AND SEED FARM
Frank J. Rist, Humboldt, Neb., Box H

SEED CORN

That makes the crop bigger is raised and sold by **JOHN D. ZILLER**
THE FARMER SEED GROWER, HIAWATHA, KAN.
Catalog free.

How to Use Fireless Cooker

A Continuation of Last Week's Article on the Home-Made Cooker

When different foods are cooked together in the fireless cooker they must be such as require the same amount of cooking, since the cooker cannot be opened to take out food without allowing the escape of a large amount of heat and making it necessary to reheat the contents. It would not do to put foods which need about one and one-half hours to cook, into the cooker with a piece of meat which would stay several hours.

Small quantities of food cannot be cooked satisfactorily in a large kettle in the fireless cooker. If a large kettle must be used, better results will be obtained if some other material which holds the heat fairly well is used to fill up the empty space. This may be accomplished in several ways. One is to put the small quantity of food to be cooked into a smaller, tightly closed kettle, fill the large kettle with boiling water and put the small kettle into it, standing it on an inverted bowl or some other support. This boiling water will take up and hold the heat better than



HOME-MADE FIRELESS COOKER
READY FOR USE

air would. Several smaller dishes—if tightly covered—may be placed in the kettle surrounded by boiling water. Baking-powder cans or other tins are useful for this purpose. Another way is to place one food in a basin which just fits into the top of a large kettle and to let something else cook in the water in the bottom of the kettle. Two or more flat, shallow kettles placed one on top of the other so as to fill the cooker, enable the cooking of small amounts of different foods successfully. Such kettles, made especially for use in fireless cookers, may be purchased.

TIME REQUIRED FOR COOKING
The time which each kind of food should stay in the cooker depends both on the nature of the food and on the temperature at which it remains inside the cooker, and before recipes for use with the fireless cooker can be prepared one must have some means of knowing how temperatures are preserved in it. In experiments made in the Office of Home Economics a six-quart kettle was filled with boiling water and put into the cooker, the packing of which happened to be newspaper. The temperature of the water, which was 212 degrees F. when put into the cooker, was found to be 172 degrees F. after four hours had elapsed. This shows the advisability of the common custom of allowing food to remain undisturbed in the cooker for at least six or eight hours, or in some cases over night. If a soapstone, hot brick, or other extra source of heat is used, less time will be required. Materials which are denser than water—sugar syrup as used in cooking dried fruit—and therefore can be heated to a higher degree, will keep up the temperature longer when put into the cooker. Thus the density of the food material, as well as the amount and the length of time that the apparatus retains the heat, must be taken into consideration in determining how long different materials must be cooked in the cooker.

The recipes for dishes to be prepared in the fireless cooker differ somewhat from those for foods cooked in the ordinary way, chiefly in the amount of water or other liquids called for. Less liquid should be put into the food to be prepared in an ordinary fireless cooker, since there is no chance for water to evaporate. The cook must be guided largely by experience in deciding how long the food should be heated before being put into the cooker and how long it should be allowed to remain there.

The following recipes are used by the Department in connection with the extension work in the Northern and Western States:

SOUPS

The cheap cuts of meat are rich in the food materials that make palatable dishes, and the bones and scraps are good for making wholesome soup. The long-continued, slow cooking which a tough piece of meat gets in the fireless cooker, and the thorough extraction to which bones and soup meat are subjected, mean that this method of cooking makes stews, similar dishes and soups cheap foods.

For making soup stock or broth, the soup bones should be well split up or the soup meat should be cut into small pieces. Wash the meat, place in the kettle and cover with cold water. Bring to a boil on the stove and boil fifteen minutes. Do this at night if the soup is to be used at noon the next day. Place in the cooker over night. In the morning remove meat and bones from soup. Strain and remove the fat. Return soup and meat to kettle, adding whatever seasoning is desired. Bring to the boiling point again, return to the cooker until noon. This stock may be used as a foundation for several soups, such as vegetable soup, clear soup, or noodle soup.

Dried lima beans and peas make good soup without meat. Since they require long cooking, they are well adapted to fireless cooker methods. Cook the dried vegetables with less water and no meat, rub through a coarse sieve and make into proper consistency with milk or thin cream and season to taste. Soups made by thinning the cooked legumes with water and seasoning with onion—fried until pale brown—with celery tops and other vegetables are very good also.

MEATS

The experimenter will soon learn that in cooking meats the amount of boiling over the flame and the time in the box will depend upon the size of the pieces of meat being cooked. Meat cut into pieces for stew will heat through more readily and cook in a shorter time than will a large ham. Most recipes for stews, pot roasts, boiled meats, and similar dishes can be readily adapted to the fireless cooker and save time and fuel. The following recipes are well adapted to the cooking box as all of them are dishes which require considerable time for their preparation.

POT ROAST.—Use any preferred cut. Sear in hot fat in a skillet. Place the meat in the cooker kettle and cover with boiling water. Boil gently for 30 minutes. Place in the cooker over night. Reheat in the morning, season, and return to the cooking box until noon. Thicken some of the liquor for gravy. If it is desired to slice cold for next dinner, return meat to liquor and let stand until wanted.

ROAST MEAT.—Prepare a four-pound rib roast as for oven roasting. It can be tied more compactly if the ribs are removed. Place in pan in very hot oven for half an hour, or sear the roast until brown in a frying pan and then place it in the oven for twenty minutes. Place the seared and heated roast in a pail into which it will fit as closely as possible, and set it into the large kettle used in the cooker, with enough boiling water to come well up around the small pail. Leave in the cooker for three hours.

Carrots, peas, string beans, onions, beets, turnips, parsnips, salsify, and in fact all vegetables may be cooked in the cooking box. They must be given time according to their age. A safe rule for all green vegetables is two and a half times as long in the cooker as if boiled on the stove. This method is particularly good for such vegetables as onions, cabbage, and cauliflower, as there is no escape of odor from the cooker. A further advantage with cabbage, cauli-

The New Miracle Forage Crop

Yields 50 to 70 bushels seed per acre, twice as much as most kinds of sorghum. Produces as much forage as most of the dwarf sorghums. Handled with less expense. A great growth-retarding forage crop, a wonderful variety.

Free 1917 Book

SHROCK'S KAFFIR SORGHUM

An entirely new plant discovered by Shrock—a rural mail carrier, in 1911 and offered by us for first time in a commercial way. Really a combination Kaffir-Sorghum. Will produce immense crop in drought season when Kaffir, Milo, Pigeon, etc., are all dead. Grows green until frost. Does not heat in stack. Matures 20 days ahead of Kaffir as a whole. Amber Case. Very nutritious. Makes cattle and horses like it—will leave alfalfa for it. Seed limited this season. Order early.

Write for New, Big Seed Book
Just a postal will bring it to you free, postpaid. Also small sample packet for testing, if requested. But, get our new seed book sure. It's chock full of Garden, Flower and Field Seed bargains. It tells about our many new varieties, such as the White Wonder Millet, etc. We are headquarters for alfalfa seed, as we are the largest alfalfa dealers in the country. Get our prices first. Write today for Special Free Supply Catalog. Address: **GRISWOLD SEED AND NURSERY CO., Dept. F-141** Lincoln, Neb.

A Cinch to get your GOPHERS

The Cinch Gopher Trap is famous for its ability to catch, hold, kill and destroy more gophers per working day than has ever been done by any other method.

"HOW TO GET RID OF GOPHERS"
Per copy by telephone, dealer or direct by mail, postpaid. One each 5 for \$2.50.

W. C. EDMERSON & CO.
Patent Gopher Traps

COLEMAN GAS LANTERN

Makes and Burns Its Own Gas

Gives strong, steady light of 300 candle power. Costs less than a third of a cent per hour to run. Can't blow out or be out. Solidly built of nickel brass with Mica Globe. Stands all hard knocks. Use it in feed lots, barns, cow sheds, chicken houses, cellars, etc. Will last only one week—Clean it only once a year. No wicks. No chimneys. No smoke, no odor. Perfectly safe. No danger even if rolled around in straw. If not on sale in your town yet, write for catalog of 50 different kinds of Gasoline Lanterns, Table Lamps, etc. Dealers or agents wanted in every locality.

THE COLEMAN LAMP COMPANY,
908 No. 5th, Francis Ave., Wichita, Kansas
St. Paul, Minn., Toledo, O., Dallas, Tex., Chicago, Ill.

APPLE, PEACH TREES—True to Name

Cherry Trees only 10c.

Everything at bargain prices.

SEED CORN, standard \$1.75
varieties, per bu.

Buy of the producer—save money! Send for latest FREE Catalog of Bargains.

MANHATTAN NURSERY
Box 117, MANHATTAN, KAN.

1917 PLANTING GUIDE AND PURE SEEDBOOK

Ask now! This beautiful 96-page four-color book describes 1917 varieties vegetables and flowers; handsomely illustrated; beautiful designs, landscaping, shrubbery, orchards, farms, gardens, etc. gardening. Flower lover's delight! Berry grower's book! An orchard-keeper's published. Better than any other 1916 book. Don't miss it. Ask today! A postal gets it.

Galloway Bros. & Co., 5215 Waterloo, Ia.

Hill's Evergreens Grow

Best for windbreaks and hedges. Protect crops and stock. Keep house and barn warmer—save fuel—save feed. Hill's evergreens are hardy, nursery-grown. Get Hill's free illustrated evergreen book and list of 50 Great Bargain Offers—from \$4.50 up per thousand. 55 years' experience. World's largest growers. Write **D. HILL NURSERY CO., Inc.** Evergreen 2815 Cedar St., Dundee, Ill. Specialists.

FREE

A pair of Mated Everbearing Strawberry plants, large pail of new Currant Feterita, Sudan Grass and Silk Leaf Peppery seed, all Free for Testing. Send 10c for mailing expense, or not, as you please. We offer genuine Progressive Everbearing plants at 50c per doz.; 90c for 60; \$1.75 for 100; \$5.00 for 500, all postpaid. **The Gardner Nursery Co., Box 463, Osage, Iowa**

SCHOOLS and COLLEGES

Spalding's COMMERCIAL COLLEGE

10th & Oak Sts., KANSAS CITY, MO.
51st YEAR. Over 28,000 former Students. Our modern Building has 15 elegant Rooms, including FREE GYMNASIUM and Auditorium, 21 experienced Teachers and Lecturers. Day and Night Schools all Year. Free Employment Bureau. Shorthand, Typewriting, Book-keeping and English Branches. Catalogue "K" Free. **J. F. Spalding, A. M., Pres.**

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. **Jones Nat'l School of Auctioneering, 34 N. Sacramento Blvd., Chicago, Illinois. Carey M. Jones, President.**

flower, and other green vegetables is that overcooking is avoided. When green vegetables are cooked too long in boiling water they turn yellow and lose their fine flavor. This they do not do so readily at the same temperature of the cooking box.

In the case of dried fruits, long continued slow cooking is desirable. When fruit is cooked in the cooker, it should be washed well and allowed to soak in cold water until it has regained its natural size, heated in the water in which it has been soaked, not quite to the boiling point, and then placed in the cooker for five or six hours. Because less water evaporates than when cooking on the stove, a smaller proportion of water will be needed for good results. If too much is used the syrup will not be quite so rich as usual. Fruit should always be cooked in an enamelware or an earthenware dish, as tin or iron may impart an unpleasant flavor to acid fruit, and also give it an undesirable color.

School and Spring Work

Each year as the spring work is begun the attendance records of many rural schools are badly broken. It may be necessary that the work be done at a certain time or else its value is lost, but is it not more necessary that the child be constantly encouraged in secur-

ing all the educational training possible? If taken from school each time there seems to be need of his extra help on the farm, he will become discouraged and finally lose all interest in his studies because of his inability to keep at them.

It is the right of every child to be surrounded with influences and opportunities which will help him make the best use of his life, and the responsibility is theirs who have it within their power to encourage or discourage in those years when the child is gaining his first impressions of the importance of things and their value to him. If the members of his family, especially the parents, show a deep interest in his school work, he will be much more apt to pursue his studies than if they discount the value of educational training to the credit of manual labor. Both are good and neither is complete in itself, and the after effects should be pondered when the need for spring labor seems urgent to the point of depriving the schoolboy or girl of a part of the year's school work.

Save the spots on the tablecloth made by the drippings from the cream and syrup pitchers, by rubbing a very little butter on the outside of the pitchers.

Now is a good time to put up some bird houses about the place.

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

This department is prepared especially in New York City, for Kansas Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompanies each pattern. When ordering, all you have to do is to write your name and address plainly, give the correct number and size of each pattern you want, and enclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Special offer: To anyone ordering a pattern we will send the latest issue of our fashion book, "Every Woman Her Own Dressmaker," for only 2 cents; send 12 cents for pattern and book. Price of book if ordered without pattern, 5 cents. Address all orders for patterns or books to Kansas Farmer, Topeka, Kansas.



