

THE FARMERS MAIL AND BREEZE

Volume 43

June 7, 1913

Number 13



A Flattered Mother—Photo by Risk

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THE FARMERS MAIL AND BREEZE

AN AGRICULTURAL AND FAMILY JOURNAL FOR THE PEOPLE OF THE GREAT WEST



Volume 43
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BEGINNING EARLY WINS IN A FIGHT WITH GRASSHOPPERS

ENORMOUS numbers of grasshoppers are hatching out in various parts of Kansas. Last fall conditions in the Southwest were unusually favorable for the females to lay their eggs and probably fully 90 per cent of the eggs passed through the winter uninjured. Unless prompt and vigorous measures are taken to destroy them, it is probable the grasshoppers will do more damage to crops this year than in 1912.



George A. Dean.

Few grasshoppers will hatch on land farmed to corn, kafir and other crops which require a stirring of the ground in the spring. Every effort should be made to keep them out of these fields, as well as to destroy the grasshoppers in the alfalfa fields, or those coming in from adjacent fields.

Poisoned bran mash, the hopperdozer, poultry and young hogs are efficient for checking the ravages of grasshoppers, as proved by tests and observations made for two years previous to September 1, 1912, by Francis B. Milliken, of the Kansas Experiment station, now with the bureau of entomology, United States department of agriculture.

Several preparations of poisoned bran mash have been used. Mr. Milliken recommends the following formula as it contains the quantities and ingredients which are most efficient and can be most conveniently handled:

Bran	20 pounds
Paris green or white arsenic.....	1 pound
Sirup	2 quarts
Oranges or lemons.....	3
Water	3 1/2 gallons

In preparing the bran mash, mix the bran, Paris green or white arsenic thoroughly in a wash tub while dry. Squeeze the juice of the oranges or lemons into the water and chop the remaining pulp and the peel to fine bits and add them to the water. Dissolve the sirup in the water and wet the bran and poison with the mixture, stirring it at the same time to dampen the mash thoroughly.

The bait when flavored with oranges or lemons was found to be not only more attractive but was more appetizing and thus was eaten by more of the grasshoppers.

SCATTER THE MASH EARLY IN THE MORNING

The damp mash or bait should be sown broadcast in the infested areas early in the morning. The amount of bait made by using the quantities or ingredients given in the formula should cover 4 or 5 acres. As very little of the bran mash is eaten after it becomes dry, scattering it broadcast in the morning and very thinly, places it where the largest

When Enough Are Present to Threaten Crops Use the Hopperdozer or Turn in the Shoats and Chickens

Written For Farmers Mail and Breeze

BY GEORGE A. DEAN

Entomologist, Kansas Agricultural College

number of grasshoppers will find it in the shortest time. Sowing it in this manner also makes it impossible for birds, poultry or livestock to get enough to kill them. On alfalfa fields, in order to get the best results, the bait should be applied after a crop has been removed and before the new crop has started. As the poisoned bait does not act quickly, it will be from two to four days before the grasshoppers are found dead and these will be more numerous in the sheltered places. It does not take much poison to kill them. Even a small portion from one of the poisoned flakes will be sufficient to cause death.

Coal oil has been used in many ways for the destruction of grasshoppers, but is most commonly used in the hopperdozer a device which consists of a long, shallow, galvanized iron pan, mounted on very low runners. The hopperdozer is very effective where it can be drawn over an infested area near the surface of the ground. It is necessary wherever grasshoppers become destructive. On infested bare areas or fields where it does not injure the crop, grasshopper damage can be quickly checked by its use. It can be used without injury in an alfalfa field for two or three weeks after a crop has been cut.

Any grade of kerosene may be used in the hopperdozer. The first cost of a hopperdozer should not be more than \$8. It should be operated at a cost not to exceed 20 cents an acre.

HOW THE BEST HOPPERDOZER IS MADE.

Mr. Milliken recommends a hopperdozer made after the following plan:

The pan is made from a wide piece of galvanized sheet iron, 8 feet long, by turning up about 4 inches of the edge all around and soldering partitions across it at intervals of about 2 feet.

The sled is made of inch boards nailed on 2 by 4 runners, with a 3-foot screen made by fastening oil cloth, smooth side forward, on upright pieces at the back. About an inch of water is put in the compartments of the pan, and enough oil added to make a good film over the top.

Horses hitched at either end draw the dozer over the infested ground, and grasshoppers that attempt to jump back over it strike the screen and fall into

the water and oil. Many hop out again, but it is an advantage as they die and save the operator the trouble of removing them later. The dead that accumulate in the pan must be removed from time to time and more oil and water added.

On smooth level ground old wagon tires will make good runners, and let the pan run closer to the surface where it will do the most effective work.

WHERE MANY ACRES ARE TO BE GONE OVER.

Where large areas are to be gone over with the dozer, two sleds should be constructed, each long enough to hold two of the pans. Place these sleds end to end with an 8-foot 2 by 4 between the runners of the ends that come together. With half inch bolts fasten the two runners loosely together through the middle 2 by 4, leaving the latter projecting behind as far as it may. Run a heavy wire through a hole in the rear end of the 2 by 4 and fasten each of the ends to the outer back corner of each dozer. This gives a machine about 32 feet in length that is flexible in the middle, and may be drawn over rolling land by a team hitched to each end. The hitch should be to the end of a 10-foot 2 by 4, which extends from the middle runner of each sled and projects at its outer end. This makes the pull in front of the pans, and it will be almost impossible to upset the machine.

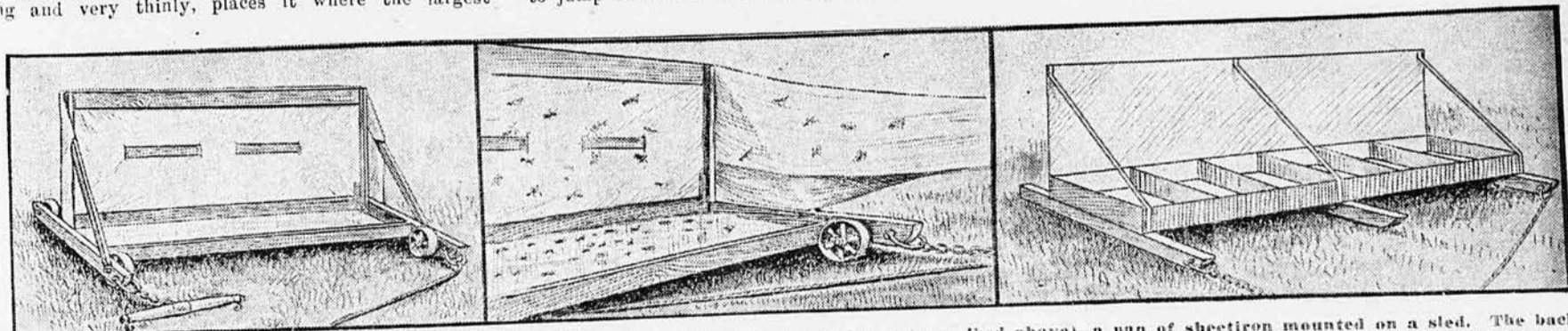
As some of the oil is removed by every grasshopper that gets into it, it will be necessary to add fresh quantities at intervals. In case the oil and water is slopping out, which it will do on rough or uneven ground, burlap or gunny sack cloth should be placed in the pans.

A BUNCH OF SHOATS WILL DO GOOD WORK.

Where barnyard fowls and young hogs can be let run on an infested field, they furnish one of the surest and most effective means of destroying grasshoppers. Poultry and hogs are fond of the hoppers and pursue them eagerly. Except in gardens, poultry can be used almost anywhere, and if they are placed where they can begin on the young hoppers as soon as they are large enough to attract the attention of the fowls, a small flock will destroy all that can be found in a surprisingly large area, and will keep their numbers down throughout the summer. Hogs can be let to run on alfalfa, weed patches and pasture lands where the grasshoppers are numerous. A bunch of young shoats will protect a considerable area.

To make a successful fight against grasshoppers too much emphasis cannot be laid upon beginning promptly as soon as the insects are present in sufficient numbers to threaten the crops, and continuing the fight vigorously as long as the grasshoppers are present.

(Continued on Page 25.)



Left to right: Plates 1 and 2, Colorado hopperdozer. Plate 3, Kansas hopperdozer, (described above), a pan of sheet iron mounted on a sled. The back may be of the same material, or of oil cloth with smooth side forward. The partitions prevent the water and oil in the pan from slopping over the sides too freely while it is being drawn through the field. An inch of water is placed in the pan and enough coal oil to form a film of oil on top. The frightened hoppers leap into the pan, or, in trying to pass over it, are caught by the smooth screen and slip and fall into the pan where the oil kills them whether they remain there or not. The Colorado hopperdozer has a bottom of No. 24 galvanized iron, 30 by 96 inches, nailed to a frame of 2 by 4's, 24 by 96 inches in size. Three inches of the sheetiron are turned up at each side and nailed to the frame. To prevent leakage a strip of tow candle wicking is nailed beneath the iron, between two rows of nails. A coat of paint makes the pan water tight. The rack, or screen, is a sheet of white oil cloth with a smooth strip of timber run through it to prevent a bellying of the screen by the wind. The lower edge of the oil cloth is nailed with strips to the inside of the pan to check slopping. Plate 2, shows one end of a sheet of oil cloth attached to the dozer, the other to one of the tugs of the horse pulling the dozer.

Ways=Means=Results

Worked Out by Mail and Breeze Readers

A Question For Hog Men

Mr. Editor—I should like to hear from readers of the Mail and Breeze who cut and feed alfalfa to the hogs instead of allowing their hogs to run on alfalfa pasture. Would hogs in a fenced lot with shade be likely to do as well on this cut alfalfa and some corn daily, as if they were running on alfalfa and had the same allowance of corn?
C. M.
Kansas City, Mo.

Cowpeas and Cane For Feed

Mr. Editor—Usually, here in Ellsworth county, central Kansas, cowpeas do not grow thriftily enough on upland in average seasons, to make them a profitable crop. Last season I sowed some with cane and the result was most favorable. I planted about 1 part peas to 2 parts cane seed. This year I am using cowpeas with all my sowed cane.
Carneiro, Kan. O. B. Smith.

Saving Time in Working Corn

Mr. Editor—When I cultivate my corn the second time with a two-row disk sled, I set the levers as they should be and work every other row for a couple of acres. Then I set the levers a hole deeper and go back over the uncultivated rows. In going over the latter rows the disks take less earth, which accounts for putting the levers down a notch. By following this plan I save the trouble of resetting the levers at each end.
Hillsboro, Kan. D. H. Dyck.

To Stop the Cribbing Habit

Mr. Editor—Some time ago I noticed the request of a reader for some means of keeping a horse from cribbing or wind sucking. Usually, the cause of this habit is idleness. Try feeding this horse from a swinging trough, suspended to the ceiling by ropes or chains. Another good remedy is to cover the upper edge of the manger with sheep skin, leaving the woolly side out. This treatment seldom fails.
Grenola, Kan. J. E. Lambert.

Stack Weights Made of Cement

Mr. Editor—I have just finished making 50 stack weights out of cement, for use on grain or alfalfa stacks. With an ordinary 5-inch post auger I dug 50 holes about 2 feet deep. These were filled and tamped down with a concrete mixture of 4 parts sand to 1 part cement. A piece of iron bent in the form of a horseshoe was pushed down into each cake to which to tie the cords. When the cement had set the weights were dug out and were ready for use.
Mayfield, Kan. J. B. Wade.

Summer Comfort For Hogs

Mr. Editor—To make hogs comfortable in summer I make use of the cow barn. The stalls are slatted up and holes made through the walls of the barn so the hogs may come in from their pens to doze, away from the heat and flies. The barn is kept darkened, even to putting old sacks over the openings. In very hot weather I dampen the stalls, and once a week I throw in some fresh soil. A little lime sprinkled about is good to keep lice down and I use a little sulphur in their feed to keep them free from lice. You should see how they enjoy their cool, dark quarters.
Lakin, Kan. S. V. Goeden.

Put in His Own Pumping Plant

Mr. Editor—I am sending you two photos of my drouth-resister. So far as I know this is the only pumping irrigation plant in Clark county, southwestern Kansas. We have room for 500 more like it in the Cimarron Valley. One photo shows the water just leaving a 7-inch pipe. The other shows the main ditch leading from the pump, a No. 5 Guild centrifugal operated by a 12 horsepower Fairbanks kerosene engine. The plant lifts 700 gallons per minute, total head 21 feet, at a cost of 10 cents an hour actual running expense.

To install such a plant, first find the highest point on your farm, then find how deep it is to water and, if possible, how deep it is through the water. We did this with a common post auger. We bored down 14 feet and struck water. Then we drove a pointed piece of pipe 45 feet, at which point it stopped. We dug an open well 8 feet in diameter, down to the water, casing up with lumber. After this we tried to go deeper with iron casings, 7 feet in diameter, and did succeed in getting down 6 feet into the water. Then we put down eight 6-inch wells, about 8 feet deeper in the bottom of the large well. This we found would supply a No. 5 centrifugal pump, running continuously, throwing probably 700 gallons per minute.

All our work was done with the ordinary farm help and tools. We had no expert or experienced help or advice, but would not advise anyone to tackle the same proposition without more

that there is no such thing as exhausting it. Wait until you have seen a big centrifugal work, then you will know something about throwing water. After you have decided to put in a plant, you will do well to investigate the former proposition.