No. 8023—Girls' Coat: Cut in sizes 8 to 14 years. One of the late arrivals in coats is seen in this picture—a model with panel front the entire length and having a plaited skirt section. The collar presents the new fashion in neck finishes, cut deep and round and made with an inlay of contrasting goods. No. 8022—Ladies' Waist: Cut in sizes 36 to 42 inches bust measure. A very fetching waist on the basque order, buttoned at back. The compelling features are: An exceedingly well-cut collar, novel sleeves stylishly cuffed, and the strap girle buttoning to the side front. The neck may be filled in with net, lace of a square of the material, or left well open as pictured. No. 8037—Boy's Suit: Cut in sizes 2, 4 and 6 years. Very much in style this season is the Russian suit for a small boy. The one pictured has a plaited back attached to a yoke, while at front the double-breasted effect is cleverly suggested by introducing a tuck and trimming with covered buttons as is shown. Bloomer trousers are included in the pattern. No. 8047—Ladies' Skirt: Cut in sizes 24 to 30 inches waist measure. A very dressy and very fashionable skirt with its four gores joined to shaped yokes, and having the sides laid in plaits with a noteworthy effect. Buttons down the side where the front yoke laps the back, decorates and designates the closing outline. No. 8031—Ladies' Dress: Cut in sizes 36 to 42 inches bust measure. A model that just snaps with smartness, and one having plenty of utility value. A handsome collar is displayed, in contrasting goods, adding style to the blouse gathered to shoulder and which has a decorative front closing. No. 8053—Misses' Dress: Cut in sizes 14 to 20 years. Strikingly original in design with a one-piece overblouse and gathered overwaist in novel outline joined to gathered skirt trimmed with banding. Two materials are used in making this dress.



You Cannot Break Them

The picture shown above was taken during a test of the celebrated Anderson Doubletree, made by Mr. J. F. Ellis, of Osage City, Kansas. Read what he has to say:

Osage City, Kansas.

TO WHOM IT MAY CONCERN:

This is to certify that I own a team of horses weighing 2,640 pounds with harness on. They have been on heavy work for a number of years and are well used to pulling, and I will put them against anything their weight for a pull. I had the pleasure of testing a pair of doubletrees for the Anderson Manufacturing Company of Osage City, Kansas. The doubletrees in question weighed ten pounds, completely ironed. I hitched them to a traction engine, and the brake was set unknown to me. The horses made as hard a pull and repeated pulls on this doubletree as I ever saw them make. I made at least a dozen hard pulls and at a few times the team lunged, but could not break it.

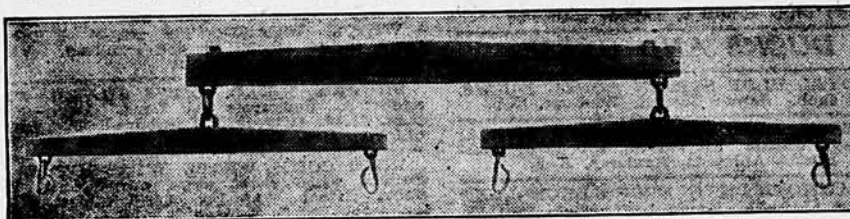
(Signed) J. F. ELLIS.

We, the undersigned, employees of the Anderson Manufacturing Company, witnessed the above when Mr. Ellis of this city tested the doubletrees, and will say that every word in the above statement is true.

(Signed) OSCAR JOHNSON
(Signed) CARL GREENQUIST
(Signed) FRED ANDERSON
(Signed) CHARLES C. ANDERSON
(Signed) J. D. RAMZY.

Here is one of the most practical doubletrees ever made for all ordinary work on the farm: Plowing, harrowing, lead team work, road work—in fact any work requiring a doubletree of medium weight and extra strength.

Fred Anderson, the inventor of the new celebrated Anderson Manure Loader and Scraper, has personally designed the Anderson Doubletree along scientific lines to develop the greatest amount of pulling strength possible, without excessive weight, and Mr. Anderson personally guarantees these doubletrees to stand the terrible strain of a steady pull of a team weighing up to 3,000 pounds.



This doubletree is constructed from carefully selected hardwood, thoroughly seasoned, painted with two coats of good paint. It measures 38 inches long, 3½ inches wide, and 1¼ inches thick. The hooks and center irons are of a special design, and will never slip off the end or center of singletrees.

All iron parts are made of ¾-inch round forged mild steel and strong enough to stand the strain of every use.

KANSAS FARMER takes pleasure in offering its readers a doubletree which cannot be equalled for less than \$1.35, absolutely free. For a short time, and while our supply lasts, we will send one pair of doubletrees complete, all charges prepaid, to anyone in Kansas sending us only \$2.00 for a three-years' subscription to KANSAS FARMER. Those living outside of Kansas must send 50 cents extra to defray transportation charges, or \$2.50 in all. This offer is open to all, new or renewal. If you are already paid in advance, we will extend your subscription. Don't delay, but order now, for this offer may not appear again.

Kansas Farmer
Circulation Dept. Topeka, Kansas

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

BARRED ROCK EGGS—WILL PLEASE. \$1 postpaid. Mrs. Geo. Kennedy, Edmond, Okla.

BARRED PLYMOUTH ROCKS—FARM-BRED BEAUTIES. Eggs for hatching, 5c each. Mrs. W. C. Becker, Solomon, Kan.

BUFF AND WHITE ROCK EGGS—FEMALES scoring high as 96 and 96%. Mating list. W. H. Beaver, St. John, Kansas.

WHITE ROCK COCKERELS, \$1.50 AND \$2. Eggs, \$3 per hundred. Nora Lamaster, Hallowell, Kansas.

WHITE PLYMOUTH ROCK EGGS—Strong free range stock. Write for prices. Mrs. O. E. Walker, Route 8, Topeka.

ARISTOCRAT AND BRADLEY STRAIN Barred Rock cockerels, good size, bone and barring. Mrs. Bert McTaggart, Pawnee, Ill.

BEAUTIFUL IMPERIAL "RINGLETS." \$35 cockerel heading Pen No. 1. Eggs, \$4 per fifteen. Mrs. Iver Christenson, Jamestown, Kansas.

HATCHING EGGS FROM BARRED PLYMOUTH ROCKS, excellent birds. Two dollars for fifteen. Peter H. Friesen, Route 1, Lehigh, Kansas.

PRIZE WINNING BARRED ROCKS—Four entries, five prizes, State Show 1917. Eggs, special mating, \$3 to \$5; farm flock, \$1. C. D. Swalm, Geuda Springs, Kansas.

BARRED PLYMOUTH ROCKS, E. B. Thompson strain. Eggs, \$1.50 per fifteen; \$3.50 per fifty; \$6 per hundred. C. J. Rivir, Lafontaine, Ind.

BARRED ROCKS, EXCELLENT IN SIZE and quality. Eggs, first pen, \$5 for fifteen; range flock, \$8 per hundred. Mrs. Myrtle Henry, Route 1, Leocompton, Kansas.

BARRED ROCKS, HENS AVERAGED 175 eggs, 1916. Trap-nest males and their pullets mated with fine cockerels. Eggs, 10c; fifty, \$4. Farnsworth, 224 Tyler St., Topeka.

BLUE RIBBON BARRED ROCKS—Twenty-eight years' experience; 110 premiums. Cockerels, \$6.50, \$8.50; eggs, fifteen, \$3. Mrs. Chris Bearman, Ottawa, Kansas.

LINDAMOOD'S BARRED ROCKS, BOTH dark and light matings. Prices for eggs from special matings, \$5 per fifteen. Utility eggs, \$5 per hundred. Send for circular. C. C. Lindamood, Walton, Kansas.

BLUE RIBBON WINNERS, MISSOURI and Kansas state shows. Barred Rocks, Ringlet strain. Eggs and stock for sale. Satisfaction guaranteed. Hartman's, Route 1, Webb City, Missouri.

BARRED PLYMOUTH ROCKS—GENUINE Thompson Ringlet prize winning strains. Pen eggs, either cockerel or pullet mating, also utility flock eggs. Circulars free. A. F. Siefker, Defiance, Missouri.

BRAHMAS.

LIGHT BRAHMAS—EGGS FOR HATCHING after February 1. Geo. W. Craig, 2031 N. Water St., Wichita, Kansas.

EGGS FOR HATCHING FROM PRIZE-WINNING LIGHT BRAHMAS. Write for prices. R. W. Getty, Downs, Kansas.

LIGHT BRAHMA COCKERELS—100 good heavy birds, have won prizes at leading shows. Can surely furnish you quality. Schreiber Farm, Sibley, Iowa.

FOR SALE—PURE-BRED LIGHT Brahma cockerels, prize winning stock. Price, \$1 to \$2.50, according to age. Mrs. Maude Lippe, Route 5, Salina, Kansas.

DUCKS AND GEES.

ROYAL BLUE STRAIN ROUEN DUCKS, \$1.75 each. James Cassell, Fremont, Neb.

GEES, EMBDEN, TOULOUSE, CHINA; turkeys, ducks. All leading breeds of poultry. Emma Ahlstedt, Roxbury, Kan.

MAMMOTH PEKIN DUCKS, EXCELLENT layers, \$2 each. Helen Harrington, Fairfax, Iowa.

PURE WHITE INDIAN RUNNER drakes, dandies, \$1.50 each. Large vigorous Buff Rock cockerels, \$1.50 up. G. W. Perkins, Newton, Kansas.

TURKEYS.

BOURBON RED TURKEY EGGS, \$2.50 per eleven. Fred Watts, Havensville, Kan.

WHITE HOLLAND TURKEYS, SINGLE Comb White Leghorns, Single Comb Buff Orpingtons. Baby chicks. Mrs. S. A. Warren, Reger, Mo.

MAMMOTH WHITE HOLLAND TURKEYS—Eggs, \$2.50 per eleven. Let us book your order early. Mrs. Roy Davison, Sabetha, Kansas.

FEATURING THE MUCH WANTED "Goldbank" Mammoth Bronze turkeys. Eggs, \$1 each after April 1. Will book orders. Mrs. Iver Christenson, Jamestown, Kansas.

BABY CHICKS.

ROSE COMB RED CHICKS—WHITE Runner duck eggs. Lily Robb, Neal, Kan.

PHEASANTS.

PHEASANTS—DEMAND UNLIMITED for Ringnecks this spring at \$6 to \$8 pair. Booking orders. Eggs of these, \$4 dozen; Golden, \$5 dozen. Harper Lake Poultry Farm, Jamestown, Kansas.

POULTRY WANTED.

POULTRY PRICES UNCHANGED. WE want your hens, capons, turkeys, guineas. We loan egg cases and coops free. Can supply good breeding stock. The Copes, Topeka.

RHODE ISLAND REDS.

EGGS FROM PRIZE WINNING ROSE Comb Rhode Island Reds. Catalog free. M. L. Puckett, Puxico, Mo.

LARGE BRILLIANT ROSE COMB RED eggs for hatching, \$1 per fifteen; \$6 per hundred. Mrs. Roy Davison, Sabetha, Kan.

ROSE COMB RHODE ISLAND REDS—Large and dark red in color, \$2 and \$2.50 each. Chas. Jacob, Route 3, Chapman Kan.

ROSE COMB RHODE ISLAND RED eggs, one dollar per fifteen. R. R. Wilson, 2519 Grand Ave., Parsons, Kansas.

ROSE COMB RED EGGS FROM BLUE ribbon winners, \$3, \$5, \$7.50 per fifteen. Best of guarantee. Fred Keim, Seneca, Kan.

SINGLE COMB RHODE ISLAND RED eggs. Maple Hill Poultry Farm, Route 6, Lawrence, Kansas.

ROSE COMB RHODE ISLAND REDS—Eggs, \$2 per setting. Kansas state show winners. Mating list. L. E. Castle, Wichita, Kansas.

PURE-BRED ROSE COMB RHODE Island Reds. Eggs for hatching, \$1 per fifteen; \$5 per hundred. Mrs. L. F. Hinson, Stockdale, Kan.

EGGS FOR SALE—S. C. R. I. REDS—Breeder for twelve years. \$1.50 per setting of fifteen; \$5 a hundred. Mrs. Jno. G. Schmidt, Route 1, Box 135, Edgewood, Lexington, Mo.

FERTILITY AND SAFE ARRIVAL guaranteed on low priced eggs for hatching, from high quality, both combs, Rhode Island Reds. Fourteen years breeding. Mating list free. H. A. Sibley, Lawrence, Kansas.

SIX GRAND PENS, ROSE COMB RHODE Island Reds that have shape, size and color. Mated to roosters costing \$15 to \$50. Fifteen eggs, \$2.50; thirty eggs, \$4; fifty eggs, \$6. Fine pure-bred range flock, \$5 per hundred. Baby chicks. Send for catalog. W. R. Huston, Red Specialist, Americus, Kan.

WYANDOTTES.

WHITE WYANDOTTE COCKERELS. U. A. Gore, Seward, Kansas.

R. C. BUFF WYANDOTTE EGGS, \$1.50 for fifteen. G. Q. Wright, Langdon, Kan.

PARTRIDGE WYANDOTTE EGGS, \$3.00 per fifteen; \$5.50 per thirty. Mrs. O. E. Collins, Drexel, Mo.

WHITE WYANDOTTE EGGS, \$1 PER 15. Martin Fishel strains. Fred Watts, Havensville, Kansas.

PURE-BRED SILVER WYANDOTTE stock and eggs for sale. Reuben M. Roddie, Ada, Okla.

ROSE COMB WHITE WYANDOTTE eggs, per fifteen, \$1; one hundred, \$4. H. A. Ritter, Route 2, Kiowa, Kansas.

EGGS FOR SALE FROM PURE WHITE Wyandottes, \$6 per hundred. Mrs. D. J. White, Clements, Kansas.

WHITE WYANDOTTE EGGS, ONE DOL- lar for fifteen. Four-fifty per hundred. Geo. Tuls, Fredonia, Kansas.

R. C. WHITE WYANDOTTE COCKER- els, \$1 each. Also eggs per fifteen, \$1. Mrs. E. S. McCandless, Nashville, Ark.

CHOICE ROSE COMB SILVER WYAN- dote eggs, \$1 for 15; \$5 for 100. Mrs. Phillip Schuppert, Arrington, Kansas.

WHITE WYANDOTTE EGGS FROM farm range stock, \$4 per hundred. Vida Hume, Tecumseh, Kansas.

SHUFF'S "BEAUTILITY" SILVER WY- andottes. Cockerels and hens. Eggs—Fifteen, \$1.50; fifty, \$3.50; hundred, \$6. Baby chicks. Mrs. Edwin Shuff, Plevna, Kansas.

ROSE COMB WHITE WYANDOTTES—Pullets, \$1.50 each; eggs, per fifteen, \$2; rock, fifteen, \$1; 100, \$4.75. Mrs. Effie Acheson, Falco, Kansas.

PARTRIDGE WYANDOTTE EGGS, MA- hogany strain, \$1.50 per fifteen. Good cockerels, \$3 to \$5 each. Canaries, fine singers. Baby chicks. Mrs. Edith B. Taylor, Marion, Kansas.

SILVER WYANDOTTES. YES, I AM still selling Silvers. Have some good cockerels left. Eggs in season. Prices reasonable. Write me. M. B. Caldwell, Broughton, Kansas.

PARTRIDGE WYANDOTTES—PENS headed by Madison Square Garden and Chicago Coliseum winners. Eggs, \$3 per fifteen. Book early. Rev. F. R. Beery, Concordia, Kansas.

ORPINGTONS.

SINGLE COMB BUFF ORPINGTON eggs from silver cup winners. Prices reasonable. Mrs. J. N. McDaniel, Arbela, Mo.

PURE-BRED WHITE ORPINGTONS—Eggs for hatching, \$1 per fifteen, \$5 per hundred. Frank Hinson, Stockdale, Kansas.

EGGS FROM PRIZE WINNING BUFF Orpingtons, \$2 per 15; fine Barred Rock, \$1 per 15, \$5 100. Mrs. M. Ditto, Newton, Kan.

FINE BUFF ORPINGTON EGGS FROM my regular winners, reasonable. H. T. Farrar, Axtell, Kansas.

WHITE ORPINGTON COCKERELS—Eggs and chicks reasonable. Mrs. Barraclough, 137 S. Fern, Wichita, Kansas.

EXHIBITION BUFF ORPINGTON EGGS, state, county winners. Bourbon Red turkeys. Prices reasonable. Write for catalog. Mrs. Rees Barton, Amoret, Mo.

WHITE ORPINGTON COCKERELS, A few pullets. Eggs reasonable. Also Indian Runner duck eggs. James Kennicott, Bunker Hill, Kansas.

LEGHORNS.

S. C. W. LEGHORN EGGS, STATE WIN- ner. Mrs. W. R. Hildreth, Oswego, Kansas.

S. C. BLACK LEGHORN COCKERELS, William Cross, Utica, Neb.

WHITE LEGHORN EGGS (YOUNG'S \$20 stock). Elsie Thompson, Mankato, Kan.

ROSE COMB LEGHORN COCKERELS—Eggs in season. Mrs. John Holzhey, Bendena, Kansas.

PURE-BRED S. C. BROWN LEGHORN eggs, \$1 per fifteen, \$5 per hundred. Mrs. L. H. Hastings, Thayer, Kansas.

ENGLISH WHITE LEGHORN EGGS, cheap. Write for prices. I. M. Fisher, El Dorado Springs, Mo.

"BARRON'S 268-EGG LEGHORNS"—Eggs, \$5 hundred. Sunlight Poultry Farm, Mt. Moriah, Mo.

EGGS, \$1.50 PER SETTING. LEGHORNS, Reds, Rocks, Wyandottes and Orpingtons. Royal Poultry Yards, Coffeyville, Kansas.

SINGLE COMB BROWN LEGHORNS—Pullet mating only. Tiff Moore, Osage City, Kansas.

SINGLE COMB WHITE LEGHORN EGGS—English Barron strain. Baby chicks. F. B. Morger, Fowler, Colo.

R. C. B. LEGHORNS, WINTER LAYERS, vigorous stock. Eggs, \$5 per hundred. W. C. Gilmore, Oneida, Kansas.

ROSE COMB BROWN LEGHORNS—Prize winners. \$5 hundred, \$2.75 fifty, \$1 fifteen. Rufus Standiford, Reading, Kan.

BROWN LEGHORN HATCHING EGGS, \$1 per fifteen, \$3 per fifty, \$5.50 per hundred. R. W. Getty, Downs, Kansas.

EGGS FOR HATCHING FROM HOGAN'S laying strain of Single Comb White Leghorns, \$5 per hundred. Roy Rhodes, Maize, Kansas.

SINGLE COMB BROWN LEGHORNS—Thirty-one prizes at Kansas State Show, 1917, including eight firsts. W. J. Roof, Maize, Kansas.

ROSE COMB WHITE LEGHORNS—Eggs for hatching, \$1 for fifteen, \$5 for 100. An extra grade of eggs, \$2 for fifteen, \$10 for 100. F. J. Nesetrl, Munden, Kansas.

ROSE COMB WHITE LEGHORN COCK- erels, scored birds. Write for prices. Eggs for hatching, \$5 per hundred. Mrs. Joe Streeter, Route 5, Hamilton, Mo.

BROWN LEGHORNS—ROSE, SINGLE Comb. Bred to lay strain breeding. Eggs, fifteen, \$2; fifty, \$3; hundred, \$6. Plainview Poultry Farm, Lebo, Kansas.

S. C. BROWN LEGHORNS—OH! YES, we have been raising them 21 years; the 223 to 266 trap nest egg record kind. Eggs, 15, \$1.25; 100, \$5.00. Gorsuch, Stilwell, Kansas.

EGGS FOR SALE FROM PURE-BRED heavy winter laying Single Comb White Leghorns, \$2 fifteen, \$10 hundred; 100% fertility guaranteed on seventh day of incubation. H. M. Blaine, Sylvia, Kansas.

SINGLE COMB WHITE LEGHORNS, Columbian Wyandottes, Muscovy ducks, Berkshire swine. Catalog. Southdown sheep, Illinois. J. A. Leland, Springfield, Ill.

PRIZE WINNING S. C. WHITE LEG- horns at two state shows. Eggs, \$2, \$3 and \$5 per fifteen. Eggs from flock, \$5 per 100. Chicks. Send for free mating list. C. G. Cook, Box F, Lyons, Kansas.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

RUSSELL'S FAMOUS BROWN LEG- horns, single comb, prize winners, heavy layers. Write for catalog. Satisfaction guaranteed. Mrs. Geo. Russell, Chilhowee, Missouri.

S. C. W. LEGHORN COCKERELS FROM hens with records over two hundred eggs; one, two, three dollars each. Baby chicks, 12c each. Eggs, \$5 per hundred. Hyperion White Leghorn Farm, Route 1, Des Moines, Iowa.

YOU WANT GOOD LAYERS. MOORE'S strain of S. C. Brown Leghorns are prize winners and winter layers. Eggs, \$1 for fifteen and \$4 for 100 postpaid. John W. Moore, R. R. No. 1, Poplar Bluff, Mo., formerly of Hendrickson, Mo.

SINGLE COMB WHITE LEGHORN EGGS for sale. Range raised. Famous Yesterday hens mated to Barron cockerels from two hundred forty egg stock. \$1.25 per setting, two or more, \$1 each; \$5 per hundred. Shady Pine Leghorn Farm, Rossville, Kan.

S. C. BROWN LEGHORNS—WINTER layers and beauty strain. Booking orders for chicks to be delivered April 1, any quantity, at \$12.50 per hundred. Eggs at \$5.50 per hundred, trap-nested stock. Pullets in laying contest. Paradise Poultry Farm, Carona, Kansas.

ANCONAS.

SINGLE COMB ANCONAS—EGGS, \$1.50 per fifteen. Louella Blosser, Route 7, Independence, Kansas.

SINGLE COMB ANCONAS—EGGS, FIF- teen for \$1.25 or \$6 per hundred delivered. Write for printed matter. C. K. Whitney, Route 9, Wichita, Kan.

MINORCAS.

S. C. BLACK MINORCA EGGS, FIF- teen, \$1; 100, \$5. Frank Scherman, Route 8, Topeka, Kansas.

S. C. WHITE MINORCAS—EGGS FROM pure-bred birds, \$3 and \$2 per setting. Correspondence solicited. A. Goodwyn, Minneapolis, Kansas.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

LANGSHANS.

GET MY FREE MATING LIST OF MAD- ison Square and Chicago prize winning Langshans. John Lovette, Mullinville, Kan.

BLACK LANGSHAN EGGS, \$3 FOR 15, from my San Francisco and Kansas State Show winners, 1917. H. M. Palmer, Florence, Kansas.

EGGS—PURE-BRED BLACK LANG- shans exclusively from free range fowls, \$1 for 15, \$5 for 100. Mrs. John A. Roberts, Route 5, Stanberry, Mo.

WHITE LANGSHANS AND BLUE ORP- ingtons, bred to weigh, lay well and pay. Chicks and eggs in season. Doerflinger, 5960 North Hall St., St. Louis, Mo.

SEVERAL BREEDS.

REDS, ROCKS, LEGHORNS; 12½c. Request folder. McCune Hatchery, Ottawa, Kansas.

EGGS FOR HATCHING—PURE-BRED, high scoring Barred Rocks and Rhode Island Reds. No better birds anywhere. Send for mating list. Tom Lettlich, Winfield, Kan.

FREE—1917 PRICE LIST OF EGGS. ALL leading breeds of chickens, turkeys, ducks, geese and guineas. Monroe Poultry Yard, Monroe, Iowa.

EGGS FROM PURE-BRED PRIZE WIN- ning Bourbon Red turkeys, both combs. S. C. R. I. Reds, White and Black Langshans, Anconas and Light Brahmas. Write for mating list. Mr. Henry Gillen, Route No. 1, Osborne, Kansas.

FOR SALE, EGGS—EGGS FROM PURE- bred, and cockerels, turkeys, geese, eight kinds of ducks, pearl and white guineas, bantams, Barred, White and Buff Rocks, Rhode Island Reds, Houdans, Hamburgs, Games, Langshans, Minorcas, Brahmas, Cochins, Buff and White Orpingtons, Buff and Silver Laced Wyandottes, Leghorns, Hares, Rabbits, Guinea Pigs, Dogs, Fancy Pigeons. Write wants. Free circular. D. L. Bruen, Platte Center, Neb.

Put Orchard on Paying Basis

Orchards cannot be kept in profitable bearing condition without pruning. Trees in heavy bearing condition will make stronger growth if pruning is done during late winter and early spring. Pruning during June and July will slightly check the rank growth on trees that are making too much growth and tend to throw them into bearing for the following year. J. C. Whitten, professor of horticulture in the Missouri College of Agriculture, gives directions for late winter and early spring pruning. Unpruned orchards must be attended to quickly or the rush of spring work will be on and there will be no opportunity to put them into proper condition.

In pruning the trees, first remove all dead or badly diseased limbs. Clean out all canker wounds on the trunk and main limbs with a tree scraper. Cut well into the rim of healthy wood on all sides of the wound, to get rid of the disease. Then paint the wound with common white lead and oil paint, to each quart of which has been added one teaspoonful of bichloride of mercury dissolved in turpentine—about one ounce. Paint all canker and pruning wounds as soon as made.

Begin at the top and prune the tree to secure a low, broad spreading branch system, with open center, to admit sunlight and air from above. Do not remove strong lower limbs if they can be given sufficient light from above. Aim to secure bearing branches throughout the main body of the tree. If the tree is shaded by too much growth at the top, the inner and lower twigs will weaken and die instead of bearing fruit.

Cut back the strong, upward growing central limbs to outward growing side branches. This induces the tree to spread laterally instead of growing too high. It admits light through the center to fruiting branches below. If limbs cross each other or crowd badly, thin them out enough to admit filtered sunlight to all parts of the tree.

In pruning, cut limbs close, so as to leave no stub or knot. A protruding knot will not heal. A wound cut close will allow the growing layer to close over the wound.

Paint all wounds over one-half inch in diameter with the disinfected paint. Disinfect saw or other pruning blades with carbolic acid after pruning cankered or diseased spots.

The following are good flowers for a fragrant garden: Sweet alyssum, mignonette, verbenas, stock, heliotrope and nasturtium.

Lady bugs are allies of the farmer in his campaign against scale insects and other similar enemies of plant life. Let the lady bugs "fly away home" unmolested.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

HELP WANTED.