I put in a 12 horsepower kerosene portable engine. The kerosene or oil engines are much cheaper to operate than the gasoline, and a portable engine can be moved anywhere on the farm or entire neighborhood and furnish power for any purpose. Buy the very best engine and pump you can get and the satisfaction afterwards will more than make up the difference. This year will be my first with so large an outfit. We shall water potatoes, oats, wheat, alfalfa, and possibly Kafir and milo. The cost of the outfit was about as follows:

One 12 h. p. kerosene Fairbanks engine.	\$ 700
One No. 5 centrifugal Guild pump.	200
Belting, pipe, etc.	50
Freight on outfit.	50
Well, wellhouse and engine house.	400
	\$1,400

Our engine being portable and used for many things, it is hardly fair to charge the whole cost to the irrigation plant. The cost of operating is about

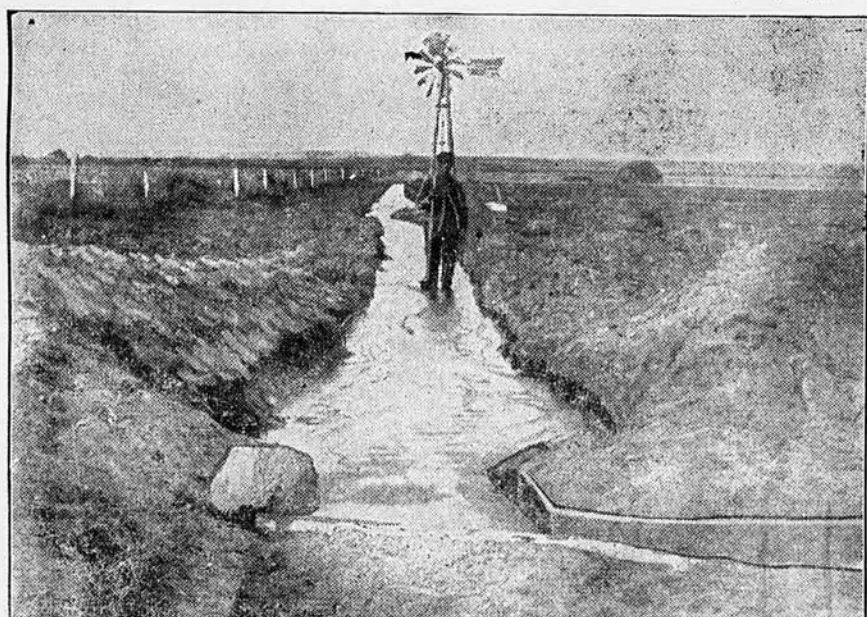


Water leaving a 7-inch pipe from M. L. Dickson's pumping irrigation plant in Clark county, probably the first of its kind in the Cimarron Valley. The pump, and 12 horsepower kerosene engine lifts 700 gallons a minute. Mr. Dickson, though not an expert, installed the plant himself. Elsewhere on this page he describes how the work was done.

knowledge than we had to start with. No two projects present exactly the same problems. I think now that the proper way to do here, is to dig down to water then put in a steel shoe, covered with 2-inch lumber, wall up to the surface of the ground with brick. Then begin taking out sand and gravel with the pump and other means, letting the wall settle of its own weight until the desired depth is reached, which will be determined by the amount of water you want to lift in a given time.

Don't get the idea that because you are unable to exhaust the ordinary well by hand power, by windmill, by small gas engine, or even by 2-inch steam jet,

10 cents per hour actual running expense, when operating on kerosene. With solar oil it should be cheaper. Our annual precipitation in Clark county is only 20 inches, from 12 to 18 of that coming in as many days. I am convinced where it is possible to irrigate at all, it will pay well. Except as a pumping proposition, irrigation is not an experiment here in the Cimarron Valley. But where a sufficient flow of water can be obtained from 10 to 30 feet in depth, by the use of modern oil engines and pumps, the land can be watered cheaper and more satisfactorily, than by the old ditch system from a stream. With an individual pumping plant



Main ditch leading from the pumping plant, show above, on the Clark county farm of M. L. Dickson in the Cimarron Valley, southwestern Kansas. Mr. Dickson, who installed the plant, is standing in the ditch.

you can water just when you please, you can quit when you please, and you have no weed seed from the other fellow, or silt, hog cholera, or other objectionable wash.
M. L. Dickson.
Protein Place, Englewood, Kan.

Rotation For Over-Corned Land

Mr. Editor—Every farmer in Kansas needs to find a rotation of crops that is best suited to his needs and conditions of soil. The system I have worked out with land that has been corned continually is to haul manure on it in winter, disk it in spring, plow it about May 15 and then put in cowpeas. Rye follows the cowpeas in the fall and this is left standing to make a crop. The next fall another crop of rye is sown and this is turned under the following spring after furnishing pasture enough to pay for the seed and labor of putting it in. Then it is ready for other spring crops.

Twenty-five years ago the man who was "strong in the arms and light under the hat", was believed to constitute a good farmer. That time is past. The man who sows wheat in the same field which has grown wheat year after year, or who lists the same old cornfield back to corn, after growing nothing but corn on it for 25 years, will soon have to give way to the man who goes into the subject a little deeper. It is simply a question of time until the fertility of such land will be so low that it will no longer pay to crop it.

The curse of this country is wheat. I fail to see where a farmer with 160 acres of land can afford to grow wheat. According to the best authority we have, we are losing money on every bushel of wheat we raise when we take into consideration the cost of production and the value of the ingredients it extracts from the soil. These two items foot up a total of \$1.04½ per bushel which is considerably more than we get for wheat on the market. And this is saying nothing about having our other crops destroyed by chinch bugs.
Burton, Kan. Harry Leclerc.

A Silo Building Experience

Mr. Editor—After deciding to build a silo I found our local lumber dealer could furnish stave material at \$42 per 1,000 feet. This figured up considerably less than the amount asked for by the silo agents. I interested others and we ordered material for four silos, making a carload in all.

We hired a carpenter to make the door frames and doors. Material for hoops and fixtures were ordered and our blacksmith threaded the hoops and gave them the proper circle. In due time we erected our silos with as much ease as though they had been factory made, and I believe they are just as good in every practical way.

My bill of materials and outside labor was as follows:

Staves, 2,800 feet.	\$117.60
Lumber for doors and frames.	9.10
Hoop iron, 540 pounds.	14.85
Tank lugs.	4.29
Hexagon burrs.	.72
Guy wires, bolts, etc.	3.00
Blacksmithing.	8.00
Carpenter's wages.	3.00
Total	\$160.56

I dug a pit 4 feet deep and lined it with a 10-inch wall of concrete. This formed the foundation of my silo. When finished I had a silo 14½ by 32 feet, which holds from 100 to 110 tons of silage. I fed 37 head of cattle from this silo beginning November 1 last, and when it came time to turn stock on grass May 1, I still had 30 days' feeding left. I never had better feed on the place.
Pomona, Kan. Ed. S. Jennings.

Cement Helped a Leaky Tank

Mr. Editor—I had a leaky galvanized stock tank which we made water tight again by putting in a floor of concrete. I first scraped off all the loose rust, enlarged the holes already there, and made a few new ones. I mixed up enough concrete, 3 parts sand to 1 part cement, to cover the bottom 4 inches deep. Wire and old iron rods were placed in the concrete as it was laid, and when through the surface was troweled smooth. After letting the concrete set three days the tank was pumped full of water. No leaks have developed and I think our tank will last several years longer.
Winfield, Kan. F. W. Page.

A New Day For the Shorthorn

Modern Conditions to Bring It About

[BY S. C. HANNA, Howard, Kansas.]

Editor's Note.—This is frankly the outspoken prophecy of one who has spent his life in the cattle industry, preferably as a breeder and feeder of Shorthorns. Mr. Hanna has made Shorthorn history in Kansas. Therefore his opinions are interesting and readable whether or not they agree with yours or mine. No one, of course, questions the steady popularity of the Shorthorn.

BEEF production in the natural evolution of the business must come more and more under farm conditions, where the farmer and feeder and not the animal must do the rustling. As population increases milk must play a more and more important part in the economics of beef production. It does not require the gift of prophecy to see that the time is approaching when the invaluable qualities combined in the Shorthorn, as in no other breed, will from necessity be more and more in demand. Then will the noble Shorthorn come into its own.



S. C. Hanna.

Superiority in size over all other beef breeds is one of the peculiar merits of the Shorthorns. One of the main purposes for which purebred herds of beef cattle are maintained is to improve the

excelled all other breeds. Superior size, width of back, depth of rib, fullness of ham, and natural docility, and the power to transmit them in a marked degree. These desirable qualities were all implanted to some extent in our western herds before the other beef breeds were introduced. The Shorthorn has been the pioneer and the great improver.

But the farmer as well as the range man began to imagine he wanted a "rustler", an animal that could survive the most hardship and neglect possible. He did not then realize, as he does now, that what he really needed was an animal that would give the most liberal response in beef and milk to the most liberal treatment, and that the breeder was the one who should do the "rustling" if he was to expect the best results. Tried by the rigid law of "the survival of the fittest" under range conditions, the purebred Texas long-horn was immensely superior to any breed ever imported. It must be apparent to every close observer that the ability to withstand neglect and adverse conditions is to some extent impaired as we increase the size of our livestock. Extreme size, whether in horses, hogs, or cattle, requires better feed and attention to preserve the growth and thrift of the animal in order that it may reach the limit of its development.

The Farmer "Rustles" in England.

There is no material difference in the native environment of any of the im-



FOUR SHORTHORN MATRONS STRONG IN SHORTHORN QUALITY.

Left to right: Fair Start, Daughter of Mary Ann, 78th Duchess of Gloster, Sittytton Lady.

size and feeding quality of the common cattle of the country. No breed will improve the size and feeding quality of the millions of native scrubs so quickly as the Shorthorn. And while improving size and feeding quality he will improve the milking quality of the scrub in an equal degree.

From my earliest experience, when I held a grade Shorthorn heifer calf for my father at a local fair in western Indiana 40 years ago, to the present time, I have been a close observer under widely different conditions of the effect of the improved breeds upon the native cattle. I was old enough to observe the rapid improvement of our cattle in western Indiana by the use of registered grade Shorthorns. That improvement continued until we were sending steers of the highest class to the Eastern markets. During the same time I had an opportunity to observe the same process in central Illinois. I cannot but believe that the country would have been millions richer if nothing but Shorthorns had ever been imported.

The Shorthorn as a Pioneer.

The Herefords and the black polls have not been the pioneers in the grading up of western cattle. We have not been able to note what they might have done if they had come before instead of after the Shorthorns. No experienced range man, however, can doubt that the Shorthorn made far greater improvement on the native Texas and Mexican cattle than could have been made by any other improved breed. Those qualities in which they were most deficient were the ones in which the Shorthorn particularly

proved breeds of beef cattle. In England the Shorthorns and Herefords are raised in the same manner and under exactly the same conditions. With the same feed and attention, the Angus and the Scotch Shorthorns flourish side by side in their native home, Aberdeenshire, Scotland. In Aberdeenshire one is no better "rustler" than the other. The breeder and farmer does the "rustling" there as he must do here if he secures the best results. If the Hereford, the Angus or the Galloway will preserve a higher degree of thrift under unfavorable circumstances than the Shorthorn, it is either because they are a smaller type of cattle or their breeders have kept the quality of constitution more constantly in view.

The sum of all my observations has been that on our low-grade, unimproved native cattle no breed has ever equaled the Shorthorn for radical improvement. The best rangers I ever saw on the Chicago market were high-grade Shorthorns from Montana. The best steers I saw in Great Britain were high-grade Shorthorns from the Orkney islands, and this after passing through Herefordshire and Aberdeenshire.

Size is one of the important qualities that the Shorthorn possesses over other breeds in improving the smaller native cattle of the country. As representatives of two beef breeds, compare the great prize-winning Hereford bull Dale with the Shorthorn Young Abbotsburn, both champions in their breed and class. Dale, with his hide as tightly filled with flesh as an egg is with meat, and a model packers' type, weighed at Kansas

(Continued on Page 8.)



The Voice of Reconstruction

When a flood sweeps over a vast area, desolating the cities and towns which lie in its course, the appeal for assistance gets a unanimous response from the whole country.

With all commercial and social order wiped out, an afflicted community is unable to do for itself. It must draw upon the resources of the nation of which it is a part.

In such an emergency, the telephone gives its greatest service when it carries the voice of dis-

ress to the outside world, and the voice of the outside world back to those suffering.

At the most critical time, the nearest telephone connected and working in the Bell System affords instant communication with distant places.

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Damaging Air Spaces Due to Wrong Plowing



Land Plowed Right—"C.T.X." Bottom No Air Spaces

Plow Right and Protect Your Crops

The coming season may be dry and hot. Better be prepared for drought in case it does come. Better see that no air spaces are left between topsoil and subsoil, whoever does your plowing. For those air spaces cut off the moisture from below and rob you of half your crop.

You'll have no air spaces if you use a Rock Island "C.T.X." Universal Plow. It turns each slice clear over, flat and smooth. Buries all trash. Pulverizes dirt—saves one harrowing—leaves the topsoil in close contact with subsoil. In dry weather, moisture comes right up from below, like kerosene comes up your lamp wick. This feeds and saves your crops.



Rock Island (C.T.X.) Universal Plow



All due to the peculiar corkscrew-like bottom on the Rock Island "C.T.X." Universal. This patented mouldboard carries the dirt backward and DOWNWARD, not backward and UPWARD, like all other plows. A very simple invention, but one that is revolutionizing all plowing methods. (Picture A shows Rock Island Universal bottom, and arrow shows how dirt travels. Picture B shows ordinary plow bottom, and arrow shows how dirt travels.)

A Genuine UNIVERSAL Plow
And the beauty of it is, with this plow you can plow up any field on your farm. Tame Sod, Heavy Clay, Sandy Loam, Mixed Soil, Stubble Fields, Old Cornfields, Meadows, etc., all look alike to the Rock Island "C.T.X." Universal. Saves buying a new plow or bottom for sod.
It's a Universal plow that does perfect work in all cases and leaves no air spaces. That's why this plow so quickly became the sensation of the farm world. That's why you'll want it the minute you see it. Send a postal now, and we will tell you where you can see a "C.T.X." and price it. You can judge yourself and will realize why it's so much better.

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It pictures and describes this most popular plow completely. Simply write these words on post card. I am interested in plows. Then add name and address and mail card to (113)
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Harvesters Will Be Needed Better Make Provision Now For Help

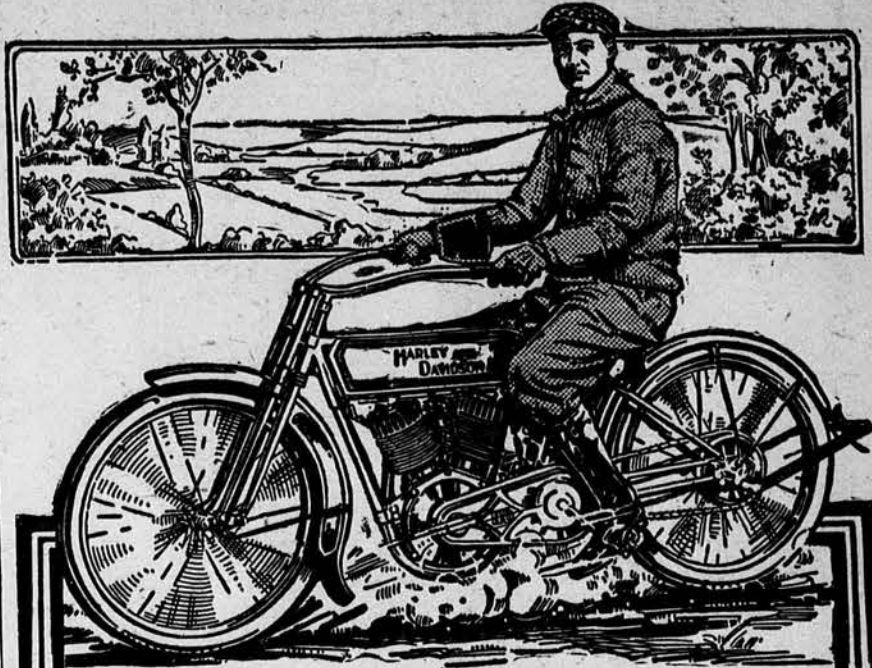
IF YOU are going to need help during harvest, write immediately to W. L. O'Brien, state commissioner of labor, Topeka, tell him the number of men you think you will need and about the date they will be needed and he will get help for you. His services are free. Wages this year will range from \$2 to \$3.50 a day and board, he says.

"There will be work for every available man unless something happens in the next few weeks to upset present prospects," said Commissioner O'Brien last week. "The state free employment bureau placed 20,000 men last year. We expect to need more than that number this year."

Reports received by the bureau, indicate wheat harvest in southern Kansas will begin on or about June 15. This

prediction is, of course, subject to weather conditions between now and that date. The full harvest rush in Kansas is not expected until about June 25. The general tone of the reports indicates the wheat crop has deteriorated in the last two weeks but not to the extent given in the published reports. The crop has not gone back far enough to affect the need of harvest hands, is the opinion of the commissioner.

Men who wish work in the harvest field may obtain a harvest schedule by writing to the commissioner. The schedule gives the dates when harvest will begin in the various counties, points where the greatest number of men will be needed, what wages are paid, etc., also the names and addresses of farmers who are in need of men.



Equity Plan of Co-operation

BY C. O. DRAYTON, National President.

[Written for Farmers Mail and Breeze.]

I THINK so much of the Equity Union plan of Golden Rule co-operation, that I want to proclaim it from the house tops. This high standard of business co-operation is being worked out



C. O. Drayton.

in 19 states by the young giant, Equity Union. A lively campaign of education is being carried on at 100 good markets, and Equity exchanges established.

When strongly organized, the Equity Union will prevent gluts of central markets, which now cause farmers to lose millions of dollars. When there is sufficient co-operation by our Equity exchanges, the price of farm machinery will be reduced 50 per cent, coal \$1 to \$2 per ton; flour, feed, fertilizer, and all necessaries, will come down, and consumers, as well as producers, will be benefited.

Local unions are organized at the best shipping points. When we have 100 or more members at one place, we start an Equity exchange with 100 stockholders and a capital of \$10,000. We work continually for more stockholders and more capital. The stockholders control this capital and run their own business.

The National Union is organized without capital. It is an organizing force, which carries on a continual campaign of education, absolutely necessary to the success of this movement for economic freedom.

A Limit of Four Shares.

The shares in our exchanges are \$25 each. The limit is four shares. The manager is bonded by a reliable bonding company. His books are carefully audited every quarter and oftener if necessary. Our commission firm in Minneapolis gives each exchange a set of books, and continual direction and assistance in buying grain. We work for honest, efficient management.

Each manager is required to buy and sell on a safe margin. All profits are prorated to stockholders according to their patronage. A large volume of trade from 200 or 300 farmers reduces the cost of handling and insures the success of the business. No danger of assessments here.

Out of the gross earnings are taken expenses, national dues, and 5 per cent

dividends on the stock subscribed. Never allow more than 5 per cent dividends on the stock subscribed. All over this is profit, figured as a per cent of all the business furnished by the stockholders, and is prorated back to stockholders according to patronage.

Patronage Makes the Earnings.

Every patron who is a stockholder gets back all that he earns by his patronage. Only patrons can draw out the earnings of the company, as patronage makes the earnings. This plan is just. A small per cent paid for capital, and as large an amount as possible paid back each year for patronage, will bind farmers together in a union that will be powerful and beneficent.

Each member's produce and merchandise is handled at actual cost, without profit, and a large volume of trade reduces the cost of handling. Non-members are paid the same as members for their produce, but do not share in the profits.

We pay all the earnings of the company to patrons who are stockholders. They must be both patrons and stockholders to get a share of the earnings. Non-members will soon see the difference and come in.

The central idea in this plan is the union of a large per cent of our farmers. The entrance fee is \$3. Each member has one vote and only one. To all members who have less than 4 shares, we prorate in shares for their patronage until they have 4 shares, the limit. We will finally have 200 good farmers united in each exchange, with a financial standing of \$20,000 in the business world, and if this is not sufficient capital, the limit of shares can be changed to 5 or 6.

Exchanges Buy and Sell.

All of our Equity exchanges must cooperate in buying and selling. It will take time and patience to work this out. We leave our exchanges free, as we do our members. We never drive nor coerce our members.

We are now arranging to buy a controlling interest in a coal mine for our Southwest unions. We will do the same for our Northwest unions. We urge every farmer to rally around the Equity Union banner. Leave the profit-system, become a golden rule co-operator, and your success as a farmer is assured. Send 10 2-cent stamps for the Equity textbook which gives a full explanation of our plan of co-operation.

Greenville, Ill.

Why the Motorcycle Keeps Boys on the Farm

DON'T expect your boy to be happy on the farm if the summer season brings only work. When the day's work is over don't tell him the horses are too tired for road work, because it is this tying to the farm, this inability to join his chums in their pastimes or to seek his own pleasures that often makes farm life distasteful to him. Get him a

HARLEY-DAVIDSON

It will let down the bars and take him where he wishes in a fraction of the time he would use by team. It will open up a thousand and one pleasures heretofore denied him. You will find he will return at bed time, happy, contented and satisfied with his lot in life. But when you buy him a motorcycle, be sure that you obtain one that is economical, reliable and durable. Buy him a Harley-Davidson, because

It is the Most Economical

The Harley-Davidson holds the world's official record for economy.

It is the Most Reliable

The Harley-Davidson is the only machine which has ever been awarded a diamond medal and a thousand plus five score in an endurance contest. The plus five was for its super-excellent performance. These awards were made by the National Federation of American Motorcyclists.

It is the Most Durable

The first Harley-Davidson made, over eleven years ago, has covered now over one hundred thousand miles and is still giving satisfaction and today retains even its original bearings.

Seven departments of the U. S. Government use a total of nearly 4000 of these machines.

Over 3900 R. F. D. Carriers daily cover their routes on a Harley-Davidson, a fitting tribute to the reliability of this machine.

Call on our nearest dealer for demonstration or write for catalog.

Harley-Davidson Motor Company

PRODUCERS OF HIGH GRADE MOTORCYCLES FOR OVER ELEVEN YEARS

774 A Street

MILWAUKEE, WISCONSIN

What About Loans to Farmers?

A good many Mail and Breeze readers think they are not getting a square deal when it comes to borrowing money. We would like to get at the bedrock facts. What has been your experience? Please tell us what security was offered and what rate charged. If you can, tell us what rate business men pay in your locality. Are interest rates higher than they were? How much interest could a farm buyer pay and stand a chance of getting out of debt in years to come? Would cheaper money have a tendency to further advance the price of land? The Mail and Breeze would like to have any light on these questions you can give it and will appreciate a letter.

The CLIPPER

There are three things that destroy your lawns—Dandelions, Buck Plantain, and Crab Grass. In one season the Clipper will drive them all out. Your dealer should have them—if he has not, drop us a line and we will send circulars and prices.

Clipper Lawn Mower Co.
Box 10, Dixon, Ill.

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

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

GURRIE WIND MILL CO.,
Topeka, Kansas.



Dairy Farming

CONDUCTED FOR FARMERS MAIL AND BREEZE BY A. G. KITTELL.

This department aims to be a free-for-all experience exchange for our folks who keep milk cows. We are glad to hear from you often. A Mail and Breeze subscription and other prizes awarded each week for helpful or interesting letters or bits of dairy news.

Fine salt for the butter always.

Slow speed in the separator is the cause of much poor skimming.

It is not a good plan to mix warm milk with that already cooled.

For a good churning it is better to have the churn less than half full, than to have more than that amount.

Beware of the agent who sells a preparation which, he claims, will prevent milk from souring when used to rinse cans.

A vessel that could hold 1,000 pounds of water would hold approximately 1,038 pounds of skimmilk and 1,032 pounds of whole milk.

A good way to strain milk is to put several thicknesses of cheese cloth over the can and hold the cloths in place with clothes pins.

A good fly deterrant is made of 1 gallon fish oil, 1 pint kerosene, and 4 table-spoonful of crude carbolic acid. Mix well and apply with a cloth, or spray all parts but the udder, just after milking. About once a week will do.

Kansas World Champion Heifer

SHE IS AN AYRSHIRE.

Kansas is the home of the world's champion Ayrshire heifer in the 3-year-old class. She is a little cow "Elizabeth of Juneau", owned by Kansas Agricultural college. On May 8 she finished a year's record in milk production that leads all former records for 3-year-old Ayrshires by a good margin. Her year's work shows 15,218.1 pounds of milk testing 3.52 per cent fat. This means 535.84 pounds of butter fat which is equivalent to 626 pounds of butter. Her record by months follows:

	Pounds milk.	Pounds butter fat.
May 9-31	1,073.3	39.82
June	1,504.0	57.75
July	1,378.7	45.64
August	1,456.4	45.73
September	1,295.9	47.56
October	1,284.2	45.97
November	1,321.7	41.90
December	1,240.7	41.07
January	1,190.7	40.96
February	1,087.5	41.43
March	1,163.3	39.24
April	938.3	39.43
May 1-8	223.4	9.34
Totals	15,218.1	535.84

This heifer had no especial care, being milked and fed by students at the college and receiving the general herd

ration. This consisted of 4 parts corn, 2 parts bran, and 1 part oilmeal, as the grain ration. For roughage she had all the silage and alfalfa hay she cared to eat. This spring she has had access to bluegrass and alfalfa pasture.

Elizabeth of Juneau is the first Kansas animal of a dairy breed which has ever held a world's record. Her work speaks well for the dairy department at Manhattan and for Prof. O. E. Reed in particular. This Ayrshire is the third cow of the college herd within the last few months to make a record big enough to attract wide attention. This sort of thing helps the dairy industry of the state and advertises Kansas as a coming dairy state.

Dairy Farming on 15 Acres

BY A. S. NEALE,
Kansas Agricultural College.

How many cows should 15 acres and a silo support? Would it be possible to feed them the year around and how large a silo would it require? I want to use grade cows of a good milking strain. Which breed would you advise me to get?—R. E. H., Washington county, Kansas.

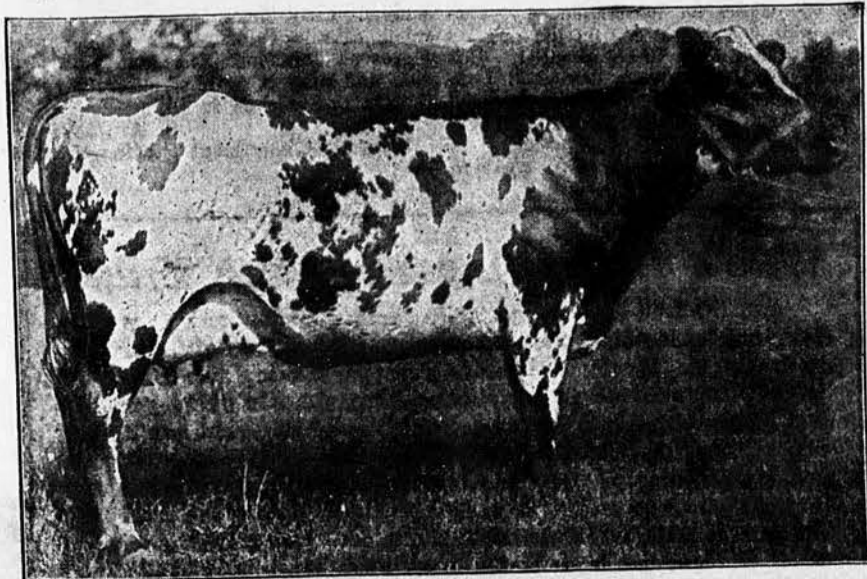
The number of cows 15 acres will support depends on the crop-producing power of the land, the system followed, the climate and the man. Some years ago a man in Pennsylvania produced enough silage and hay on a 15-acre farm to feed 17 dairy cows, 11 head of young cattle and 2 horses. This was on land that had been brought up to a high state of fertility by careful farming. The entire area was devoted to growing hay and silage crops and no pasturing was done.

In planning a system for a 15-acre farm for Washington county, the principal crops should be corn, Kafir, or Sweet sorghum, for silage, and alfalfa or clover for hay.

Under present average conditions, good land in that section should produce 10 tons of silage and 3 tons of alfalfa an acre. These yields can be increased 50 to 100 per cent within a few years by a good system of farming where everything is fed to livestock and the manure carefully saved and returned to the land. By planting half of the land to silage crops and half to alfalfa, with such yields, enough silage and hay will be produced to feed 10 cows one year. In addition it will be necessary to feed about \$15 worth of grain per cow a year, which must be bought.

A silo for 10 cows should not be more than 11 feet in diameter, and to hold 75 tons must be at least 40 feet high. It is not practicable to build a wooden silo of these dimensions but one can be built safely of concrete.

The breed of cows to buy is not material, if it is a dairy breed. Jersey, Guernsey, Holstein and Ayrshire are the leading dairy breeds, and there is more difference among individuals of a breed than between the breeds. The Jersey, produces a comparatively small amount of milk but it is rich in butter fat. The Guernsey is a larger cow, produces more milk, but usually it is not so rich in fat as that of the Jersey. The Holstein, the largest dairy cow, gives the most milk, but the butterfat content is much lower than that of either the Jersey or Guernsey. The Ayrshire is a hardy cow, smaller and smoother than the Holstein, and gives less milk, but the milk is a little richer in butter fat. Manhattan, Kan.



Elizabeth of Juneau, the Kansas Ayrshire heifer that holds a world's record by producing 15,218 pounds of milk in one year. This is an average of approximately 5 gallons for every day in the year.

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Be Your Own Judge

We cannot believe that there is a sensible man living who would purchase any other than a DE LAVAL Cream Separator for his own use if he would but SEE and TRY an improved DE LAVAL machine before buying.



It is a fact that 99% of all separator buyers who do SEE and TRY a DE LAVAL machine before buying purchase the DE LAVAL and will have no other separator. The 1% who do not buy the DE LAVAL are those who allow themselves to be influenced by something other than real genuine separator merit.

Every responsible person who wishes it may have the Free Trial of a DE LAVAL machine at his own home without advance payment or any obligation whatsoever.

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The new 72-page De Laval Dairy Hand Book, in which important dairy questions are ably discussed by the best authorities, is a book that every cow owner should have. Mailed free upon request if you mention this paper. New 1913 De Laval catalog also mailed upon request. Write to nearest office.

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NEW YORK CHICAGO SAN FRANCISCO SEATTLE

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WHOLESALE PRICE TO CONSUMERS—Combining best quality with low price. NO WATER IN MY KEROSENE OR GASOLINE.