BE A GOVERNMENT FARMER. GOOD pay; steady, interesting job. Write Central Institute, 44-F, St. Louis.

MAN OR WOMAN TO TRAVEL FOR old established firm. No canvassing; \$1,170 first year, payable weekly, pursuant to contract. Expenses advanced. G. G. Nichols, Philadelphia, Pa., Pepper Bldg.

WANTED—SINGLE MAN FOR WORK on dairy farm. Must be a lover of stock. Send references and state wages expected. Address Lloyd T. Banks, The Banks Farm, Oswego, Kansas.

MEN—18 OR OVER BECOME RAILWAY mail clerks. \$75 to \$150 month. Vacations. Big chances farmers. Write immediately for list government positions, easily obtainable. Franklin Institute, Dept. A-82, Rochester, New York.

FARMERS 18 OR OVER—GET GOVERNMENT jobs, \$75 to \$150 month. Vacations with full pay. Spring examinations everywhere. Education unnecessary. Sample questions free. Write immediately. Franklin Institute, Dept. W-82, Rochester, N. Y.

AGENTS WANTED.

GOOD MAN TO TAKE ORDERS. GET own clothes free, make big money. Knickerbocker Tailoring Co., Dept. 594, Chicago.

WE PAY \$80 MONTHLY SALARY AND furnish rig and expenses to introduce guaranteed poultry and stock powders. Bigler Company, X 671, Springfield, Ill.

AGENTS—100 PER CENT PROFIT guaranteed selling sprayers, gasoline pumps and auto washers. Write Rusler Company, Johnstown, Ohio.

REAL ESTATE.

WANTED—TO HEAR FROM OWNER OF good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

RENTERS—LET US SHOW YOU HOW to own your own farm. Send for free magazine. Western Sales Agency, Minneapolis, Minn.

FOR SALE—360 ACRES ALFALFA LAND with good paying dairy. Plenty cows, hogs, sheep, live stock, corn, hay, implements and labor on place to work it. N. Scales, Macon, Miss.

NEW FARM OPPORTUNITY IN ONE OF the greatest states in the Union. A new line of the Santa Fe is tapping a rich and fertile prairie section of Northwest Texas, where already many farmers have made good in a big way with wheat, hogs and live stock. Here, if you act now, you can get first choice—get in on the ground floor of a great opportunity. You can get in ahead of the railway—ahead of the people whom the railway will bring—ahead of those who act more slowly than you do. This is the chance of a lifetime for a man of moderate means. A certain number of thrifty, far-seeing farmers can acquire good land at an astonishingly low figure and on long, easy terms. If you have confidence that a great railroad, like the Santa Fe, would only recommend what it considers a good thing, and because it wants to see new territory developed and wants newcomers to prosper and produce—then this district is for particulars about this district. Mild climate, social advantages, schools, churches, telephones, good roads. Everything there but enough men with their families. Will you be one of the fortunate first comers to reap the advantages of a section that has been minutely inspected by a Santa Fe agricultural agent and pronounced right? Write me now and let me send you a copy of the special illustrated circular we are getting out. C. L. Seagraves, Industrial Commissioner, A. T. & S. F. Ry., 931 Railway Exchange, Chicago.

BUSINESS CHANCES

offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to any one who has not acquired sufficient money to provide necessities and comforts for self and loved ones. It shows how to become richer quickly and honestly. Investing for Profit is the only progressive financial journal in America and has the largest circulation in America. It shows how \$100 grows to \$2,200. Write now and I'll send it six months free. H. L. Barber, 431.28 W. Jackson Boulevard, Chicago.

WISCONSIN LAND FOR SALE

LANDOLOGY, A MAGAZINE GIVING the facts in regard to the land situation. Three months' subscription free. If for a home or as an investment you are thinking of buying good farm lands, simply write me a letter and say, "Mail me LandoLOGY and all particulars free." Address Editor LandoLOGY, Skidmore Land Co., 801 Skidmore Bldg., Marinette, Wis.

MISCELLANEOUS.

HAIR SWITCHES AND MEN'S WATCH chains made from hair combings. Mrs. Ethel Hayes, Florence, Ark.

YOU CAN MAKE A GOOD LIVING IN your back yard raising Belgian hares. Full particulars and price list of all breeds, 10c. W. G. Thorson, Aurora, Colo.

FOR SALE—16-HORSEPOWER GASO-line engine on steel trucks; good as new. Double seated carriage, rubber tires, good as new, cost \$480, or will trade either of the above. Make me an offer. H. W. McAfee, Route 8, Topeka, Kansas.

TREES, SEEDS AND PLANTS.

WHITE BLOSSOM SWEET CLOVER, reasonable. John Lewis, Hamilton, Kan.

SEED CORN.—LAPTAD STOCK FARM, Lawrence, Kansas.

TREES AT WHOLESALE—CATALOGUE free. Agents wanted. Peyton Nurseries, Boonville, Mo.

WATERMELONS—GUARANTEED PURE. Both Halbert Honey and Rubber Rind. H. A. Halbert, Originator, Coleman, Texas.

BOW CREEK FARM SEEDS—ALFALFA, feterita, kafir, Sudan grass, corn. (Sudan, sweet clover wanted.) Logan, Kansas.

BLACK-HULLED WHITE KAFIR SEED, re-cleaned, tested and sacked, \$2 per bushel. Grover Lee, Pratt, Kansas.

TEN ELBERTA AND FIVE CHAMPION peach trees, postpaid, \$1. Send now. Wellington Nurseries, Dept. C, Wellington, Kan.

WHITE SWEET CLOVER BOUGHT (ANY quantity) if priced attractively. State lowest price. Box 375, Emporia, Kansas.

SEED CORN—BOONE COUNTY WHITE, carefully selected, \$2.50 per bushel shelled. J. W. Taylor, Edwardsville, Kansas.

SUDAN GRASS SEED FOR SALE, 35c per pound; 100 pounds at \$30, f. o. b. J. K. Burke, Estacado, Texas.

SEED CORN—WON FIRST AND SWEEP-stakes, Missouri State Corn Show, 1917. For catalog, write George Manville, Faucett, Mo.

ALFALFA SEED, NEW CLEAN UPLAND, 14 cents per pound for one bushel or more. Bags, 25 cents. Sample on request. W. M. Hixon, Berryton, Kansas.

SEED CORN—DIAMOND JOE WHITE, excellent drought resister, and Reid's Yellow Dent, Graded, \$2.50 bushel. D. D. Denver, Milford, Kansas.

ALFALFA SEED FROM HIGH PRODUC-ing fields. 370 bu. from 40 acres. 99.74% pure; 95% germination. \$8.00 per bu. Sample free. Stockwell Farms, Larned, Kansas.

REID'S YELLOW DENT, BOONE COUNTY White seed corn. Genuine Red Texas seed oats, clover, timothy and alfalfa seed. S. G. Trent, Hiawatha, Kansas.

SEED CORN—YELLOW DENT; ST. Charles White, carefully selected. Shelled, bushel, \$2; bags free. Orders filled with care at once. Frank Crosby, Route 2, Bellevue, Kansas.

RED TEXAS RUST-PROOF SEED OATS, cleaned and carefully graded. You buy nothing but oats. Grown here one year. They are fine. Let me send you a sample and price. Warren Watts, Clay Center, Kan.

FOR SALE—EVERBEARING STRAW-berry plants. Progressive or Superb, 200 for \$1.75; hardy forest trees right for shade or grove, \$1.00 per 100. Wickham Berry Farm, Salem, Nebraska.

DIAMOND JOE BIG WHITE CORN—Drought proof; germination 98%; bags furnished for two bushels or more. Shelled, graded, \$2.25 per bushel. Peter Hangle, Cameron, Missouri.

TREES, SHRUBS, PLANTS, VINES, seeds. Everything at lowest prices direct to you. All tree peddlers' commissions cut out. Free book. Wichita Nurseries & Seed House, Shell Bldg., Wichita, Kansas.

SEND \$1.00 FOR 100 PROGRESSIVE strawberry plants and get our Twentieth Century Berry Book absolutely free. Worth dollars to you. E. W. Townsend, Box 3, Salisbury, Md.

SEED CORN—PURE-BRED REID'S YEL-low Dent and Boone County White. Alsike, Mammoth and Medium Red Clover, Kherson and Iowa 103 Oats, new crop timothy seed. Folder and prices free. F. M. Riebel & Son, Arbelia, Mo.

ALFALFA SEED FROM HIGH PRODUC-ing fields. 370 bushels threshed from forty acres. Quick to recover after each cutting. 95% germination, 99 purity. Test made by County Agent Schnacke. Won first at our fair. Price, \$8 per bushel; new sacks, 25c. Stockwell Farms, Larned, Kansas.

CATTLE.

CHOICE POLLED DURHAM BULL AND seven high grade cows and heifers. Priced right. C. M. Albright, Overbrook, Kan.

FOR SALE—ONE PURE-BRED JERSEY bull calf, born January 24, 1917. Write H. H. Starr, Claffin, Kansas.

FOR SALE—REGISTERED HOLSTEIN bulls, ready for service. Prices right. G. H. Ross, Independence, Kansas.

REGISTERED HOLSTEINS—CHOICE bull calves from heavy producing dams and our \$1,000 sire, \$50 each. Nu-Born Farms, Jasper, New York.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$20 apiece. Frank M. Hawes, Whitewater, Wis.

ONE HUNDRED CHOICE BREEDY HOL-steins from six months to six years. Some fresh, a lot springing. Tuberculin tested, three-fourths white, dairy conformation. Yearlings extra large. C. S. Simmons, Belmont, Wisconsin.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER



Box Everbearing Strawberries

Will You Enjoy a Fine Bed of Fancy, Heavily Fruiting, Everbearing Strawberry Plants at Our Expense? See Our Offer Below

THESE guaranteed true to name Everbearing Strawberry plants are just what their name implies and if set in your garden during the spring months will bear a heavy crop of fine, big, red, deliciously flavored strawberries all through July, August, September and October of same year.

Everbearing Strawberries Now a Commercial Success

The berries are of good size, fine color, firm flesh and of much better flavor than the average June berries. The plants fruit very heavily, running a good 20% more than the regular once a year fruiting sorts bear at regular strawberry time, but instead of stopping fruiting at end of regular season, these new everbearers keep right on and fruit heavily all through the summer and fall months.

Wonderful Root System

The Everbearing varieties have a much heavier root system than the common sorts, often going into the soil to the distance of a foot and a quarter. This gets the roots down into the moist soil and enables the plants to produce fine large berries right along during hot, dry summer weather.

We are glad to help introduce these valuable plants, and if you will accept our offer and fill out the coupon and mail to us at once, we will have our nursery send you the DOZEN ASSORTED EVERBEARING PLANTS at proper time for planting in your locality and include with them a plant of a new \$1,000 variety for good measure on the deal.



KANSAS FARMER CIRCULATION DEPT., Topeka, Kansas.

Gentlemen.—Please find enclosed \$1.50 for two years' subscription to KANSAS FARMER. Send me absolutely free of charge one dozen assorted EVERBEARING STRAWBERRY PLANTS and the NEW \$1,000 PLANT as advertised in above offer.

NAME

POST OFFICE

STATE..... R. F. D.....

Are you now taking KANSAS FARMER?.....

HORSES AND MULES.

CLOSING OUT SALE OF SHETLAND ponies. Geo. Aid, Gallatin, Mo.

FOR SALE—PURE-BRED MORGAN stallions. Iver K. Johnson, Goff, Kan.

SHETLAND PONIES, FIFTY HEAD, moderate prices. Charles Clemmons, Coffeyville, Kansas.

FOR SALE OR TRADE—ONE COMING four-year-old black registered Percheron stallion. Bert Donley, Oxford, Kansas.

JACK FOR SALE OR TRADE—FIVE years old, gray, 14 hands jack measure; excellent breeder. Sacrifice price. Harry Bilsen, Eureka, Kansas.

300 HEAD OF REGISTERED AND HIGH grade cows and heifers for sale, headed by the great 40-pound bull, Johanna King Segle. Neal Houslett, Oxford, Wis.

FOR SALE—ONE REGISTERED PER-cheron stallion, bay, coming 3 years old, sired by Casino. Weight about 1,600 pounds. J. E. Regier, Whitewater, Kansas.

FOR SALE—REGISTERED FRENCH Draft Stock Percheron-bred stallion, age 4, weight 1,760. Two fillies, coming two. Frank Kratzberg, Sr., Greeley, Kansas.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

HEDGE POSTS.

FOR SALE—FIFTY THOUSAND OSAGE hedge posts. H. W. Porth, Winfield, Kan.

HEDGE POSTS—SALE, CARLOAD GOOD hedge posts. B. C. Day, Sibley, Kansas.

TRAPPER POISON

GOES' LIQUID POISON CAPSULES KILL foxes, coyotes, wolves, on spot. Eleventh season in use. Mention this paper and I send free circulars. Edmund Goes, Milwaukee, Wis., Station C.

SITUATION WANTED.

MAN AND WIFE WANT WORK ON farm. Experienced with live stock. Have no children. Good references. Address W. care Kansas Farmer.

DOGS.

COLLIE PUPPIES, \$5. FRANK BAR-rington, Sedan, Kansas.