- XXX 46 gravity water white kerosene.....\$6.00 for 52 gal. bbl.
 - XX 42 gravity kerosene (the kind usually sold).....\$5.25 for 52 gal. bbl.
 - XXX 64 gravity gasoline.....\$10.00 for 52 gal. bbl.
 - 1 case graphite axle grease (2 doz. 3 pound pails).....\$3.50
 - 40 gravity prime white stove distillate.....\$4.50 for 52 gal. bbl.
 - 38 gravity stove distillate.....\$4.25 for 52 gal. bbl.
 - 60 gallon (28 gauge) galvanized steel tank with pump and hood cover complete—a great convenience in every home.....\$3.60
 - Extra heavy pure crude oil, steamed and settled, (black oil) good lubricant, just the thing for greasing tools.....\$4.00 for 52 gal. bbl.
 - STANNARD'S PROCESSED CRUDE OIL, the best dip made for killing lice and curing mange. One application will do more to kill lice and cure mange than three applications of any other dip made (it destroys the nits).....\$5.00 for 52 gal. bbl.
- I also carry a full line of lubricating oils.
I will pay \$1.25 each for my crude oil barrels, \$1.50 each for my refined oil barrels returned to me at Coffeyville, Kansas, in good order, less freight charge on same.
C. A. STANNARD, BOX M, EMPORIA, KAN.

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Demand the Genuine—Refuse substitutes.

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2-A

At Soda Fountains or Carbonated in Bottles.

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\$25 for a Name for this Pony



I will give \$25.00 FREE for the best name for this beautiful prize Shetland pony. Send the best name you can think of right away, for not only do you have a good chance to win the \$25 prize but **You Can Win the Pony, Too**

for I am going to give him to some boy or girl who will do a little easy work for me. I have just given "Dandy," another beautiful pony, and now I am going to give away this pony. But first I want a name for him.

1500 VOTES FREE

Just as soon as you send me a name for the pony I will tell you all about my great offer and I will also send you a special coupon good for 1500 free pony votes. Remember, I will give \$25 for the best name for this pony, and I send you 1500 free pony votes and full particulars about the pony as soon as I hear from you. Write me today.

Copyright, 1913. By A. M. Piper. **A. M. PIPER, 665 Popular Bldg., Des Moines, Ia.**

Write Quick & Cut Out Shoveling in Hot Harvest!

EVERY blessed farmer who buys his Sandwich Elevator before harvest gets double work out of it! This summer, it will store his small grain—then crib his corn next fall. You, too, can get double value—you, too, can cut out the senseless slavery of shoveling load after load till you drop. "The Sandwich Farm Elevator is the best investment I ever made in hard labor-saving machinery," writes Herman Frey, Melvin, Ia.—one of an army who say the same.



Sandwich (Eternal) Farm Elevator

Solves the hired-man problem and even lightens the house-hold work by cutting out the keep—the expense—of extra men. And it pays you a profit too!

"Had my crop picked 1c a bu. less on account of my elevator," says C. H. Keller, Marshall, Minn.

50 Bushels in 3 to 4 minutes
The Sandwich fills your bins—your cribs—chuck to the top lickety split! Unloaded 50 bu. corn in 4 minutes," writes I. E. Orendorf, Heyworth, Ill. Others crib 40 bu. in 2½ minutes with the Sandwich.

No Leg-Breaking Platform
The Sandwich wagon-jack is overhead. "Works to perfection," says A. J. Anderson, Boone, Ia. You drive right under—with even the tallest load. And it dumps it in the hopper

in a jiffy. Then hitch on any power—horse or engine—and it's off with a flying start.

Cypress Body Outlasts Steel
We make less money using "the wood eternal" but we make more friends and more sales. This is why it is called the Everlasting Sandwich and is fast crowding other elevators from the market.

Write Right Now for FREE Book
Last season we got late orders for 60 car-loads we could not supply. These were from farmers who waited. They had to shovel. But they couldn't blame us. We warned them as we are warning you now! Our Elevator Book comes free by return mail the minute your request arrives; also the name of a Sandwich dealer close by. Address today 130 B St.

SANDWICH MANUFACTURING CO., SANDWICH, ILL.

ORCHARD & GARDEN

For the best letter each week, contributed to this page by a reader, we offer a year's subscription or extension of subscription to Farmers Mail and Breeze. We want your views and experiences. They will help others. Address contributions to Horticultural Editor Farmers Mail and Breeze.

The orchard should be the last place to plant Kafir and cane.

Pumpkins and squash planted late are less liable to injury by the squash bug.

If the soil is rich, plant sweet corn thickly. Otherwise it will sucker badly.

June pruning in the orchard induces fruit growth, winter pruning growth of wood.

If your garden is not where you can get water on it, move the garden.—L. A. C., Morrowville, Kan.

Unless weeds and grass are kept out of the new strawberry bed there will be trouble getting the plants to spread freely.

When rhubarb sends up large numbers of small shoots it is time to re-plant. Dig up the roots, split them, and reset.

To kill moles, soak corn or beans in strychnine and with a sharp stick push the bait into the runs.—M. M. R., Mt. Pleasant, Tex.

The first pullings of sweet potato plants are the strongest and best. It is well to find out which crop you are getting, at the nursery.

A good way to set out plants is to put them in the holes, pour in a cup of water, and when it has settled press the earth about the plant. The water washes the soil in around the roots where it is most needed.

Will Market Their Peaches in Cans.

Fifty commercial peach growers in Muskogee, McIntosh and Cherokee counties, Oklahoma, have decided they will ship no peaches to market this year. Instead they are all buying canning machines and will can the entire output on their own farms. Local wholesale grocery houses have agreed to buy the entire crop canned at the top market price. This district produced 200,000 bushels of peaches last year. The canning industry will be extended to every kind of fruit and vegetable crop.

Setting Out Sweet Potatoes.

[Prize Letter.]

Mr. Editor—Land for sweet potatoes must be in the best condition, if anything like a satisfactory crop is to be harvested. My plan is to plow deeply in the fall, then early in the spring plow several times with a bull tongue and harrow thoroughly every week or 10 days till planting time, which in this state is May or June.

If the land is worked this way and the weather is reasonable it will be none the worse for its frequent cultivations, and the earth can be bedded up and planted in the usual manner. But if there happens to be a dry spell I do not bed at all, but plant below the level of the ground. The rows are laid off with a bull tongue run fairly deep. If necessary the plants are watered in.

after being set in the ground, and the next morning the patch is gone over with a hoe or garden rake and dry dirt raked around the plants, bringing the rows up level with the land. Frequent and shallow cultivations follow, first with the harrow and later with the cultivator.

In dry weather the slips are set late in the afternoon. The plants are pulled shortly after noon, the tops cut back a little and the roots placed in water till we are ready to put them out. We do not find it necessary to follow the old back-breaking way of setting by hand, but push them into the ground with a stick. One person drops them in the right place and another follows with a stick of convenient length, pushing the plants into the ground and knocking a little dirt around them. Another hand applies the water.

Benton, Ark. David Townsend.

An Experience With Tomatoes.

[Prize Letter.]

Mr. Editor—For several years I tried to grow tomatoes in my garden, which we located on upland to have it near the windmill. The vines always grew well and blossoms would form all summer but they dropped off and no fruit would set. Late in summer when the weather began to get cooler the vines would set fruit but too late for it to ripen. I thought the land too poor and dry, so manured and watered it, but with no better results. Finally I put a crop out in the field in a draw, where the nights are cool, and we raised fine tomatoes that took the prize at the fair. We had the same experience with cucumbers.

Sylvan Grove, Kan. F. Schneider.

To Mix and Use Kerosene Emulsion.

One of the oldest and most serviceable of insecticides is kerosene emulsion. The formula for the stock solution is as follows:

Kerosene 2 gallons
Soap ¼ pound
Water 2 gallons

Thoroughly dissolve the soap in 2 gallons of boiling water. Remove the water from the stove and while it is still hot add the kerosene. Stir this mixture very thoroughly. If one has a bucket pump, this is easily done by removing the nozzle and pumping the fluid back upon itself until the whole mass becomes a rich, creamy mixture. The stirring should continue till all the oil is emulsified, which will probably be in from 5 to 10 minutes.

If the oil does not emulsify readily, it may be necessary to put the mixture back on the stove and warm it more. Great care must be taken that the substance does not boil over.

The stock solution will often keep for a considerable period, but is better if used immediately. When the mixture has separated, it may be warmed and reagitated until the emulsion is restored. Smaller quantities of emulsion may be made in the proportion given. A cupful may be made in a bowl and stirred with an egg beater.

Pure kerosene is very dangerous to plant life. For growing plants it is seldom safe to use the emulsion stronger than 1 part of kerosene to 16 of water. Many plants will not stand it quite so strong. To make the stock solution this strength, one should add 1 gallon of the stock solution to 7 of water. Only clear water, free from much alkali or dirt, should be used. Kerosene emulsion is a contact insecticide and may be applied directly to the insects one wishes to kill.

S. A. Johnson.
Colorado Experiment Station, Ft. Col.

Who's Doing Anything With Fruit?

Are the fruit trees increasing in number, or are orchards running down in your locality? In many places small quantities of fruit cannot be marketed. Would co-operative shipments remedy this difficulty? Have fruit growers in your locality combined either in shipping or selling? If so tell us whether or not they are making more profit than under the old system of every fellow for himself. What fruit pays best in your locality? How does work laid out on fruit compare, so far as profits are concerned, with work expended in growing the usual field crops? The Mail and Breeze would like to have your answer to any one or all of these questions, for the information and benefit of Mail and Breeze folks, generally.

CAPPER BOYS CORN CLUB



Founded 1907

by Arthur Capper

HOW would you like to take a trip to Washington, D. C., this fall with all expenses paid? Congressman Guy T. Helvering of the Fifth Kansas district has offered this free trip to the boy in his district who grows the most corn on an acre of ground this year. The Fifth district includes Marshall, Riley, Geary, Washington, Clay, Dickinson, Republic, Cloud, Ottawa, and Saline counties. Any "Capper boy" under 18 years old who lives in one of these counties is eligible. The rule is that to be eligible the contestant must be entered in some other corn growing contest. You should send your name to Congressman Helvering at Washington stating in what contest you are entered.

Here is another piece of news that will interest members of the Corn Club. The State Fair board at Hutchinson, will conduct another corn and Kafir growing contest just like last year's except that one boy, instead of two from each county, will have his expenses paid to and from Hutchinson. For this contest the state will again be divided in three districts, two for corn and one for Kafir, as follows:

KAW VALLEY DISTRICT.

Jewell, Republic, Washington, Marshall, Nemaha, Brown, Doniphan, Atchison, Jackson, Pottawatomie, Riley, Clay, Cloud, Geary, Wabaunsee, Shawnee, Jefferson, Leavenworth, Johnson, Douglas, Lyon, Osage, Franklin, Miami, Linn, Anderson, Coffey, Allen, Bourbon and Wyandotte counties.

ARKANSAS VALLEY DISTRICT.

Smith, Osborne, Mitchell, Russell, Lincoln, Ottawa, Dickinson, Saline, Ellsworth, Barton, Rice, McPherson, Morris, Chase, Marlon, Greenwood, Butler, Harvey, Reno, Stafford, Pratt, Kingman, Sedgwick, Barber, Harper, Sumner, Cowley, Elk, Chautauqua, Woodson, Wilson, Montgomery, Neosho, Labette, Crawford and Cherokee counties.

KAFIR DISTRICT.

Phillips, Rooks, Ellis, Kiowa, Rush, Pawnee, Edwards, and Comanche, and all counties lying westward.

The prizes for yellow corn and white corn range from \$10 down to \$1 for the first 10 places in both corn districts. Similar prizes are offered for red and white Kafir in the Kafir district. In addition, the boy who gets the best yield in each county will receive a free trip to the fair at Hutchinson. The county superintendent and two bankers are to decide each county contest.

Capper Girls' Tomato Club

GERTRUDE BOYD, a member of the club at Galena, Cherokee county, had tomato plants in blossom as early as May 19. She didn't wait for the weather to warm up but set her plants in the hotbed.



Gertrude Boyd.

"I am glad the Mail and Breeze has a contest for girls," she writes. "Even if we do not win a prize we can sell our tomatoes and our time is not wasted. I set my tomatoes out in the hotbed until large and strong enough to stand the cool weather. Then I planted them on well drained ground. I think I shall have some tomatoes in a few weeks, as they are blooming now (May 19)."

Those girls who planted the vining varieties of tomatoes should train them up on stakes or a trellis of some kind. About the best and quickest way is to set a stake 4 or 5 feet long at every plant. Later the plants are kept pruned to one or two main stems and as these stems with their side branches grow up they are tied to the stake at several places, with rags torn into ribbons.

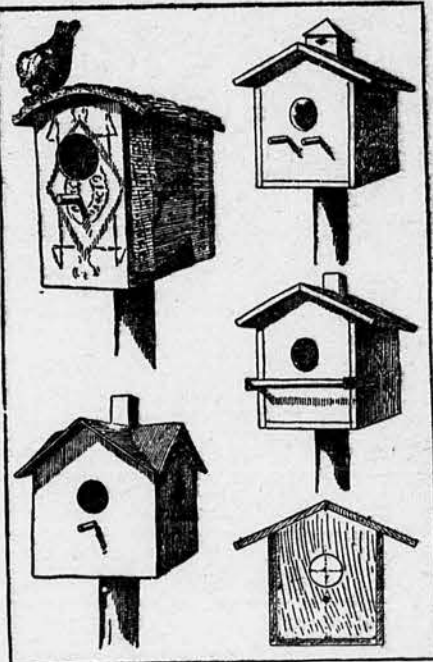
Growing tomatoes this way means extra work, but it brings more and better fruit. The tomatoes are held up off the ground and so do not rot so easily. Also by keeping the plants pruned the strength goes largely into making fruit instead of vines.

Capper Boys' Swine Club

Fred Schrick of Potter, Kan., selected his pig from a litter of 15. "This litter of 15 was farrowed April 1," writes Fred, "and they are doing just fine. I expect to bring my pig to the fair at Topeka this fall." Guy McAllaster of Lyons got a late start but he is not a bit discouraged about it. "My pigs came April 18," he writes, "they are Poland Chinas and there are 10 in the litter. I am a little late but will be at the Hutchinson fair."

Have You a Bird House to Rent?

The boy or girl who puts up boxes for the birds to nest in and supplies the birds with drinking water and bathing places, is certain of an unending source of pleasure. Much of this will come from watching the birds, at times, and study-



Suggestions for bird houses. Any Mail and Breeze boy can make one. When the birds move in they will pay rent by eating hundreds of insects which would otherwise do damage. ing their habits. Bird houses needn't be new or elaborate. The roughest shelters, and weather-stained boxes, are more likely to find a tenant early, than those made of new lumber.

Soil Survey For Montgomery

The next Kansas county to have a complete soil survey will be Montgomery in the southeastern part of the state. Montgomery county contains 643 square miles and it will be necessary to take soil samples of almost every acre of ground on these 643 sections. The U. S. department of agriculture and the Agricultural college at Manhattan will cooperate in doing the work. When the survey is finished next fall a report will be prepared. It will include a soil map which will show the location and extent of different soils, and the location of churches, schools, streams, railroads, public roads, and farm homes. Complete soil surveys have been made of Allen, Brown, Cherokee, Greenwood, Jewell, Reno, Riley and Shawnee counties.

I like the Mail and Breeze and think it the best farm paper printed.—J. S. Wilson, R. 3, Medford, Okla.

Here's Something New! John Deere Motor Press

The Press with the Patent Eccentric Drive

Designed especially for gasoline engine power, Speed of engine and capacity of press easily maintained because compression stroke is slow and powerful, while return stroke is quick. Gives a steady use of power, and permits the use of a small engine. Has no fly wheel or back gears—they are unnecessary on this new press.

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In all styles and sizes

The line is complete and is without exception of the well known high-grade John Deere Design and construction.

Attractive folders will be sent free.

Be sure to mention the kind of machine in which you are interested so that we will be sure to send you just what you want.



Keep it in the Barn

For Harness

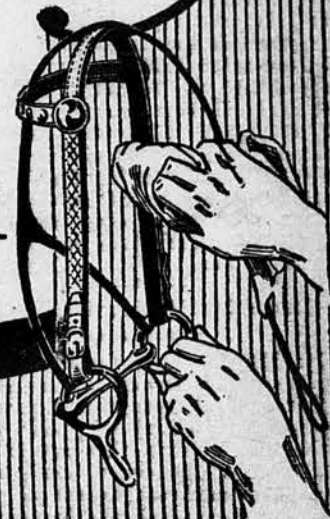
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Why Chicks Have Diarrhea

BY D. E. SALMON, D. V. M.
U. S. Department of Agriculture.

It has been found that white diarrhea of young chicks is caused by at least four different kinds of infection. All of these microbes also infect adult fowls and generally are communicated by them to the chicks.

The most common cause of the disease is a bacillus called bacterium putlorum. This often infects hens and the eggs which they lay. Such eggs produce chicks which have the germs of the disease within them when they are hatched. These chicks show symptoms within the first few days of their lives.

The contagion also may be communicated from chick to chick by means of the droppings which contaminate food and drink. This causes the appearance of symptoms when the chicks are from 1 to 2 weeks old. Chicks are most susceptible to infection during the first 24 hours after hatching, are more resistant during the second and third days, and are practically insusceptible after the fourth day. Incubators, brooders, and coops preserve the contagion indefinitely. Adult fowls are resistant and do not show any symptoms.

Cholera Carried the Same Way.

The cholera bacillus also may be carried by laying hens and infect the egg before it is laid. Young chicks hatched from such eggs soon show symptoms of disease and communicate the contagion to others at all ages.

The coccidia which cause a chronic disease in adult fowls many infect eggs and cause disease with similar symptoms in the chicks.

The aspergillus fungus is the fourth cause of white diarrhea. Occasionally it is included in the egg when laid but may also penetrate the shell when eggs are packed in moldy chaff, straw, or grain, or are allowed to get damp. All these microbes may be carried on the outside of the shell, and may infect nest boxes, incubators, brooders, and yards where diseased birds have been.

Treatment Should Be Preventive.

Medical treatment is impractical as it is too expensive and has little effect on the course of the disease. The birds may be given sour milk or buttermilk to drink, or 15 grains of catechu may be added to the gallon of drinking water.

Preventive measures should begin with the eggs used for hatching. If bought, the eggs should only be accepted from flocks known to be healthy. The eggs should be kept in a dry, moderately cool place, so spread out that the air can circulate over them. They should not be placed in hay, straw, or other substance liable to become musty or moldy. Before putting them into the incubator or under the hen the eggs should be wiped with a cloth wet in grain alcohol, of 70 to 80 per cent strength, to remove any germs that might be on the surface of the shell. The hens used for hatching should be free from infection and the incubator thoroughly cleaned. If there have been any sick chicks in the incubator or brooder, the machine should be washed with a 5 per cent solution of cresol.

If Hatching Is Done With Hens.

If the hatching is done with hens the brood should be put on fresh ground and any chicks which sicken should be immediately removed and isolated or killed. By removing frequently to fresh ground or by frequent disinfection the disease may sometimes be limited to a few. In incubator hatches, trays and brooders may be divided by light partitions with 4 or 6 chicks in each. If the disease appears the affected lot may be removed and the place occupied disinfected. After four or five days the healthy chicks may be put together.

Raising the Turkey Brood

READERS' WAYS.

Mr. Editor—When making her nest the turkey hen does not use much bedding. Usually she lays her eggs under a bush on the bare ground and when she leaves the nest, covers the eggs with grass or leaves. This keeps them warm. Many failures with turkey hatches are due to too much straw in the nest. The eggs are buried so deeply they become chilled. If a box or barrel is used for the nest put a bucket full of earth in

the bottom of it and leaves or hay on top. This covering should be about 1/2 inch thick when pressed down.
Athol, Kan. Edward Lind.

Care of the Young Turkeys.

[Prize Letter.]

Mr. Editor—If the weather is cold and wet when the turkeys are hatching I bring them in the house and keep them there the first day and night, leaving only one or two with the hen. When they are all with the hen once more I scatter bread and crumbs in the grass and slip away. I never pen nor tie a turkey. I set a turkey hen and a chicken hen at the same time and give all that hatch to the turkey, first giving her a good greasing of vaseline or pure lard mixed with a few drops of coal oil or carbolic acid. Don't use the grease while she is sitting on the eggs or they won't hatch. I give them the run of an orchard near the house where the chickens cannot run over them. I would not advise any one to try raising turkeys where they cannot be kept away from the chickens.

At noon I get the turkeys in the shade if I can. At night I wait till they have come to their roosting place,

then feed again, making three meals for the day. I feed corn bread and milk with curds once in a while. When they are 6 weeks old I give chop, wheat or, in fact, almost anything twice a day. For the last three years I have not sold less than \$70 worth a year from four hens. I hatched 53 last year and lost only one.
Bois D'Arc, Mo. Mrs. Daisy Rose.

Let Turkey Hens Raise Them.

Mr. Editor—Raising turkeys for market is one of the easiest ways by which farm women folk can earn a fair supply of pin money. Unlike chickens the money from turkeys comes all at one time and just when we need funds for Christmas buying. Being natural foragers, cost of keeping turkeys is small, only a little feed being necessary night and morning to induce them to roost at home.

Eggs from strong, healthy, well-matured birds, are the kind to use for hatching. Do not use eggs from a mating where both hens and gobbler come from the same flock. On finding the nest I remove the eggs and substitute two or three hens' eggs for them. A turkey hen will seldom move her nest after making one. I gather the eggs

every day, keep them well wrapped, and turn once a day. When a turkey wants to sit I give her 15 to 18 eggs and put the rest under chickens. Nests are made on the ground. When hatched I let the turkey have all the poults and put them in a roomy pen enclosed with wire 2 feet high located on a grassy, well drained spot.

I feed them sparingly of hard boiled eggs and bread crumbs, also providing grit and plenty of water. When they are able to travel well the flock is turned out late in the afternoon. As they grow larger they are turned out earlier. I am always careful to see they come back to roost. I move the pen to a new location frequently. Dampness and lice are fatal to young turks but I believe over-feeding causes heavier losses than anything else. The brood should be fed lightly and allowed plenty of exercise. Usually lice are found on top of the head and at the butt ends of the wings. A little grease will kill the lice but too much will kill the turks.
Lowrey, Okla. Mrs. Lillie York.

I read the Mail and Breeze and could not do without it.—Fred Stehwien, Atchison, Kan.

**No-Rim-Cut Tires
10% Oversize**

11% Less This Year

Rubber has dropped a little. And our factory cost, because of multiplied output, has dropped a little more. Our new factories are completed, and we've equipped them with the latest labor-saving machinery.

Now we have a capacity pretty close to 8,000 motor tires daily.

As a result, No-Rim-Cut tires are costing about 11 per cent less than last year.

What You Save

You save, by using these new-type tires, all the ruin of rim-cutting. And that is what wrecks 23 per cent of the old-type clincher tires.

You get extra capacity. No-Rim-Cut tires are 10 per cent larger than the same rated size in clinchers. And that oversize, under average conditions, adds 25 per cent to the tire mileage.

And now you save on price—11 per cent under what these tires cost last year.

No Extra Price

No standard tire of any type costs less than No-Rim-Cut tires today.

Hooked-base tires—tires which rim-cut—now cost the same as these new-type tires which don't.

Tires just rated size now cost as much as these oversize tires.

Consider how it pays to insist on these savings when they cost you nothing extra.

Their Records

No-Rim-Cut tires, when they cost more than clinchers, came to outsell all others.

The demand for these tires has doubled over and over. It has become the sensation of Tiredom.

More Goodyear tires were sold last year than in the previous 12 years put together. And car makers alone have contracted this year for 890,680 of them.

Now No-Rim-Cut tires cost no more than old-types, and our demand from users so far this year has jumped 85 per cent.

Just Be Fair

All we urge is fairness to your-

self. Test the tires which, on countless cars, have shown the lowest cost per mile.

One glance will show that these tires can't rim-cut, that they are over rated size. Find out how this lowers tire bills.

Hundreds of thousands of men who have done that now use Goodyear tires.

Also be fair to us. For 14 years our experts have worked to lessen tire upkeep. And we are still spending \$100,000 yearly on research and experiment.

Now comes this 11 per cent reduction. Doesn't this record, in your estimation, call for a test of these tires?

Write for the Goodyear Tire Book—14th-year edition. It tells all known ways to economize on tires.



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LEAVING aside all argument as to what car was the leader last year, or what car will be the leader next year, the Paige "36" answers the question as to which car is the leader—the big *extra value car*—this year. It is a next year's car, and the *car buying public* knows it just as well as the *automobile trade* knows it.

There is no other car now that gives so much in size, power, quality of materials and construction, up-to-date design and so much in equipment, for its price.

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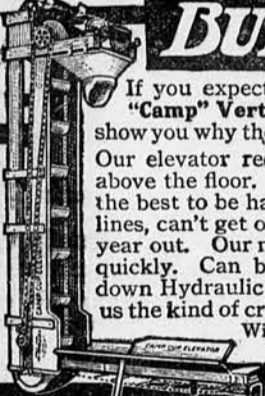
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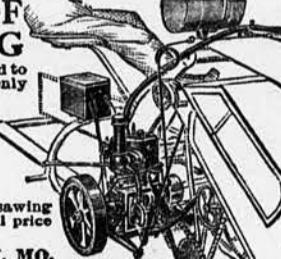


If you expect to build a crib let us tell you how to install the "Camp" Vertical Cup Elevator—We'll gladly offer suggestions and show you why the "Camp" is the most suitable equipment for your needs. Our elevator requires no pit—it can be installed with hopper above the floor. Made of first quality cypress, all material is the best to be had. The Camp is constructed on most simple lines, can't get out of order and gives satisfaction year in and year out. Our machine does the work properly and does it quickly. Can be installed with either overhead or low down Hydraulic Jack. Camp takes up less space. Tell us the kind of crib you intend to put up; we'll do the rest. Without fail, get our full information today.

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CROPS and FARM WORK

(Crop Reporting Service of Farmers Mail and Breeze.)

August weather in May and early June, when wheat heads are filling out, is anything but favorable to bumper yields or crop boosters' predictions. All previous crop estimates are in need of revision downward—some of them as much as 50 per cent in central and western Kansas counties. From Harper and Barton counties come reports that stock has been turned onto some wheat fields. Although wheat has been "saved" several times this spring by seasonable rains, it never needed saving as much as it did this week. The hot spell has ripened grain rapidly and harvesting in southern Kansas will begin as early as next week. Some wheat already has been cut in Oklahoma.

Where soil moisture has been sufficient, corn is getting away for a good start. A warm sun overhead and moisture underneath form a combination that can't be beat for making corn stretch. Good weather has enabled weeding and cultivating to go ahead without interruption and fields are unusually clean. Most early plantings have received two workings and in Lincoln county, Oklahoma, the larger part of the crop has been laid by, says J. B. Pomeroy.

Grass has been suffering along with other crops and stock pastures are getting uncomfortably short for this time of year, in some localities. H. C. Jacobs of Clark county, Kansas, says spring calves in that county are being contracted for fall delivery at \$25 to \$30 per head.

A. C. Craighead of Grant county, Oklahoma, writes that the grasshopper crop is the best ever in that county.

KANSAS.

Decatur County—Early sown wheat beginning to head. Wheat and other crops need rain badly. Corn doing well. Weather warm and dry.—G. A. Jora, May 31.

Saline County—Wheat ripening fast and needs rain badly. Corn is in good condition. First cutting of alfalfa put up. The crop was light but of good quality. Eggs 14 cents.—G. W. Holt, June 1.

Barber County—No prospects for wheat this year as far as any profit is concerned. Lightest May crop of alfalfa I ever saw. Grass at a standstill but cows still giving milk.—G. H. Reynolds, May 31.

Chase County—Wheat looks fine but needs rain to fill it out. Good stand of corn generally. Plenty of grass and water and stock doing well. Good crop of alfalfa being put up.—W. J. Dougherty, June 2.

Osborne County—No rain for two weeks and wheat is damaged 30 to 40 per cent. Good crop of alfalfa being put up. Corn shows good stand and doing well. Pastures getting dry.—W. F. Arnold, May 31.

Cheyenne County—Dry for two weeks and very hot. Small grain looks pretty bad. Too dry to list. Grass drying up. Cows selling at big prices. Hogs down a little. Eggs 15 cents, cream 24.—Mrs. J. S. DeLong, May 29.

Comanche County—Wheat prospects reduced 50 per cent in last two weeks by dry weather. Oats a failure and pastures beginning to dry up. Corn shows a good stand generally but acreage is small.—S. A. Delair, May 31.

Sheridan County—Getting dry here. Large acreage of corn planted and most of it up and looking fine. Wheat shows some improvement since last report. Barley looks good. Garden stuff coming on fast.—R. E. Patterson, May 29.

Lincoln County—Very dry and hot. No rain since May 3. Wheat short and beginning to dry up except in north half of county. Chinch bugs not numerous yet. Pastures fair but need rain. Colt crop large.—E. J. G. Wacker, May 30.

Labette County—Wheat damaged about 30 per cent by chinch bugs. Some old ones in corn but have noticed no young brood. Oats look fine. Most farmers over their corn twice. Hogs \$7.50, eggs 15 cents, butter 25.—Wilbert Hart, May 31.