FOR SALE—SCOTCH COLLIE PUPS, farm raised, from good workers. I. P. Kohl, Furley, Kansas.

AIRDALE—THE GREAT TWENTIETH century dog. Collies that are bred workers. We breed the best. Send for list. W. R. Watson, Box 128, Oakland, Iowa.

THE STRAY LIST.

TAKEN UP—BY ROY J. PHILLIPS, Council Grove, Council Grove Township, Morris County, Kansas, on December 18, 1916, one red heifer, no marks or brands. Appraised at \$25. Lee A. Moser, County Clerk.

TAKEN UP—BY HUGH JONES, OF Reading, Reading Township, Lyon County, Kansas, on December 16, 1916, one red and white steer, branded on left hip and piece out of right ear. Appraised at \$60. G. L. Miller, County Clerk.

TAKEN UP—BY MRS. LAURA ATKIN-son, of Americus, Americus Township, Lyon County, Kansas, on February 12, 1917, one red steer, no marks or brands. Appraised at \$40. G. L. Miller, County Clerk.

TAKEN UP—BY MAGGIE A. BOLTON, Council Grove, Council Grove Township, Morris County, Kansas, on December 21, 1916, one mare mule two years old, color brown, no marks or brands. Appraised at \$55. Lee A. Moser, County Clerk.

TAKEN UP BY W. H. DECROW, WA-mego, Wabunsee Township, Wabunsee County, Kansas, one six-months-old heifer calf, red with brockle face. Both ears bobbed. 2½ feet high. Appraised at \$20. Taken up on February 10, 1917. L. B. Burt, County Clerk, Alma.

Arrangement of Shrubby

It will be well worth while to do some careful planning in the setting out of ornamental shrubbery.

Probably the first plantings of shrubbery should be close to the foundation of the house. The angle at each side of the steps and the space in front of the porch seem to demand the first work. In arranging this planting, the shrubs should not be in a straight line, but in a more or less irregular zigzag direction, with some extending out beyond the others, especially at exterior corners. It is preferable, in most cases, not to plant solidly, but to allow the foundation of the house to show at varying intervals.

Angles formed by the intersections of walks or of a walk and a drive are usually good places to plant shrubs. Sharp corners should be softened if possible. A turn in a drive can be made to look natural if a tree or clump of shrubbery is placed in front of the curve, making it appear that the change of direction was necessary.

HOLSTEIN CATTLE.

CLYDE GIROD, At the Farm

HOLSTEIN-FRIESIAN FARM, TOWANDA, KANSAS

Breeders of pure-bred Holsteins. Special attractions in choice young bulls ready for service, with fashionable breeding. Write for pedigrees and prices. We maintain a breeding herd of pure-bred females and offer a grand lot of young springing heifers and cows, a number with A. R. O. records at prices within reason.

IT WILL PAY YOU TO SEE OUR OFFERING
Of choice extra high grade young cows and heifers, all springers in calf to pure-bred sires; large developed females, good udders, well marked and the right dairy type at prices that will challenge comparison for Holsteins of their breeding and quality. A visit to our farm will convince you. Keep us in mind before purchasing. Wire, write or phone.

GIROD & ROBISON**MAURER'S HOLSTEIN FARM**

We have a choice lot of high grade cows, fresh and springers. Also grade and pure-bred calves of either sex. We can please you in good Holsteins.

T. R. MAURER & COMPANY**EMPORIA, KANSAS****Purebred Registered
HOLSTEIN
CATTLE**

The highest prices ever paid in the St. Paul yards for a cow or a bull for beef were paid within a year for Holsteins. Two grade Holstein cows 13 years old brought \$187, one 12 year old registered Holstein cow \$116, and a registered 4 year old Holstein bull \$168.93. In considering Holstein cattle as a dual purpose breed, the above authentic facts render further comment unnecessary. There is big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America
F. L. Houghton, Sec'y. Box 114, Brattleboro, Vt.

CORYDALE FARM HERD

Offers for sale four bull calves two to four months, sired by Jewel Paul Butter Boy 94245. These calves are all nicely marked and from good milkers.

L. F. CORY & SON, BELLEVILLE, KAN.**Sunflower Herd Holsteins**

Watch for Date of Big Public Sale.
150 head bred for production. Get catalog early.

F. J. SEARLE - OSKALOOSA, KANSAS**Butter Bred Holsteins**

Buy your next bull calf from a herd that won the butter test over all breeds.

J. P. MAST - SCRANTON, KANSAS**LILAC DAIRY FARM**

Route No. 2, Topeka, Kansas.
BREEDERS OF PURE-BRED HOLSTEINS
Bulls from A. R. O. cows, all ages, for sale.

GOLDEN BELT HOLSTEIN HERD

Herd headed by Sir Korndyke Bess Hello No. 165946, the long distance sire. His dam, grand dam and dam's two sisters average better than 1,200 pounds butter in one year. Young bulls of serviceable age for sale.

W. E. BENTLEY, MANHATTAN, KANSAS**REGIER'S HOLSTEINS**

Holstein-Friesian A. R. O. bulls ready for service. World's record blood flows in their veins.

G. REGIER & SONS, WHITEWATER, KAN.**Braeburn Holsteins**

A. R. O. BULL
With De Kol-Netherland-Korndyke main blood lines, and Johanna, Walker, King Segis out-crosses.

H. B. COWLES - TOPEKA, KANSAS

HOLSTEIN CALVES—Ten heifers and two bulls, 15-18ths pure, beautifully marked, 5 weeks old, from heavy milkers. \$20 each, crated for shipment anywhere. Write EDGEWOOD FARM, Whitewater, Wis.

CEDAR LAWN FARMS

C. A. Schroeder & Sons, Props.
Forty years of registered Holstein breeding, not dealing. Birthplace of 40-pound cow, Johanna DeKol Van Beers. State wants and get delivered prices on young bulls.

W. C. SCHROEDER - WEST BEND, WIS.**HIGH GRADE HOLSTEIN CALVES**

Five to six weeks old, nearly pure, well marked. \$20 express paid.

COLD SPRINGS FARM, Whitewater, Wis.**NEMAHA VALLEY HOLSTEIN FARM**

Choice yearling bulls and bull calves. World's record blood lines. Price reasonable. We invite inspection of our herd.

H. D. BURGER, Route 2, SENECA, KANSAS**HOLSTEIN COWS**

Holstein cows, springers or bred heifers. Very large, good markings, out of best milking strains, bred to pure-bred bulls of the very best blood. Special prices on carload lots.

J. C. ROBISON, TOWANDA, KANSAS**REGISTERED HOLSTEINS**

We want to cut down our herd. Will sell ten or twelve choice cows, most of them young, also a few heifers.

M. E. MOORE & CO. - CAMERON, MO.**CEDAR LAKE HOLSTEIN HERD**

We are making very low prices on a few young bull calves. It will pay you to buy them of us while young. Sired by our 29.4-pound grandson of Pontiac Korndyke.

T. M. EWING, INDEPENDENCE, KANSAS

Birds may be attracted about homes by planting trees, herbs, and shrubs which produce seeds or fruits relished by the birds, and by exposing food in artificial devices.

HOLSTEIN CATTLE.

F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN-FRIESIAN FARM, TOWANDA, KANSAS

Breeders of pure-bred Holsteins. Special attractions in choice young bulls ready for service, with fashionable breeding. Write for pedigrees and prices. We maintain a breeding herd of pure-bred females and offer a grand lot of young springing heifers and cows, a number with A. R. O. records at prices within reason.

IT WILL PAY YOU TO SEE OUR OFFERING
Of choice extra high grade young cows and heifers, all springers in calf to pure-bred sires; large developed females, good udders, well marked and the right dairy type at prices that will challenge comparison for Holsteins of their breeding and quality. A visit to our farm will convince you. Keep us in mind before purchasing. Wire, write or phone.

GIROD & ROBISON**MAURER'S HOLSTEIN FARM**

We have a choice lot of high grade cows, fresh and springers. Also grade and pure-bred calves of either sex. We can please you in good Holsteins.

T. R. MAURER & COMPANY**EMPORIA, KANSAS****HOLSTEIN CALVES.**

Very high grade heifer calves, five weeks old, nicely marked, \$20 each delivered to your station. We can supply you with registered or high grade Holsteins, any age or number, at reasonable prices. Clover Valley Holstein Farm, Whitewater, Wis.

Look to the future.

Tredico Bulls**(Holsteins)****Kingman, Kansas****GALLOWAY CATTLE.****GALLOWAY BULLS**

SIXTY yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-grown. Will price a few cows and heifers.

E. E. FRIZELL, Frizell, Pawnee Co., Kansas**ANGUS CATTLE****EDGEWOOD FARM****ABERDEEN-ANGUS CATTLE**

Twenty-five young bulls, also some good cows and heifers for sale. All registered.

D. J. WHITE, CLEMENTS, KANSAS

Main line of A. T. & S. F. Ry., 145 Miles West of Kansas City.

Real Estate For Sale**A GENUINE BARGAIN**

Fine 320 Acres, Unimproved. All good wheat, land. Three and one-half miles to center of Leoti, the county seat of Wichita County. One-half mile to school. Not a draw between this half section and town. Price, \$12 per acre, cash.

D. F. CARTER, Leoti, Wichita Co., Kansas**IMMEDIATE POSSESSION OF**

Splendid 360-acre farm, fine soil, well located, and a bargain.
160-acre farm, good improvements, good soil.
80-acre farm, good improvements, land in high state of cultivation.
Come at once. These farms are priced worth the money.

MANSFIELD LAND CO., OTTAWA, KAN.**For Sale**

EIGHT-ROOM HOUSE, MODERN,
in Kenwood Addition. The best residence district of Topeka. Good terms. Write

KANSAS FARMER, BOX 3**TOPEKA, - - - KANSAS**

17 ACRES adjoining city McAlester. Pop. 15,000. 13 a. dry bottom. Fine for vegetables and poultry. \$55 per acre. Terms.

SOUTHERN REALTY CO., McAlester, Okla.**FARM AND HERD NEWS NOTES**

G. C. Wheeler, Live Stock Editor
W. J. Cody, Manager Stock Advertising.
O. W. Devine, Representative

Address All Communications to
Kansas Farmer, and Not to
Individuals

Personal mail may have to be held for several days, or be delayed in forwarding, and Kansas Farmer cannot assume any responsibility for mistakes occurring thereby

CLAIM SALE DATES.**Jacks and Jennets.**

March 13—H. T. Hineman & Sons, Dighton, Kansas.

March 15—L. M. Monsees & Sons, Smithton, Mo. Sale at State Fair Grounds, Sedalia, Missouri.

Jacks, Jennets and Percherons.
March 26—G. C. Roan, La Plata, Missouri.

Holsteins.

March 7—J. A. Engler, Chapman, Kansas.
March 9—Robinson & Shultz, Independence, Kansas.

April 7—Breeders' consignment sale, Newton, Kan. W. H. Mott, Herington, Kan., sale manager.

April 10-11—F. J. Searle, Oskaloosa, Kan.
March 20—Oakland Stock Farm, Chillicothe, Missouri.

Jersey Cattle.

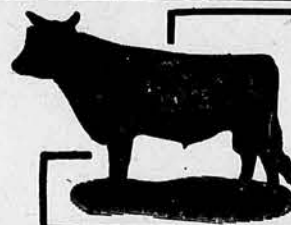
March 8—F. J. Scherman, Topeka, Kansas.

Shorthorn Cattle.

March 7—Andrew J. Howitt & Son, King City, Mo.

March 30, 1917—Combination Sale, South Omaha, Neb. H. C. McKelvie, Lincoln, Neb., Manager.

April 4-5, 1917—Central Shorthorn Association at Stock Yards Pavilion, Kansas City, Mo.

AYRSHIRE CATTLE.**KILMARNOCK HERD OF AYRSHIRES**

I have for sale bull calves, heifer calves, cows in milk and freshening, also bulls two and three years old at low figures for spot cash. Come and see my herd. If impossible to come, describe your wants in detail.

Wm. Galloway, Personal, Waterloo, Iowa

MR. HUGH F. WHITNEY of Pulaski, N. Y., was induced to buy a popular breed,

but after some time discarded it and bought AYRSHIRES. Those who once own AYRSHIRES seldom change. But just watch the number of breeders who will CHANGE TO AYRSHIRES the next year or two. If you will investigate this hardy, healthy, prolific, PROFITABLE breed, you will understand WHY. Address

AYRSHIRE BREEDERS' ASSOCIATION
C. M. Winslow, Sec'y 33 Park St., Brandon, Vt.

March 6—Moses Bros. & Clayton, Great Bend, Kansas. Combination sale.

Polled Durhams.
March 29, 1917—Combination sale, South Omaha, Neb. H. C. McKelvie, Lincoln, Neb., Manager.

Durocs and Polands.
April 25—Fred G. Laptad, Lawrence, Kan.

Durocs.
March 6—Richard Rotgeb, Pleasant Green, Mo.
March 15—W. T. McBride, Parker, Kan.
March 29—W. W. Oley & Son, Winfield, Kansas.