Rush County—Wheat, oats and barley badly damaged by intense heat and dry winds. Temperature has stood at 100 to 105 greater part of week. Corn, Kafir and other feed not injured. Local showers May 30. Butter fat 28 cents, eggs 15.—J. F. Smith, May 31.

Barton County—Still dry. No moisture in subsoil and the few showers have done little good. Grass is scarce in pastures. Some farmers have turned stock onto wheat fields. Corn looks healthy but is not growing. Good stand of oats but will make no crop.—J. A. Johnson, May 31.

Clay County—Wheat still doing fine but heads are short. Weather hot and ground getting dry. Young chinch bugs are working in corn in some places. Corn is backward. Most of it had to be replanted on account of heavy rains. Oats beginning to head.—H. H. Wright, May 31.

Grant County—This county is suffering from dry weather. All crops at a standstill. Wheat will be a complete failure. Grasshoppers bad in some places. Cattle generally doing well. Cream and eggs are proof against drought. Butter fat 23 cents, eggs 13.—J. L. Hipple, May 31.

Ford County—Farmers working corn and putting up alfalfa. Kafir and sorghum not

doing well on account of dry weather. No rain for three weeks. Wheat badly burnt and cannot make much at best. Plenty of grasshoppers and chinch bugs. Farmers discouraged.—F. J. Turner, May 30.

Cherokee County—Good stand of corn and plowing in full blast. Wheat in head and looking well. Oats generally poor. Plenty of rain. Pastures good. Plenty of cattle buyers but no cattle to sell. Chinch bugs plentiful but not doing much damage. Corn 65 to 70 cents, hay \$10.—J. W. Harden, May 31.

Riley County—Weather hot and dry. Rain would be welcome. Wheat shows effects of bugs. They are also working in oats and corn. Good stand of corn and most of it worked once. First crop of alfalfa put up. Some oats good but others kept down by smartweed. Corn 50 cents, eggs 16.—F. O. Hawkinson, June 1.

Harper County—No rain for some time. Wheat drying up and oats are a failure. Weather dry and near hot winds blowing. Wheat harvest will begin in 10 days. Some fields being pastured now. Corn looks good. Rain needed badly as this county has not had 2 inches of rain this year.—H. E. Henderson, June 1.

Greeley County—One heavy rain in north part of county this month. Ground too dry to work in some places. Lots of thistles on all cultivated ground. Early planted corn growing fine. Only a few places of wheat in this county will be harvested. Grass in south part of county dry enough to burn.—J. Skillman, May 31.

Mitchell County—Weather warm and a little dry for wheat to fill. Corn looking good and being worked with disk weeder. Fine crop of alfalfa being put up. Oats look well but need rain. Nearly all feed crops planted. Farm help scarce. Fine prospect for apples, grapes and blackberries.—J. H. DePoy, May 31.

Cloud County—Most wheat headed out and looks fine generally but could use more rain. A few pieces slightly damaged by flies. Good stand of corn and some cultivating done. Good first crop of alfalfa being cut. Oats doing fine but need rain. Large acreage of cane and Kafir being put out. Hot weather for this season.—W. H. Plumly, May 31.

Scott County—Corn working the principal farm job now. Cutworms did some damage to late plantings. Early plantings show good stand. Grasshoppers plentiful. First cutting of alfalfa being put in stack. Pastures good and stock doing fine. Small grain making slow growth. Surface soil dry but subsoil keeps corn growing.—J. M. Helfrick, May 31.

Osage County—Dry and hot weather with thermometer at 100 the last two days. Oats and wheat suffering from chinch bugs. Corn and Kafir all planted. Corn shows good stand and has been plowed once. Pastures good and stock doing well. Full crop of berries and cherries. Few peaches, apples light, and no pears. Grapes promise well.—H. L. Ferris, May 31.

Clark County—Last eight months have been driest in many years. Dry weather and hot winds have ruined all small grain. Soaking rains are needed as a large acreage of spring crops still to be planted. Pastures getting short. First crop of alfalfa being cut but is light. Spring calves contracted for fall delivery at \$25 to \$30 per head.—H. C. Jacobs, May 28.

Ottawa County—Last three days of May were hottest ever known for that month in this county—107 May 29. Crops suffering for rain. Wheat headed out but going backward. Young chinch bugs hatching and are bad in some fields but others not affected. Good stand of corn and first planting being worked. Pastures good and stock doing fine.—W. S. Wakefield, May 31.

OKLAHOMA.

Pottawatomie County—Oats the best in years. First alfalfa crop put up. Corn in good shape—some 3 feet high. Cotton backward. Potato crop good. Stock is in fair shape but hogs and cattle are scarce.—L. J. Devore, May 30.

Delaware County—Weather warm and dry but crops are not suffering. Corn is in good shape. Wheat filling out and a good berry is in prospect. Oats not very good. New potatoes coming on. Peach crop will be fair.—John M. Rock, May 31.

Grady County—Wheat prospects reduced more than a half by dry weather and flies. None abandoned so far. Corn and cotton show good stands but need rain. Cotton chopping begun. Corn 55 cents, butter 25, eggs 15.—Sam C. Hefner, May 30.

Lincoln County—Fine growing weather but a shower would be acceptable. Oats in full head. Corn clean and most of it laid by. Kafir and milo acreage large and stand good. Cotton choppers scarce. New potatoes and early apples plentiful.—J. B. Pomeroy, May 31.

Kingfisher County—Dry weather the last two weeks but had light showers in some localities. Wheat and oats need rain but have already been cut short. Harvesting will begin June 2 in some places. Spring crops look well but pastures drying up.—H. A. Reynolds, May 31.

Canadian County—Weather dry and will cut wheat and oats short. Corn doing well so far. All has been worked twice and some three times. Some harvesters are talking of beginning work June 3. Everybody wants rain. Corn 55 cents, oats 30, wheat 77.—H. J. Earl, May 31.

Grant County—Hot winds and dry weather have practically ruined wheat and oats. Harvest will begin first of week. First cutting of alfalfa light. Kafir shows good stand, is clean, but very small. Chinch bugs are numerous and grasshopper crop is the best ever.—A. C. Craighead, May 30.

Texas County—Dry weather has burned small grain badly although some fields holding out well. Only a few local showers the last three weeks. If we don't get rain soon may have to pass the hat for donations. Grasshoppers have done much damage to row crops. Hogs \$7, wheat 80 cents, eggs 12.—F. Free, May 31.

No Rest for the Auto.

The auto on the farm arose
Before the dawn, at four.
It milked the cows and washed the clothes
And finished every chore.
Then forth it went into the field
Just at the break of day;
It reaped and threshed the golden yield
And hauled it all away.
It plowed the field that afternoon,
And when the job was through
It hummed a pleasant little tune
And churned the butter, too.
And pumped the water for the stock
And ground a crib of corn,
And hauled the baby 'round the block
To still its cries forlorn.
Thus ran the busy hours away
By many a labor blest,
And yet when fell the twilight gray
That auto had no rest.
For while the farmer, peaceful eyed,
Read by the Tungsten's glow,
The patient auto stood outside
And ran the dynamo.

—Ex

Lining a Silo With Cement

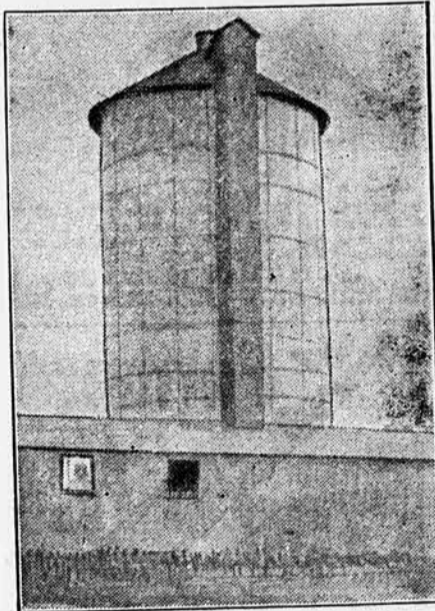
BY W. W. THAYER.

[Written for Farmers Mail and Breeze.]

When we built our silo in 1904 I knew nothing about silos and silage except what I read in farm papers and books. I caught the fever at once. I was fully convinced that green corn could be put in these big cans and used for winter feed. While building my silo I had to do a good deal of explaining to my neighbors to protect myself. I also had to bluff them and added that the time would come when silos would be as plentiful in Brown county as windmills. Early one morning, after finishing the silo, I found a man leading a team of horses around it. On seeing me he stopped, looked up at the top, and asked if I would not show him how to water his horses. For several years no other silos were built here, but interest in them has grown steadily and a number of neighbors have put them up in the last two years. Every man of them is well pleased with his investment.

How the Silo Was Built.

My silo is 33 feet high by 16 feet 4 inches in diameter and holds 150 tons. It is a cement-lined wooden silo. After my article in the Mail and Breeze last spring I could not answer all the letters that came asking for further particulars. I hope this one will make these points plain. We began our silo by first excavating a pit 19 feet in diameter and 4 feet deep, leveled the bottom of this and then went 6 inches deeper around the edge, this trench being 18 inches wide. This was filled with concrete for a foundation. For the sill we used 2 by 4s cut into 30-inch lengths and the ends



Mr. Thayer's cement-lined silo. The outside is covered with galvanized iron.

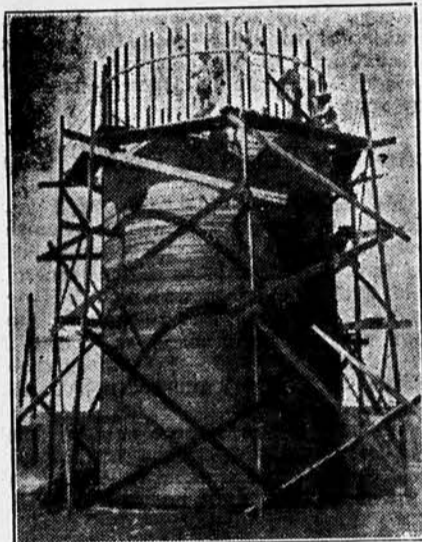
beveled so they might be toe-nailed together for the circle. The studding are 2 by 4s placed 15 inches apart from center to center and toe-nailed at the bottom. The first studs should be set in the angles formed in the sills. To stay the studding we set a telephone pole in the center of the silo and to this stays may be nailed from every alternate stud. The studs were carefully plumbed on the inside.

Split Fencing for Sheeting.

At this point we ran a line about the outside of studding where the top of the foundation wall was to come. This was a foot above ground and here two courses of sheeting were nailed to the

outside of studs, one course on top of the other to break the joints. Then the rest of the studs were set in and plumbed and four more thicknesses of sheeting nailed on top of the first two. This band is for the purpose of giving extra strength at the base and also to serve as a watershed. A strip of galvanized iron was nailed over the top at the band and allowed to extend up the studs 2 inches. The wall was then built up to the underside of this band and all the water that runs down the side of the silo is carried off instead of running down at the sides of the studding.

Sheeting was made of 6-inch fence boards, this being resawed, making it a little less than 1/2 inch thick. The lath were made of the same material, each of the 1/2-inch boards, 6 inches wide making three lath. Each lath was sawed with beveled edges so that when nailed to the sheeting with beveled edge in, they held the cement the same as patent lath. We put two courses of sheeting on the inside, bending them to the studding. The sheeting was well nailed and all joints covered. Lath were bent and



Putting on the Sheeting.

nailed on the sheeting in the same way. A single course of sheeting was put on the outside and this covered with galvanized iron.

How Doors Were Put In.

Openings for doors are 27 inches square and placed 4 1/2 feet apart. Doors were made by nailing three thicknesses of flooring to two pieces of 2 by 4 as battens. Door frames were made on the ground of 2 by 4s. The doors were made with bevel edges and being put in from the inside they tighten up as the pressure inside increases.

Three parts of clean, sifted sand to 1 part cement were used for plastering. We began at the top and plastered down, taking out the staging as we finished. The cement was put on to cover the lath about 1/2 inch thick and was well troweled.

About 6,000 feet of lumber were used, 4,000 feet of this being 1 by 6-inch fencing 16 feet long. Other materials were 50 sacks of cement, 200 pounds of nails, galvanized iron \$70, sand and rock \$15. We paid one carpenter \$50 and my own work and that of two boys was not counted. We did our own resawing here on the place, but would not advise anyone who has not had experience with it before, to try a circle saw.

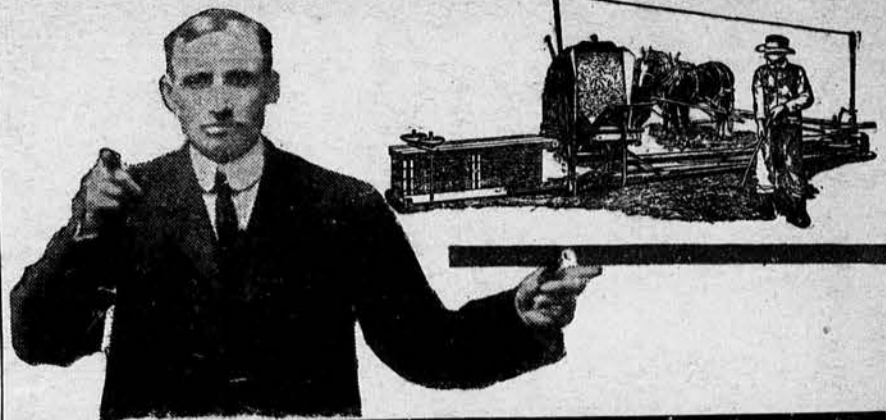
Fairview, Kan.

Mutton is Cheap and Good

National and state governments have been unable to lower the prices of beef and pork in the United States. Big meat packers claim they are unable to reduce the prices of beef and pork, because the supply on the hoof is not equal to the demand, even with retail prices in the sky. There is no prospect of beef and ham getting much lower in price during the next year, no matter what congress does to the tariff.

There is a way, however, for the people of the United States to get cheap meat of good quality. Mutton is one of the best of meats. It is agreeable to the taste, nourishing, and clean. It has the virtue today of being the cheapest meat obtainable on the hoof and also in some markets, dressed.

I would not be without your paper for anything, for it is the best farm paper in the country.—J. W. Borger, R. 3, Cawker City, Kan.



I want to send you this hay press on 30 Days Free Trial with a positive guarantee that it will save you one-third the labor and from 20 to 30 per cent of the expense of any hay press on the market.

That's my guarantee and it means exactly what it says: A saving of one-third in the labor of baling your hay, and a better price for every ton of hay you sell.

Two men can bale more hay with an Auto-Fedan hay press than three men can bale with any other two-horse baler on the market.

The Auto-Fedan is in reality a self feed. Two men can operate it. The hay does not have to be tabled, but is pitched into the large open hopper with an ordinary pitch-fork. You do not have to tamp it with your feet. The press makes three strokes to every circle of the team; thus gaining one stroke to the round over most machines and increasing the capacity of the press one-third.