O. I. C. Hogs.
March 8—F. J. Scherman, Topeka, Kansas.

F. J. Searle, of Oskaloosa, Kansas, owner of the famous Sunflower Herd of Holsteins, announces April 10 and 11 as the date of his big two days' sale of registered Holsteins. He will catalog 175 head of Holsteins for this sale and it will be the sale event in Holstein circles this season.

T. M. Ewing, of Independence, Kansas, is among the successful Holstein breeders in Kansas and while his herd is not the largest, it is noted for choice breeding and heavy production. Mr. Ewing reports his herd making a good record at present. A feature of the herd at this time is the richly bred heavy producing cows and choice lot of young stock, including choice young bulls.

John Gilmore, editor of the Wilson County Citizen, Fredonia, Kansas, has embarked in the pure-bred sheep business and is building up a flock of pure-bred Shropshires on his 800-acre ranch. That he is starting right is evidenced by the fact that he recently purchased a number of imported ewes and expects to add others. With proper care and attention, his flock of Shropshires will easily be the most profitable stock on his ranch, and there will be little cause for Mr. Gilmore to worry over the price of print paper. His flock of Shropshires will solve that problem, as well as financial problems in connection with running his ranch.

H. H. Holmes, of Great Bend, Barton County, Kansas, has sold his 550-acre Barton County farm and has bought the Ayrshire Farm just west of Topeka, formerly owned by C. W. Merriam. This farm is one of the ideal cattle farms of Shawnee County and Mr. Holmes will move his fine herd of Scotch Shorthorns to this farm about April 1, including his showy and breeding herd. His herd consists of a choice lot of cows, representing the best Scotch tribes. The herd bulls in use in the herd are Prince Valentine 4th and Clipper Braworth, both noted as good sires. Prince Valentine 4th is a noted winner at the big fairs. He was sired by the famous bull, Prince Pannonia. Clipper Braworth was sired by Clipper Model. The cows in the breeding herd are nearly all daughters and granddaughters of famous bulls of the breed.

Fred B. Caldwell, of Howard, Kansas, held one of the successful Poland China bred sow sales of the season. Sows bred to Caldwell's Big Bob were in great demand. Breeders from seven states were present and mail bids from breeders all over the corn belt were in evidence. The offering was presented in splendid breeding condition. Many compliments were heard around the ringside on the splendid lot of big broody sows. No. 2 in the catalog topped the sale at \$325, going to J. R. Young, of Richards, Missouri. The entire forty head catalogued and sold made an average of \$130. These prices were very satisfactory to Mr. Caldwell.

Samuel Drybread, of Elk City, Kansas, owner of Star Breeding Farm and one of the great herds of Hereford cattle in Kansas, reports the demand for high class registered Hereford cattle the strongest he has ever experienced during the eighteen years he has been breeding Herefords. He has one of the big herds in the state and a feature of the herd at this time is the 100 head of young bulls and heifers.

The sale of Jacks and Jennets announced by G. M. Scott, of Bea, Missouri, to be held at Savannah, Missouri, March 16, will be the fifty-fourth sale held by the Scott Breeding Farm. They have been breeding Jacks since 1866. This year Mr. Scott will catalog twenty head of mammoth Jacks, a number of Jennets, and three registered Percheron stallions. The annual sale of the Scott Breeding Farm is always the leading sale event in Northwest Missouri and the attendance by breeders from Missouri and neighboring states is invariably large.

The date of the Jack and Jennet and Percheron sale announced by Oakland Stock Farm, Chillicothe, Missouri, for March 17, has been changed to March 20.

G. C. Roan, of La Plata, Missouri, announces March 26 as the date of his annual Jack and Jennet sale, and will catalog the best lot of Jacks he has ever sold for this sale.

F. P. Wilson & Sons, of Doyle Spring Stock Farm, Peabody, Kansas, are among the successful Shorthorn breeders in Kansas and they have found their herd of Scotch and Scotch-topped Shorthorns very profitable. They have the beefy type that are the profitable kind. The young stock in the herd, including a lot of young bulls, is a very fine lot.

H. E. Huber, of Meriden, Kansas, held his annual Shorthorn cattle sale February 23. Twenty-one head of heifers and bulls sold for \$2,835, an average of \$135 per head. The offering was not fitted to command high prices. Mr. Huber is cutting down his herd to make room and expects to have a well fitted high class offering for his next annual sale.

Robinson & Shultz, of Independence, Kansas, have announced a Holstein sale to be held March 9. This will be one of the events in Holstein circles this season, as Albechar Holstein herd is one of the noted herds in the West. This herd is headed by Sir Juliana Grace De Kol, one of the best Holstein bulls in service in this state. His dam has a record of 924 pounds butter in one year and a milk record of 22,087 pounds. His sire's dam made a year butter record of 1,021 pounds as a three-year-old, and over 3,000 pounds of butter in three years. They will catalog 116 head of Holsteins for this sale. Eighty-six head will be pure-breds, many from world's record ancestors. The offering will include daughters and granddaughters of the great bull, King Henger-vold Model Payne, a brother to the world's best cow with a seven-day butter record of 50.68 pounds; daughters of their great herd bull, Sir Juliana Grace De Kol, Pontiac Korndyke, King Segis and other famous sires.

Hotbed for Early Vegetables

It does not cost much in time or money to make a hotbed, and it will be a great help in growing vegetables. A hotbed will enable the gardener to grow crops that require a long season to mature, such as tomatoes, celery, peppers, and egg plants. The hotbed also may be used to advantage in starting early cabbage, onion, cucumber, and muskmelon plants.

Hotbeds may be constructed in a number of ways. One of the most common and serviceable is the pit method. The hotbed should be placed on the south side of a building or some other good windbreak. Care should be taken that it has good drainage. Three feet by six feet is a convenient size for a sash and as many of them may be used as desired. The frame should be twelve to fifteen inches high at the back and eight to ten inches in front. The sash may be of glass but many persons prefer muslin. Muslin is much superior to the glass if the bed is used for sweet potato plants.

The heat for hotbeds is commonly supplied by the fermentation of horse manure. That from highly fed horses is best. Straw to the amount of one-third to one-half of the mixture should be added, as the manure will not heat if it is too solid. It should be piled in a long, narrow, square-topped pile, and if very dry should be moistened.

If the weather is cold and the manure does not ferment readily, add a little hen manure or warm water to one part of the pile. In order to insure uniform fermentation the pile should be turned occasionally and all lumps broken. When the pile is steaming throughout—which is usually in from ten to twelve days—it is ready for use.

Dig a pit two to three feet deep, depending on the time of year the bed is to be used, and the same size as the bed desired. For common use, such as growing early tomatoes, radishes, and lettuce, early in March is the time to start the hotbed. Hotbeds prepared after the first week in March should have an 18-inch pit.

Upon the bottom of the pit place a layer of straw or leaves two or three inches deep. Next place a layer of the fermented manure 18 to 20 inches thick. Above this put a layer of loam soil four to eight inches deep in which the plants are to be grown.—M. F. AHEARN, Kansas Agricultural College.

More gardens should be started this year than ever before. Well planned and well cared for gardens will cut down living expenses. Every home should have its garden.

HEREFORD CATTLE.

Walnut Breeding Farms



Where real Anxiety 4th blood is found in abundance. The home of Concentrate 289644, a double Beau Brummel. Young stock always on hand for sale from this noted sire. Five extra herd headers on hand at reasonable price, blood lines considered. Twenty choice young bulls for sale. Come and see my herd. Satisfaction guaranteed. Also a few Berkshire pigs.

LEON A. WAITE, R. F. D. 8, WINFIELD, KAN.

HEREFORDS AND PERCHERONS

Choice 2-year-old bull, weight 1,600 lbs.; extra good bull calves. One May calf, weight 600 lbs., outstanding herd header prospect. Two choice yearling Percheron stallions. Priced to sell.

M. E. GIDEON - EMMETT, KANSAS

POLLED DURHAM CATTLE.

DOUBLE STANDARD POLLED DURHAMS Bulls for sale. "Forest Sultan" at head of herd. C. M. HOWARD, Hammond, Kansas.

JERSEY CATTLE.

REDHURST JERSEYS

Grandsons of Golden Jolly and Noble of Oaklands for sale. Also a few fancy cows and heifers of same breeding. Write.

REDMAN & SON - TIPTON, MISSOURI

120 Jersey Cows and Heifers

Pure-bred and high grade. Forty bred yearlings, superior individuals, all from profitable dams, now for sale.

J. W. BERRY & SON, Jewell City, Kansas

DORNWOOD FARM JERSEYS

Some richly bred young Jersey bulls. Pedigrees and prices on request.

DORNWOOD FARM - TOPEKA, KANSAS

Registered Jersey Bulls, butter-bred, from high producing cows. Photo furnished. Maxwell's Jersey Dairy, Route 2, Topeka, Kan.

LINSOTT JERSEYS

Kansas First Register of Merit, Estab. 1878. If interested in getting the best blood of the Jersey breed, write me for descriptive list. Most attractive pedigree.

R. J. LINSOTT - HOLTON, KANSAS

LONGVIEW JERSEYS

Seventy Three in Register of Merit. Why Take a Chance?

Buy from a responsible firm. Bulls all ages, type and production combined with Register of Merit backing. Guaranteed to be satisfactory and as represented. Otherwise money refunded and express charges paid both ways.

LONGVIEW FARM, LEE'S SUMMIT, MO.

What is Gained by Testing Cows

Testing your cows tells whether they are earning money for you. By the Register of Merit work you can now build up your herd from animals of known production. Science is driving guesswork out of the dairy business. Government records show that the average net profit per cow was increased 129% in eight years by testing. Selection based upon actual dairy merit will produce like results in your herd. Our booklet, "What is Accomplished by Testing Cows," will help you. Send for it now. It's free.

The American Jersey Cattle Club
875 West 23rd Street
New York City



When writing to KANSAS FARMER live stock advertisers, please mention this paper.

GUERNSEY CATTLE.

A GRADE GUERNSEY COW in Montana produced in one month 1815.1 lbs. milk and 87.71 lbs. butter fat, an average of over 3 lbs. of butter daily.

Grade up your herd with a Guernsey Bull

Write for our FREE BOOKLETS and a FREE POCKET HERD BOOK

The American Guernsey Cattle Club
Box R. K. PETERBORO, N. H.

HEREFORD CATTLE.

SHORTHORN CATTLE.

Barber Shorthorns

Villager Junior and Curley Dals Head Herd.

For Sale—Twenty coming yearling bulls, 20 yearling bulls, 40 cows and heifers, Scotch and Scotch topped. We have what you want. Come and see our cattle. Three hundred head in herd.

F. C. Barber & Sons

SKIDMORE - MISSOURI

Sycamore Springs Shorthorns

Master of Dale by the great Avondale heads herd. A few young Scotch bulls and bred heifers for sale.

H. M. HILL - LAFONTAINE, KANSAS

Doyle Spring Shorthorns

Scotch-topped Shorthorns. Ten bulls, age 9 to 11 months, sired by the famous Star Goods, Orange Marshall. Write your wants.

F. F. WILSON - PEABODY, KANSAS

RIVERSIDE SHORTHORNS.

Prince Valentine 4th and Clipper Bra-worth in service. Such popular tribes as Orange Blossoms, Butterflies, Queen of Beautys, and Violets. Choice young bulls, fit to head good herds, for sale.

H. H. HOLMES, Route 1, Great Bend, Kan.

Lowmont Shorthorns—Bulls, including white 2-yr.-old; 18 cows and heifers; priced right. E. E. Heacock & Son, Hartford, Kansas.

RED POLLED CATTLE.

Red Polled Cattle

A few 1916 fall bull calves for sale. Also a few cows and heifers.

AULD BROS. - FRANKFORT, KANSAS

HAMPSHIRE HOGS

ATTEBERRY'S HAMPSHIRE HOGS

Choice July boars, best breeding, \$12.50 each. They are bargains.

ATTEBERRY & SONS
Lancaster - Missouri

DUROC JERSEYS.

TWENTY FIVE SPRING BOARS

Sired by Crimmon Wonder Again Jr., first prize boar at Topeka Fair, 1916, and G. M.'s Crimmon Wonder. Big rugged fellows ready for service. Immunized and priced to sell.

G. M. SHEPHERD - LYONS, KANSAS

ROSE HILL HERD DUROCS

For Sale—Thirty spring gilts bred for March and April farrow; ten boars for service; a few fall pigs. All immune, eligible to record. Out of prolific sows and by boars of state fair prize blood. S. Y. THORNTON, Blackwater, Missouri, on Missouri Pacific Ry.

AUCTIONEERS.

Live Stock and Farm Auctioneer

Write or wire for date. I can please you.

LAFE BURGER, WELLINGTON, KANSAS

Jas. T. McCulloch Live Stock Auctioneer. I make sales anywhere.

Write for date. CLAY CENTER, KANSAS

LESTER R. HAMILTON

Live Stock Auctioneer

Write for terms and date. Clarksdale, Mo.

P. M. GROSS

LIVE STOCK AUCTIONEER

Pure Bred Sales a Specialty

MACON, MISSOURI

"Twelve Years on the Block"

Sales Made Anywhere



GUERNSEY CATTLE.

HORSES AND MULES.

German Coach Stallions and Mares
THE FARMER'S GENERAL PURPOSE HORSE

Twenty-three stallions from weanlings to 5-year-olds. Handsome, stylish, gentle, but powerful young stallions, 1,300 to 1,600-pound fellows, the right kind to produce durable, active farm horses and command attention in any stud. Priced where you will buy. Satisfaction guaranteed. Come or write at once.

BERGNER BROS.,

ROUTE 4, PRATT, KANSAS
Waldeck Lake Ranch

MARES AND FILLIES
ABOUT ALL SOLD

A few good ones left. Fifty head of stallions and mares. Thirty head of stallions, including Percherons, Belgians and Coach stallions, 2 to 6 years old. All for sale at hard times prices. Come and see me.

J. M. NOLAN - PAOLA, KANSAS

PRAIRIE VIEW STOCK FARM

Has 40 big, black Mammoth Jacks and jennets. Every jack my own raising; two to six years old, 15 to 18 hands high, extra heavy bone, big bodies. I can sell you a better jack for \$500 to \$600 than most speculators can for a thousand. They must sell.

ED BOEN, LAWSON, MO.
38 Mi. E. of K. C. on C. M. & St. P.
40 Mi. S. W. of St. Joe, on Santa Fe

PERCHERONS—BELGIANS
Imported and home-grown 4 and 5 yr. old stallions, ton and heavier, 3 yr. olds, 2 yr. olds, yearlings. Produce of 62 imported mares and noted prize winning imported sires. Farmers' prices. Fred Chandler, R. 7, Chariton, Iowa. (Above Kansas City.)

FOUR BIG JACKS FOR SALE

Also three jennets. Jacks are all blacks, 4 and 5 years old, 15 1/2 to 16 1/2 hands, standard. All grandsons of Limestone Mammoth. Barns 3 blocks north of depot.

F. W. POOS - POTTER, KANSAS

FOR SALE OR TRADE

Eight head of jacks from sucklers to eight years old. All black with white points; 15 to 16 hands high; weight up to 1,100 pounds. Can use a good draft stallion or other live stock.

H. A. JOHNSON
Red Cloud - Nebraska

REGISTERED PERCHERONS
Yearling and two-year-olds, both sexes. Good breeding and individuals grown in a way to make useful animals. Would trade filley for Shorthorn bull good enough to head herd of registered cows.

GEO. S. APP, Route 2, ARCHIE, MISSOURI

POLAND CHINAS

DEMING RANCH POLANDS

We will not hold a spring sale. Our show herd will be at Wichita, Kansas, Oklahoma City, and Fort Worth, Texas. We have for sale forty bred sows and gilts bred to our four herd boars, also 125 high class fall pigs, boars and gilts.

H. O. SHELDEN, HERDSMAN

THE DEMING RANCH,

OSWEGO, KANSAS

TOWNVIEW FARM

Big-Type Poland Chinas

For Sale—25 summer and fall gilts, sired by Miller's Sioux Chief and out of Lady Longfellow. Bred for late spring litters. Also 25 summer boars. Come and see my herd.

C. E. GREENE - PEABODY, KANSAS

ARKELL'S BIG POLANDS

Fall boars sired by Longfellow Again and Chief Big Bone, out of choice big-type sows. Choice individuals. Some herd header prospects.

JAS. ARKELL, JUNCTION CITY, KANSAS

OLD ORIGINAL SPOTTED POLANDS

Stock of all ages, sired by seven of the very best boars of the East and West. Priced right. Write your wants to the

CEDAR ROW STOCK FARM

A. S. Alexander, Prop. Burlington, Kansas

PROFITABLE TYPE POLANDS

Big-type Poland Chinas, as good as grows. You prove it at my expense. Breeding stock for sale at all times.

L. C. WALBRIDGE - RUSSELL, KANSAS

ROSS & VINCENT BIG-TYPE POLANDS

Gilts bred for March and April farrow. Also both sexes of September and October farrow. These represent the breeding of Big Type Jr., Douglas Jr., Improved King Jr. and Cowles' Orange. All immune.

ROSS & VINCENT, STERLING, KANSAS

When writing advertisers, please mention Kansas Farmer.

HORSES AND MULES.

Jacks, Jennets, Percherons

Two coming 6-year-old herd jacks, 9 1/4 and 10-inch bone, 1,100 and 1,200 pounds. Two coming 4-year-old jacks. Eight jennets, most of them in foal. Two coming 3-year-old Percheron stallions. Write for prices and description.

W. S. DEARDOFF - HALE, MISSOURI

JACKS AND JENNETS

15 Large Mammoth Black Jacks for sale, ages from 2 to 6 years; large, heavy-boned. Special prices for fall and winter sales. Fifteen good jennets for sale. Come and see me.

PHIL WALKER,
Moline, Elk County, Kansas

40 Head Percheron Stallions 40

Jacks and Jennets - 40
Two to six years old, heavy bone, right in every way. Imported Spanish jack, weight 1,200 pounds, at head of jennet herd. Come and see us. We mean business. Prices reasonable.

J. P. & M. H. MALONE

CHASE - KANSAS

FOR SALE—Registered

French draft stallion, Badger 26999 by Homers 26997 by Danvers 59713, dam Millie 16896 by Pepin 13909. Badger was foaled June 1, 1913. Dark gray, weighs 1,650 in ordinary breeding condition. Also black Jack, white points, 15.02 standard, weight 1,000 pounds.

W. M. TIBBETTS
Ocheltree - Kansas

Barn Full of Percheron Stallions and Mares.

Twenty-five mature and aged jacks. Priced to sell. AL. E. SMITH, Lawrence, Kansas.

SHIRES AND PERCHERONS

Stallions and mares, registered.

JAMES AULD, Wakefield, Clay Co., Kansas

Home-Bred Draft Stallions, your choice \$500 with the exception of two. Also mares for sale. A. Latimer Wilson, Creston, Iowa.

POLAND CHINAS.

Breeder's Directory

ANGUS CATTLE.

Geo. M. McAdam, Holton, Kan.

Geo. A. Deitrich, Carbondale, Kan.

D. J. White, Clements, Kan.

RED POLLED CATTLE.

Mahlon Greenmiller, Pomona, Kansas.

DORSET-HORN SHEEP.

M. C. LaTourrette, Route 2, Oberlin, Kan.

JERSEY CATTLE.

J. B. Porter & Son, Mayetta, Kan.

When writing advertisers, please mention Kansas Farmer.

MULEFOOT HOGS.

Buy Big-Type Mulefoot Hogs from America's champion herd. Low cash prices. Big catalog free. Jno. Dunlap, Williamsport, O.

Mulefoot Hogs. Choice bred sows and gilts, both sexes, all ages, for sale. Five families in herd. J. W. Cox & Son, Arapahoe, Neb.

LAST CALL

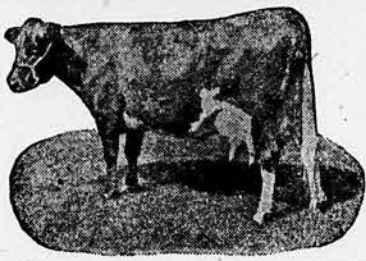
FOR ALPHA DELL FARM STOCK SALE, TOPEKA STATE FAIR GROUNDS

THURSDAY, MARCH 8, 1917, 1:15 P.M.

Twenty registered Jersey cows in milk and heifers. Thirty O. I. Chester White Hogs. Five Horses.

Get catalog and send bids to Col. Chas. Crews, Auctioneer, or W. J. Cody, Kansas Farmer, in my care.

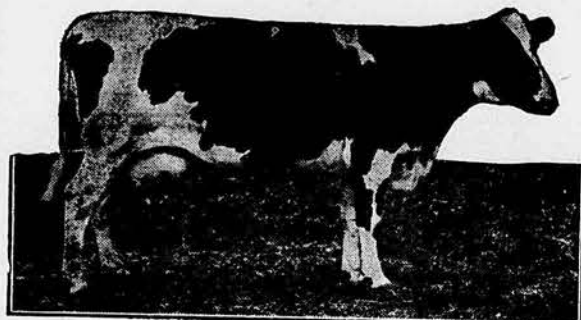
F. J. SCHERMAN, Route 8, Topeka, Kan.



PUBLIC SALE OF HOLSTEIN SPRINGERS

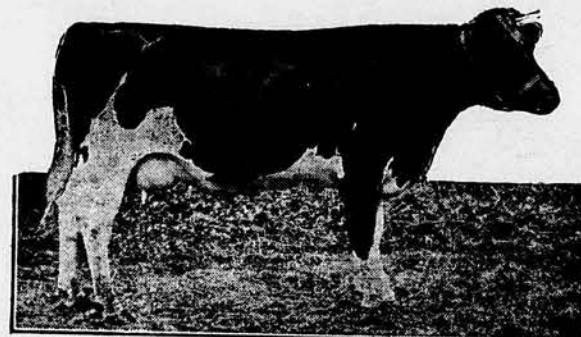
—AT CHAPMAN, KANSAS, MARCH 7, 1917—

57 - Head of Carefully Selected High Grade Holstein Heifers - 57



This will be one of the best offerings of Holsteins that will be sold in Kansas this season. They are choice high grades, well marked, from two to three years old. All are in calf to registered bulls and all tuberculin tested. They were very carefully selected from the best Holstein herds in Green County, Wisconsin, the banner dairy cattle county in that state. If you want Holsteins that are producers, this lot will suit you and you cannot afford to miss this sale. Chapman is on the main line of the Union Pacific Railway, twelve miles east of Abilene and twelve miles west of Junction City. Easy of access from Santa Fe, Rock Island and M. K. & T. Railways. Remember the date, March 7, 1917.

J. A. ENGLER, CHAPMAN, KANSAS



DUROC JERSEY BRED SOW SALE

AT PARKER, KANSAS, THURSDAY, MARCH 15, 1917

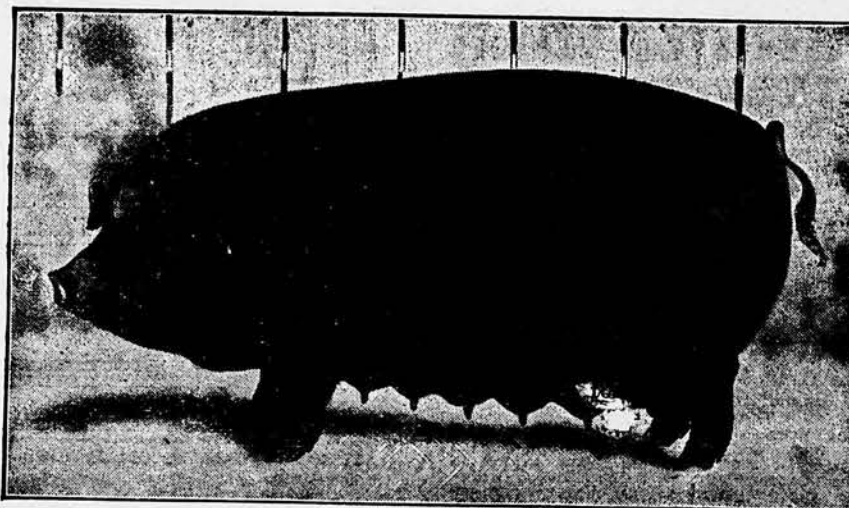
Thirty head March and April gilts sired by Parker Wonder, he by Ladore Wonder, and out of sows by such noted boars as Defender, Crimson Wonder and Kant-Be-Beat. All will be bred for March and April litters to my herd boars, H. & B's Pathfinder, bred by J. E. Davis, Knoxville, Ill., by Old Pathfinder and his dam was Orian Bell by Orian Chief 6th. A few of the gilts are bred to Jorgenson's Golden Model by Grand Model and out of Iowa Queen by King The Col. 2d. All these gilts are large and growthy and are showing safe for spring litters.

I will also sell two registered Red Polled Bulls coming yearlings. They were bred by D. F. Van Buskirk and sired by his great show bull, Kansas City Lad No. 23058 and out of my best herd cows. These calves will be yearlings on next June 12 and June 20. Well grown out and will make herd bulls. Sale starts at 10:30 a. m. Will be held in my new sale barn. Please send for catalog and arrange to attend. O. W. Devine will represent Kansas Farmer at sale.

W. T. McBRIDE, PARKER, KANSAS

Auctioneers:

Jas. W. Sparks, Marshall, Mo. L. S. Jackson, Parker, Kan.



World's Championship Blood at Auction

Fairview Stock Farm, Dighton, Kansas

Tuesday, March 13, 1917



TWENTY-FIVE JACKS from weanlings to tried jacks; from 14½ to 16 hands standard. Heavy boned, rugged kind, not fat nor pampered.

TWENTY-FIVE CHOICE JENNETS, bred to the world's grand champion, Kansas Chief 9194. Most all of them showing heavy in foal. A number with Kansas Chief colts at side.

TEN GOOD PERCHERON STALLIONS, MARES AND COLTS. Rugged, heavy boned, western raised horses.

The most useful offering of breeding stock we ever sold. Jacks and jennets, first prize winners of Kansas and Missouri State Fairs.

Sale will be held in new sale pavilion on farm, regardless of weather. Sale commences at 10 a. m., sharp.