The hay is not pounded or hammered into the press, but is pressed down evenly by our solid feed-board and pressed into compact layers.—The result is the cleanest, smoothest bale you ever saw. The hay comes off in even layers and alfalfa is not broken or shattered.

Auto-Fedan

3 STROKES—SELF-FEED

Is sold on a positive guarantee covering every claim we make for it and is just as binding upon our company as we can, by any possibility make it.

HERE ARE SOME OF THE SPECIAL FEATURES OF OUR GUARANTEE:

The Auto-Fedan will bale from one fifth to one-third more hay per hour, than any other two-horse hay-press made.

The Auto-Fedan—when baling from the windrow—is operated by TWO men, and these two men bale MORE hay than three men can bale with the two-stroke presses.

The Auto-Fedan is really self-feed and is absolutely safe. Don't risk life and limb tamping hay into a dangerous hay-press.

The Auto-Fedan doesn't pound nor hammer the hay; our feed board PRESSES it into compact layers. It makes the smoothest, neatest bales which always grade high.

The Auto-Fedan sets low; you don't have to pitch the hay upon a table, but you pitch it easily into the open hopper.

The Auto-Fedan will bale ANY KIND of hay from the coarsest to the finest. It has the easiest and quickest tension to adjust to various weights and conditions of hay.

The Auto-Fedan is the favorite with farm help because it is easiest on both men and teams and because it is absolutely safe.

The Auto-Fedan with its long sweep and its short crank arm is by far the most powerful press made; and it is so durably built and made of such good materials that you will have very little trouble from breakage.

The Auto-Fedan is sold at a lower price, capacity considered, than any other hay press.

The Auto-Fedan has the strongest guarantee that I know how to write. If you can think of any fairer proposition, write me about it. I want you to have this press.

AUTO-FEDAN BELT POWER PRESS

We also build the famous Auto-Fedan Belt Power Press—the most economical power press in the world. Two men can run it, but if you want to crowd it, speed up and double your force, operated by a 6 hp engine. If you have a large quantity of hay, you'll be interested in the prices we can quote you on this powerful press. Write for particulars.

NOW, THEN, LET'S GET TOGETHER

I promise to save you money at the very outset.
I promise to send you this machine on 30 days free trial.
I promise that you will save at least 20 per cent in the cost of baling.
I promise that you will get a higher price for your hay because of the neater, smoother bales the Auto-Fedan makes.
You are DEEPLY INTERESTED in all these things!
They mean bigger profits for you. Write to me today and let's get busy! I can ship promptly NOW, but the demand may exceed the supply. Get ready for a big harvest.

Edward P. Ross, Pres., Auto-Fedan Hay Press Co.
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Prevents Ticks.
KEEPS FLIES OFF
Cattle and Horses

and allows cows to feed in peace, making More Milk and More Money for you. A clean, harmless liquid preparation, applied with a sprayer. Keeps cows in good condition, and saves five times its cost in extra milk.

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If your dealer cannot supply you, send us his name and \$1.25, and we will deliver prepaid to your address a half-gallon can of COW-EASE and SPRAYER for applying. For West of Missouri River and for Canada, above Trial Offer, \$1.50.

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All sizes and colors, at Paint & Hardware Dealers
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We have made up one thousand surprise packages which we are going to distribute among the first 1,000 readers of this paper who answer this advertisement. Each package will contain at least three articles and one of these will be a book. The other two or more articles will constitute the surprise and will be something which we believe you will appreciate very much. We have a large assortment of miscellaneous goods and cannot say here just what will go in the package you receive—but we are quite sure you will say the three articles are EACH worth MORE than 10c. If you answer at once, sending 10c for a 3-months' subscription to our paper and 2c additional—just 12c in all—you will be receiving one of the big surprise packages for only 2c. Send 12c today. Address **Household Surprise, Dept. 13, Topeka, Kas. 666**

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Baseball Suit and Outfit



Baseball Suit, Glove, Mitt, Mask, Ball, Cap and Belt for Every Boy Who Will Write Us.

There are eight pieces in this fine outfit. The suit consists of heavily padded pants, latest style shirt, cap and an extra good belt. Every piece is guaranteed full regulation league size.

Boys! If you want this complete BASEBALL OUTFIT, send us your name and address today on the coupon below and we will tell you how you can get it entirely without cost to you.

FREE COUPON.

G. W. Carter, Sec'y, St. Paul, Minn.: I would like to receive the baseball suit and outfit complete you are giving away.

My Name.....
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G. W. CARTER, Sec'y,
92 E. Fourth St. ST. PAUL, MINN.

Feeds & Feeding

QUESTIONS ANSWERED
by Prof. G. C. Wheeler
(Address queries to Farmers Mail and Breeze)

All matter contributed to this Column by Prof. Wheeler, Expert in Animal Husbandry, Extension Service, of Kansas Agricultural College, Bears His Signature.

Cane Seed for Horses.

What is the value of cane seed as a feed for brood mares that are worked on the farm? Would it have any feeding value mixed with ground Kafir and cottonseed meal?—J. E. K., Butler county, Kansas.

Cane seed is not as desirable a feed for mares that are worked as cracked Kafir. It is more or less bitter and not greatly relished by horses. Some bran should be mixed with the cracked Kafir for best results as it gives it more bulk and makes it a looser mass, thus preventing a tendency toward packing. Kafir 75 per cent, bran 20 per cent and oilmeal or cottonseed meal 5 per cent would make a very satisfactory ration for a work horse. I would suggest that you write to the Kansas Experiment station, Manhattan, Kan., for their publications on sorghum.

Dr. C. W. McCampbell.

Tankage in Hog Rations.

Which is the best feed for growing or fattening hogs—tankage or meat meal and how can either be fed most profitably?—A. D., Reno county, Kansas.

The terms tankage and meat meal are used sometimes interchangeably. One large packing house sells a product called meat meal which is guaranteed to contain 60 per cent protein, while another large concern sells a tankage with the same guarantee as to protein. There is a product in the market called meat meal which contains a smaller amount of protein, 46 per cent being the amount guaranteed here in Kansas. The lower grade of meat meal would not be worth as much per pound as the higher grade meat meal or tankage.

Here at the experiment station our most profitable results in the feeding of tankage or meat meal have been secured by feeding it in combination with corn meal and shorts, the ration being made up as follows: 62 pounds of corn meal, 30 pounds of shorts, and 8 pounds of tankage or meat meal. This mixture is wet at the time of feeding and fed in troughs, giving the hogs only such amounts as they will clean up with a keen relish. A ration of this kind should produce a gain of 1½ pounds a day per head on good thrifty shoats. Where it is desired to feed the corn separately the tankage and shorts could be mixed up in a slop and fed in the troughs. In feeding it in this way the slop given should be calculated so that the hogs do not get to exceed ½ to ¾ pound of the meat meal or tankage per hog. Some feeders give tankage dry, carefully distributing it on the clean feeding floor or in a trough. At the present prices of feeds the gains on a 150-pound shoat should be made at the rate of about \$5 to \$5.50 per 100 pounds.

G. C. Wheeler.

Building a Cement Tank

JUST A ONE-DAY JOB.

An everlasting water tank of cement is a possibility on every farm for it can be built at a comparatively small cost and three men can do the job handily in one day. Frost will not injure such a tank if it is made right. A tank 6 by 16 feet and 3 feet deep would serve the needs of about 60 head of stock. To go about building one, excavate about 4 inches deep for the foundation. Put 1 or 2 inches of crushed rock in the bottom. The frame for the side may be made from old lumber. The better this fits together the more it will improve the appearance of the tank when finished. It must be braced firmly inside and out. Then put in the mixture of sand and cement in the proportions of 3 sand to 1 cement. Use Portland cement.

Pipe or Wire Reinforcing.

The sand need not be screened if it is not too coarse. For a tank of this size, it takes about 20 sacks of cement and 4 loads of sand. Wire

netting makes very good reinforcement, but gas pipes or iron rods would be better. The sides may be tamped a little to make them fill out the frame well. The sides of the tank should be about 6 inches thick at the bottom and 4 at the top. Make the outside perpendicular and the inside sloping. It should be 5 feet wide at the bottom and 5 feet 4 inches at the top. This will keep the cement from cracking when the water freezes.

Drain Pipe and Overflow.

After the sides have been made, fix the bottom. This should be made 2 inches thick without the crushed rock. Coat the tank with pure cement, making it more impervious to water.

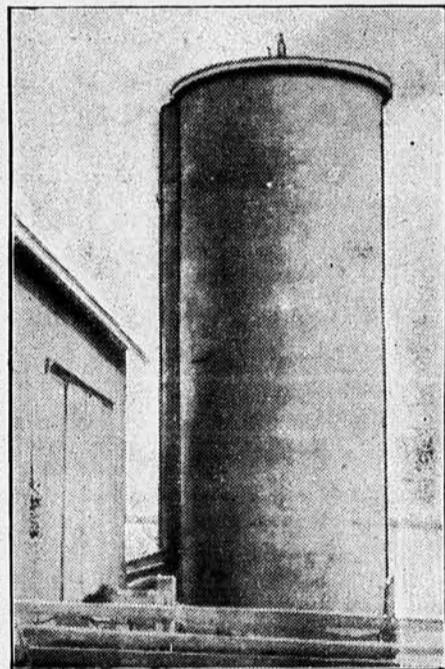
The tank should be made in one day so that it will join together well. Make it a little lower at one end and put a 2-inch pipe through the wall at the bottom. This will be a help in cleaning. The overflow should also be placed at this end.

Storage tanks are good also as a source from which to irrigate gardens. A tank 16 by 16 by 4 will hold enough water to irrigate a good-sized garden. This would require about 30 sacks of cement and could be made in one day by four men.

Another Silo With Tank on Top

Mr. Editor—I see by the Mail and Breeze Mr. Ingraham thinks he owns the only silo in the state with a water tank on top. I have a 14 to 45-foot concrete silo with a 4½-foot water tank above and a concrete roof and a concrete chute. Our silo has not a piece of wood in it; even the chute is of concrete. This gives it a very finished appearance, as well as strength.

We have the continuous or open door, but had the privilege of the round-hinged door, spaced 22 inches apart. We like the continuous door, as it makes it easy to



Not a Stick of Wood in It.

get out the silage. When putting in the bottom of the tank no scaffolding was used. I-beams were put in and galvanized iron roofing rolled to a circle was placed between the I-beams, acting as a bridge to make the floor. The water pipe comes up on the inside of the silo, is boxed air tight and filled with sawdust.

Our silo is higher than all the other buildings and makes as good a water system as can be desired. This silo, water tank and all was built on "the Nevius system," developed by C. S. Nevius, Chiles, Kan.

I also want to report the success we have had with siloing shock corn. We were late in getting our silo up, so we cut and shocked our corn early, about November 15. We put it into the silo, running plenty of water with it. It is feeding out almost as good as any silage. It has fed twice the amount of stock the shock fodder would have fed, and all the cattle and horses look well.

Wagstaff, Kan. John Downs.

The first thing I do after the paper comes is to look over it if time will permit. The Mail and Breeze and the Capital have a welcome shelf in our home.—Rich Freeman, Washington, Kan.

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The Right Kind at the Right Price

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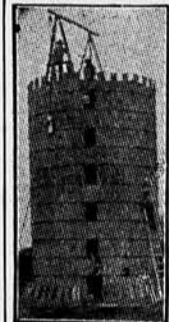
Every kind and grade tackle, not made just to sell, but for actual fishing; tackle that is worth the money. We are the recognized authority of the U. S. on Bait Casting tackle. Our 176 page catalog is more than a mere price list, it's a help to any fisherman, without considering the money saved. We are the largest exclusive Sporting Goods House in the world—that's why we can give you better goods for less money. Everything in

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Kansas City, Missouri

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It never blows down—never cracks by cold or heat.



Never shrinks, swells, decays, corrodes nor burns.—Never requires painting or repairing.—Made of cement staves 30 inches long, 10 inches wide, 2½ inches thick. Easy to construct and will last many lifetimes. Don't figure on a silo without first writing for full particulars.

Portland Stave Cement Silo Co., Wichita, Kansas

\$55 Saddle for \$38 Cash

Our latest 1910 Swell Fork Saddle, 16-inch swell front, 28-inch wool lined skirt, 3-inch stirrup leather, ¾ rig, made of best oak leather, guaranteed for ten years; beef hide covered solid steel fork.

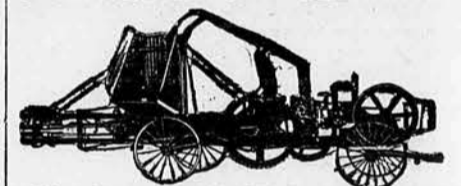


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Send in your name for our 1913 catalogue, now ready.

The Celebrated Mueller Saddle.

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The Tuttle combined power hay press saves you MONEY. New side self-feed and the self-tyer does it. 2 men can run it. 3 men is a full crew. Fully guaranteed for 12 months, SELF-TYER AND ALL.

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Our Farmers' Cattle Knife



This Farmers' Cattle Knife

is a beauty. It has one large scimitar, one spaying and one congress blade; Extra quality steel, double German Silver bolster and shield, brass lined, stag handle. This beautiful useful knife will be sent you FREE, postpaid, for securing only four 3-months subscriptions to the Mail and Breeze at the regular rate of 25 cents or we will send you our paper one year for \$1.10 and the knife free as premium. We guarantee the knife and will return your money if you are not satisfied. We know you will like it as we have given away hundreds and have never had a complaint. This illustration is one-half actual size. Write today.

MAIL AND BREEZE
Topeka, Kansas

It Pays to Wait.

One time my neighbor prayed for rain To fall upon his fields of grain, Said he: "More moisture in each field Would certainly increase the yield."

Last year my neighbor held his peace, Quoth he: "I'll simply farm my lease, And let the weather take its course: I shall not try my crops to force."

I don't believe it pays a man To try to change some earthly plan To suit his own peculiar needs, The sort of fellow who succeeds Is he who does not rail at fate

Can Alfalfa Be Used in the Silo?

BY W. E. TAYLOR, Director Soil Culture Department, Deere & Co.

Is it practicable to put alfalfa in the silo? "Yes" and "no".

The best plan, and I think the only safe one, is to silo the last cutting of alfalfa, mixing it with corn. If the alfalfa is green, the corn should be somewhat dry, otherwise putrefaction is likely to take place, due to an excess of moisture.

It is perfectly feasible to silo cow-peas and soybeans with corn if precaution is taken to place them in the silo when they are in the right condition.

Alfalfa in the green state contains an excessive amount of moisture. As silage it is apt to be slimy because of the action of putrefacting bacteria, and much is spoiled around the edges due to an absence of fermentation on account of loose packing.