H. T. Hineman & Sons, Dighton, Kan.

AUCTIONEERS—Col. Bob Harriman, Bunceton, Mo.; Col. Jno. D. Snyder, Hutchinson, Kan.; Col. Pete Powelson, Kiowa, Kan.; Col. Wiley Clouston, Ness City, Kan.

JACK, JENNET AND PERCHERON SALE

AT SAVANNAH, MISSOURI

FRIDAY, MARCH 16

Twenty large, heavy boned, thick bodied, black, Mammoth bred, registered Jacks. A few Jennets. Three black registered Percheron Stallions.

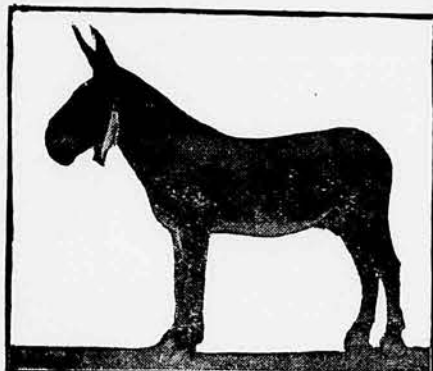
The Jacks are from 2 to 8 years old, 14½ to 15½ hands high.

This is our 54th sale. Write for catalog. Sale at Savannah, Mo., thirteen miles northeast of St. Joseph, on the C. G. W. and C. B. & Q. Railroads. Interurban from St. Joseph arrives and departs every hour.

G. M. SCOTT

ROUE NO. 2

REA, MISSOURI



Registered Percheron Stallions and Mares

On March 9, 1917

FOLLOWING THE THOMAS CLAYTON CATTLE SALE

I will sell ten Percheron stallions, age from 2 years to 5 years old, and ten Percheron mares from 2 years old to 7 years old.

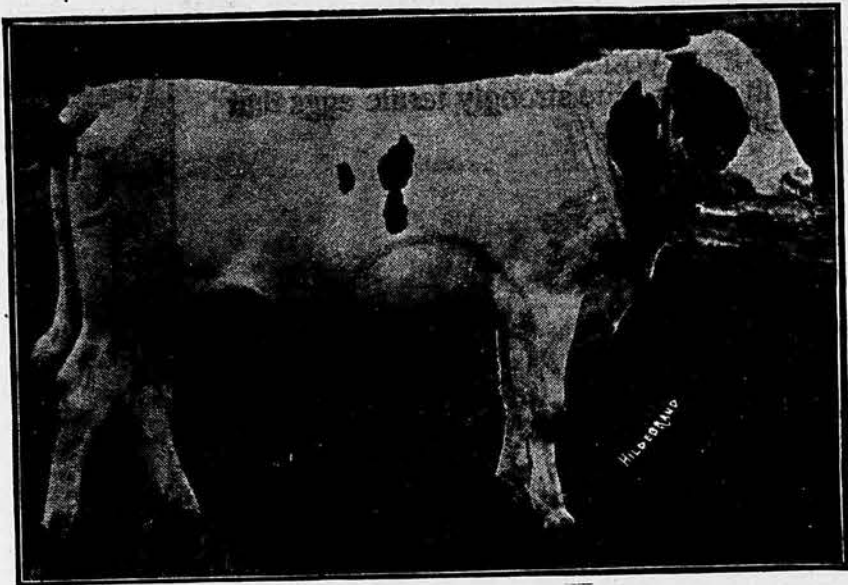
A. H. SEYMOUR
GREAT BEND - KANSAS

PUBLIC SALE OF HOLSTEIN-FRIESIAN CATTLE

ALBECHAR HOLSTEIN FARM, INDEPENDENCE, KS.

Offers For Public Sale, Beginning at 10 A. M.

Friday, March 9, 1917



SIR JULIANA GRACE DE KOL

RECORD OF DAM (Semi-Official): Butter, 365 Days, 924 pounds; Milk, 365 Days, 22,087 pounds.
RECORD OF SIRE'S DAM (Semi-Official): Butter as Three-Year-Old, 365 Days, 1,021 pounds (World's Record); Butter Three Years Over 3,000 pounds (World's Record).

Catalogs will be mailed on request. Will be glad to see you at the sale. Address correspondence to Robinson & Shultz, or

ALBECHAR HOLSTEIN FARM,

INDEPENDENCE, KANSAS

One Hundred and Sixteen Head Holstein Friesian Cattle.

This offering is made up of eighty-six pure-breds, many of which are from world's record ancestors, and consisting of cows in milk, bred cows and heifers, heifer calves, and bulls, from calves up to serviceable age. There will be daughters and granddaughters of King Hengerveld Model Fayne, who is a brother to the world's best cow, 50.68 pounds of butter in seven days.

Daughters of our herd sire, Sir Juliana Grace De Kol, whose sire's dam was a world's record three-year-old, and whose dam, as an old cow, made 924 pounds of butter in one year.

Granddaughters and great granddaughters of Pontiac Korndyke, King Segis, and Pieterje Hengerveld Count De Kol. These cows and heifers are all bred to high record bulls, and a great many of them will be heavy springers, by date of sale.

Six bulls ready for service, all from A. R. O. dams. Four by a great son of Pontiac Korndyke.

Nine heifers of high record ancestry are bred to a 35-pound son of Polly Posch and Pontiac Korndyke, and will freshen soon.

There will also be thirty head of high grade cows, fresh or springing. All of these cattle are of good size and capacity, and capable of turning a large amount of roughage into high priced dairy products.



LIMESTONE VALLEY FARM

Thirty-Eighth Annual Auction Sale of High Class Registered Mammoth Jacks and Jennets

THURSDAY, MARCH 15, 1917

At Missouri State Fair Grounds, Sedalia, Pettis Co., Mo.

TWENTY-NINE JACKS—Twenty-three old enough for service; six extra good yearling jacks. **THIRTY JENNETS**—Five with colts at foot; twenty-five jennets breeding age and now bred to the three noted jacks, Limestone Monarch 3254, Missouri State Fair champion and San Francisco World's Fair reserve grand champion, son of the undefeated show jack, Limestone Mammoth 298; Limestone Good Boy 6028, second prize three-year-old at San Francisco World's Fair, son of the undefeated and St. Louis World's Fair grand champion, Orphan Boy 696; De Wolf Hopfer 3720, son of Orphan Boy 696. We will also sell two good registered Percheron Stallions. Sale begins promptly at 9:30 a. m. in Show Pavilion, with comfortable seats and other accommodations. For fine illustrated catalog, address

L. M. MONSEES & SONS

321 SOUTH OHIO STREET

SEDALIA, MISSOURI, U. S. A.

Auctioneers: Cols. Harriman, Gross, Hieronymus Bros. & Logsdan.

REGISTERED KENTUCKY JACKS



I have shipped from my home, Poplar Plains, Kentucky, eighteen head of jacks to Newton, Kansas, and they are for sale privately. This is a good load of jacks, with lots of bone and size, with all the quality and finish you would ever see in a load of jacks. Ages from two to eight years; height from 14½ hands to 16 hands standard, and good performers.

I have shipped jacks to Kansas since 1879 and I do not believe I ever shipped a better load.

Any one wanting a good jack, call and see me at Welsh's Transfer Barn, two blocks from Santa Fe Depot, one block from Interurban. Come and see me.

E. P. MAGGARD

SUCCESSOR TO SAUNDERS & MAGGARD

NEWTON, KANSAS

FARM AND HERD.

James Arkell of Junction City, Kansas, owner of one of the choice herds of big-type Polands in this state, reports his herd doing well. A feature of his herd at this time is the choice lot of September boars by Long-fellow Again and Chief Big Bone.

A. J. Erhart & Son, of Ness City, Kansas,

held one of the highest Poland China bred sow sales made in the state this winter, fifty-four head of bred sows and gilts being sold for \$8,075, or an average of \$149.53. The top price was paid for No. 2, going to B. D. Hodson, Ashland, Kansas, at \$335. The offering was presented in splendid breeding condition and breeders from several states were present and bought. The sale was one of the most satisfactory ever made by Erhart & Son.

Giant Poultry Industry!

Hundreds of millions annually. Tens of thousands are making good money out of their chickens. Are you getting your share? Are you making poultry pay?

Year in and year out I am preaching this doctrine: *Condition your poultry.* Give them a chance by keeping their health good; keep up the good feeling and good humor; keep up the singing and scratching and you'll keep up the laying. It's the singing, good-humored, industrious hens that lay the eggs—the strongly fertile eggs that will give you good, livable chicks and healthy, fully developed fowls.

Don't Make a Mistake

What you make out of your hens depends on how you treat them. Pin your faith to **DR. HESS POULTRY PAN-A-CE-A**. It's the 23-year-old poultry preparation that has spelled success for so many thousand poultry raisers. It will do the same for you.



Feed Dr. Hess Poultry PAN-A-CE-A

A Tonic—Not a Stimulant
Makes Poultry Healthy Makes Hens Lay Makes Chicks Grow

Now that mating time has arrived, it's up to you to see that your poultry get a tonic and internal antiseptics to make them vigorous and free of disease. *Therefore, feed Pan-a-ce-a.*

In that condition your hens will lay better, you will get more healthy, fertile eggs and the chicks will stand a better show of reaching maturity. *Therefore, feed Pan-a-ce-a.*

And, before the hatches come, I want to warn against gapes, leg weakness and indigestion, for these ailments are responsible for half the baby-chick losses. *Therefore, feed Pan-a-ce-a—it will save you these losses.*

My lifetime experience as veterinarian, a doctor of medicine and poultry raiser has taught me the needs of poultry under all conditions; that is why I urge you to try my scientific and long-tried prescription.

Prices: 1½ lbs. 25c; 5 lbs. 60c; 12 lbs. \$1.25; 25-lb. Pail, \$2.50
 (Except in Canada and the far West)

Dr. Hess Stock Tonic

There's nothing better to put horses in trim for hard spring and summer work. Milch cows need it just now to prepare them for the heavy milking season ahead. Dr. Hess Stock Tonic makes all stock healthy, keeps them toned up and expels worms. Sold under money-back guarantee. 25-lb. pail, \$2.00; 100-lb. drum, \$6.50; smaller packages as low as 50c (except in Canada and the far West and the South).

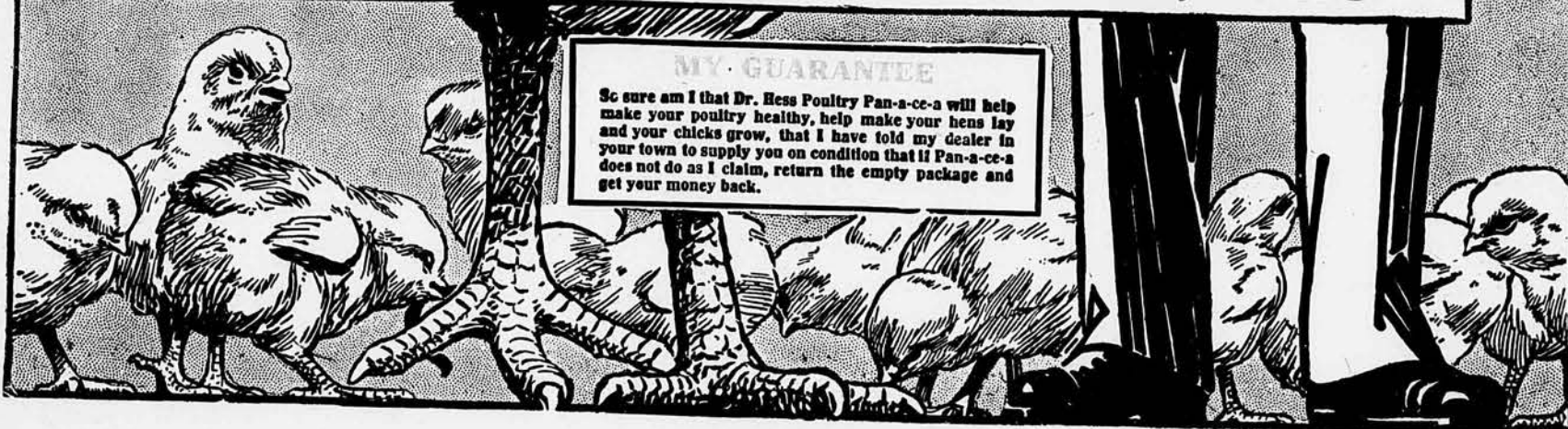
I'll Save Your Veterinary Bills

When you have a sick or injured animal or ailing poultry, write me, telling symptoms. Enclose 2c stamp for reply and I will send you prescription and letter of advice free of charge.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and sprinkle it in the nests; or, if your fowl are provided with a dust bath, sprinkle Instant Louse Killer in the dust bath every other week—the hens will do the rest. Also destroys bugs on cucumber, squash and melon vines, slugs on rose bushes, etc. Comes in handy, sifting-top cans. 1 lb. 25c; 3 lbs. 60c (except in Canada). I guarantee it.

DR. HESS & CLARK, ASHLAND, OHIO



MY GUARANTEE
 So sure am I that Dr. Hess Poultry Pan-a-ce-a will help make your poultry healthy, help make your hens lay and your chicks grow, that I have told my dealer in your town to supply you on condition that if Pan-a-ce-a does not do as I claim, return the empty package and get your money back.