The advantage of preserving alfalfa in the silo is that the leaves are saved. Three-fifths of all the protein the plant contains is in the leaves.

If alfalfa is exposed to rain for 10 days or two weeks, as much as 40 per cent of the protein is lost and even one rain lessens its value.

Why Girls Leave School

The idea that children leave school to go to work, because their parents need the money, is vigorously combatted in a bulletin just issued by the United States bureau of education.

The survey showed that the number of girls between 14 and 16 years of age who leave school is constantly increasing. In the opinion of the authors of the bulletin, the conditions found in Worcester emphasize the imperative need for special training of a practical sort for girls between the ages of 13 and 15.

they might have liked and would have profited by, they blindly joined the army of shifting, inefficient, discontented girls that go from one monotonous factory job to another, and, because of their lack of training, rarely rise above the class of low-paid, unskilled workers.

Bulletins You May Want

Any of the bulletins named in this list may be obtained free by writing to the experiment stations at the addresses given. Government bulletins also are free and may be had by writing to the Secretary of Agriculture, Washington, D. C.

- Alfalfa Inoculation Tests (No. 136), by C. W. Pugsley.—Nebraska Experiment Station, Lincoln, Neb.
Winter Barley (No. 518), by H. B. Derr.—U. S. Department of Agriculture, Washington, D. C.
Raising Guinea Pigs (No. 525), by David E. Lantz.—U. S. Department of Agriculture, Washington, D. C.
The Fowl Tick (No. 170), by F. C. Bishop.—U. S. Department of Agriculture, Washington, D. C.
Sudan Grass, a New Drouth-Resistant Hay Plant (No. 125), by C. V. Piper.—U. S. Department of Agriculture, Washington, D. C.
Stock Poisoning Due to Scarcity of Food (No. 536), by C. Dwight Marsh.—U. S. Department of Agriculture, Washington, D. C.
The Chinch Bug Situation in Kansas (No. 29), by G. A. Dean and J. W. McCulloch.—Kansas Experiment Station, Manhattan, Kan.
Important Poultry Diseases (No. 530), by D. E. Salmon.—U. S. Department of Agriculture, Washington, D. C.
Fifty Common Birds of Farm and Orchard (No. 513), by Henry W. Henshaw.—U. S. Department of Agriculture, Washington, D. C.

Can't Afford to Spare the Hedge

Mr. Editor—Who is the Kansas man who wants to know an easy way to kill his hedge? I would as soon destroy my orchard as to remove the best fence, windbreak, post and fuel timber Kansas produces.

My annual income from hedge posts ranges from \$50 to \$150 and we have plenty to spare of the best fire wood obtainable here. I admit that I cannot raise good corn right next to my hedge but I do not think it is an extravagance to have 30 acres of good timber on 720 acres of land.

Market Conference Report Out

The report of the first conference on marketing and farm credits held in Chicago, April 8-10, is now ready for distribution. It contains all the addresses presented and a complete stenographic report of the discussions.



Randall, Ohio, Race Track. Grand Stand, Cooling Shed, "Doc" Watters' Barn, Saunders' Stables, and all new buildings around Track covered with J-M Asbestos Roofing

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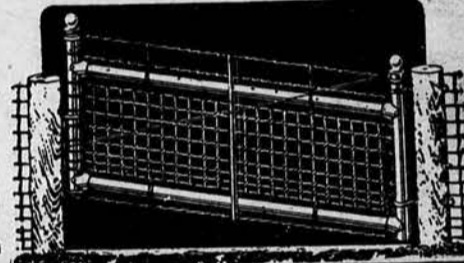
They're bull strong and hog tight. The strongest and best built farm gate selling at the lowest prices ever made on a strictly standard high-grade farm gate.

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To introduce Galloway Galvanized Gates, I'm making remarkably low, direct prices. You can buy ten superior Galloway Galvanized Gates for what six of the ordinary type would cost of your dealer or some agent.

Galloway Gates are sold direct on our famous plan of satisfaction guaranteed or your money and freight costs refunded. Don't buy gates of any other style or make until you see our big circular and prices. Write me today—NOW—before you lay this paper down. Use a postal or letter. Just address

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The Great Worm Destroyer



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"Sal-Vet" requires no dosing, no drenching, no handling, no trouble at all. Simply place this wonderful medicated salt where all your stock can run to it freely and THEY WILL DOCTOR THEMSELVES. You will be surprised how they will keep in better condition—thrive better—gain faster—make you more money. I'll prove it right on your own farm at my risk before you pay.

Send No Money—Just the Coupon

Fill out the coupon at right—tell me how many head of stock you have and I'll send you enough "Sal-Vet" to last all your stock 60 days. You simply pay the freight charges when it arrives. If it fails to do what I claim, I'll cancel the charge—you won't owe me a penny. Address

SIDNEY R. FEIL, Pres.
THE S. R. FEIL CO., Mfg. Chem.
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PROOF

110 days after I commenced feeding my lambs Sal-Vet, they began to gain flesh and now Oct. 3rd they are in perfect health and fat as they can be. I have used tobacco in large quantities and worm powders of three different kinds and they did no good. J. A. ALEXANDER, Maple Hill Stock Farm, New Harmony, Ind.

PRICES: 40 lbs. \$2.25; 100 lbs. \$5.00; 200 lbs. \$9.00; 500 lbs. \$21.12. No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold in bulk: only in Trade-Marked Sal-Vet packages. Shipments for 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular size packages.

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Ship me enough Sal-Vet to last my stock 60 days. I will pay the freight charges when it arrives, report results in 60 days and will then pay for it if it does what you claim. If it does not, you are to cancel the charge.

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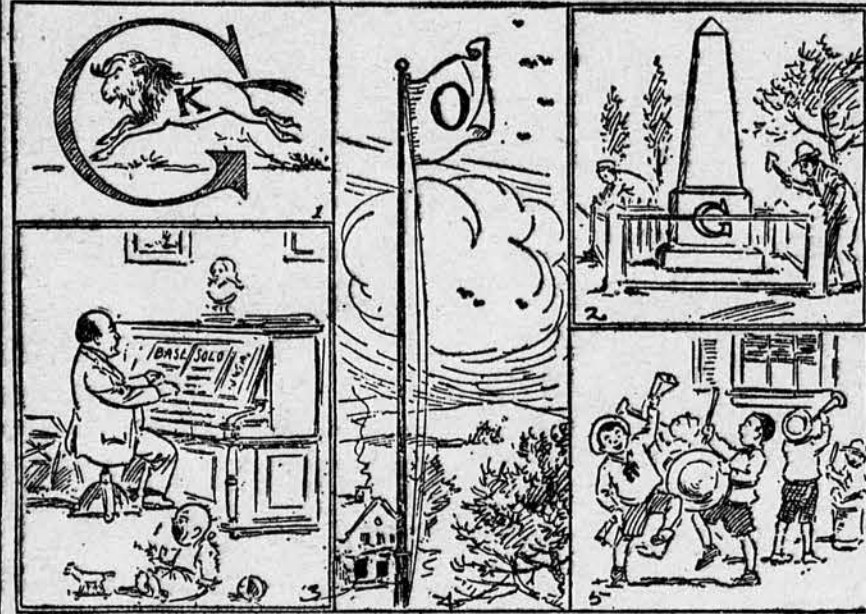
This book is the greatest time and labor saver ever offered the American farmer. It is also a great money-saver and money-maker. It shows you how to accurately and instantly figure out any problem that may come up—how to figure estimates, wages, taxes and interest on any sum of money, any number of days, at any rate—bushels and pounds in loads of grain, correct amount at any price; weight and prices of livestock; contents of cribs, wagons, bins, etc. It is a "lightning calculator" always ready when you want it. Bound in red cloth covers, 128 pages, pocket size. One copy of this famous book free to all who send 25c for a year's subscription to our well-known home and farm monthly.

VALLEY FARMER Dept. 11 TOPEKA, KAN.



A Puzzle For Mail and Breeze Boys and Girls

EVERY one of the five pictures represents a popular sport. For instance, No. 3 is very apparently intended to represent baseball. Can you tell what other games are indicated? A set of postcards for each of the 10 neatest solutions received by Saturday, June 14.



WHAT FIVE GAMES OR OUTDOOR SPORTS ARE INDICATED?

To your solution attach your name and address, then mail to Farmers Mail and Breeze, Topeka, Kan., making sure to mark the lower left hand corner of the envelope "Sports" puzzle. ENCLOSE NO OTHER BUSINESS WITH YOUR SOLUTION. Prizes are awarded not only for your skill in solving the puzzle, but for the neatness, originality and general care taken in preparing the answers.



FOSTER'S FORECASTS

(Copyright 1913 by W. T. Foster.)

Washington, D. C., June 7.—Last bulletin gave forecasts of disturbance to cross continent June 4 to 8, warm wave 3 to 7, cool wave 6 to 10. From near meridian 90 eastward this disturbance will cause severe weather with a proba-



(For Better Understanding of the Forecasts.) Broken lines separate map into eight great valleys including the Northwest and Southwest, and Eastern Sections including the Lakes, the Northeast the Southeast weather districts, named North Pacific Slope, South Pacific Slope, Great Central and Washington. The dividing line bisecting St. Louis is meridian 90.

bility of heavy rains at some points on the gulf coasts. Unusually hot weather will prevail southeast of the low, or storm center, as it crosses continent. Dangerous storms are expected in great central valleys during the five days centering on June 7. Some showers in western sections during the five days centering on June 27 and in eastern sections centering on June 7. While some sections will get good showers first half of June, others of large extent will have a deficiency of rain.

Next disturbance will reach Pacific coast about June 9, cross Pacific slope by close of 10, great central valleys 11 to 13, eastern sections 14. Warm wave will cross Pacific slope about June 9, great central valleys 11, eastern sections 13. Cool wave will cross Pacific slope about June 12, great central valleys 14, eastern sections 16.

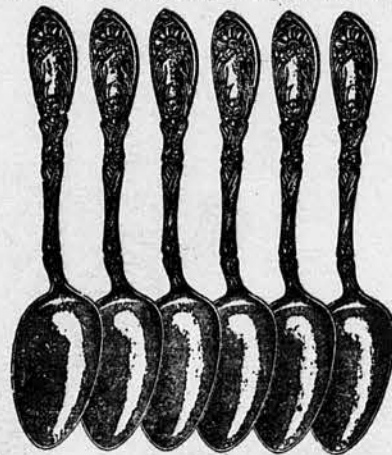
This disturbance will continue the severe storms, hot weather and drought. These of course will cover only small portions of the country. The storm forces will be most severe west of meridian 90 and particularly on the Pacific coast but the forces of the preceding storm will be greatest east of meridian 90.

Our No. 3 pamphlet, further explaining the forces of nature, causes of great storms and weather changes, is now ready for distribution and will be mailed free to all subscribers to the papers in which these bulletins are published. Enclose stamp and address Foster's Weather Bureau, Washington, D. C.

Our greatest West India hurricanes occur in August and September as a general rule, but sometimes they come in July or October. For 1913 we are expecting the principal hurricanes in July and October.

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I have just consummated a most remarkable purchase whereby I secured at a ridiculously low figure 5,000 sets of beautiful Silver Plated Narcissus Spoons made by the famous Oxford Silver Plate Co. Each spoon is extra heavy, full standard length, extra deep bowl and with beautifully embossed and engraved handles. I am going to give a set of



these handsome spoons absolutely free, postage paid, to all who send just \$1.00 to pay for a year's subscription to my big farm weekly, The Farmers Mail and Breeze. Send your subscription order at once and secure a set of these beautiful and serviceable spoons. State whether you are new or old subscriber. Time will be extended one year if you are already paid in advance. Address Arthur Capper, Publisher Mail and Breeze, Topeka, Kan.



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CO-OPERATION

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Why not order your other newspapers through us? We can save you money and guarantee prompt and courteous treatment. Address MAIL AND BREEZE, Topeka, Kan.

Regular price for the year	NAME OF PAPER AND PLACE OF PUBLICATION.	Our price for both
\$1.50	St. Louis Republic.....sw	\$1.35
1.25	Farm Progress.....sm	1.15
2.00	Chicago Inter-Ocean.....	1.25
1.25	Weekly Capital.....	1.15
5.00	Century Magazine, N. Y. m	4.50
2.00	Cosmopolitan, Irvington, N. Y. m	1.85
1.50	Farm & Home, Chi. & Spfd. sm	1.25
5.00	Harpers Magazine, N. Y. m	4.30
2.00	Kansas Farmer, Topeka.....w	1.75
2.25	Munsey's Magazine, N. Y. m	1.95
1.50	Poultry Culture, Topeka.....	1.10
1.00	Review of Reviews, N. Y. m	3.50
3.00	The World, New York.....tri-w	1.65
2.00	Toledo Blade, Toledo.....w	1.25
1.50	Housekeeper, Minneapolis.....	1.50
1.25	Missouri Valley Farmer.....m	1.10
1.25	K. C. Weekly Journal.....	1.15
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3.00	Breeders Gazette, Chicago.....w	2.90
2.00	New York Weekly Tribune.....	1.75
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1.75	Farm Journal, Phila., 5 years.....	1.70
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2.00	Globe-Democrat, St. Louis.....sw	1.40
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What Mail and Breeze Folks Say of the Mail and Breeze

Never at any time in its history has Farmers Mail and Breeze received so many letters of commendation from its readers as have come to it during the recent winter and this spring. It is impossible to print all of these letters, but it is cheering to know that, in the estimation of the writers, the Mail and Breeze is realizing its ambition to be the great agricultural paper of a great agricultural region. You cannot doubt the sincerity of such letters as these:

The Mail and Breeze is the best of all the farm papers and both Arthur Capper's and Tom McNeal's editorials and comments, in general, always are o. k. I wish you would keep urging that the government issue the money to pay for good roads and all improvements, letting the municipalities and states have it on their bonds at an interest rate that will just cover all expenses.

Mulberry, Kan. E. R. RIDGELY.

I could not farm without the Breeze. Best farm paper I ever took.

R. 3, Kirwin, Kan. DAN FISK.

I think Farmers Mail and Breeze is the best farm paper published. At least I so consider it.

Benton, Kan. HENRY J. KIPERS.

I am an old subscriber and think the Mail and Breeze fine. Would not do without it.

MRS. M. A. BARNETT, Box 72, Brownell, Kan.

The Mail and Breeze is the best all round farm paper published.

Chester, Neb. GEORGE JEFFRIES.

I have taken the Mail and Breeze for many years and have been benefited very much thereby.

Concordia, Kan. W. E. GREEN.

I think the Mail and Breeze is among the best of farm papers. It was printed in North Topeka when I first took it. I wish I knew how many years it has been since I became a subscriber. I did all I could to make Mr. Capper governor, but the way it panned out, I was glad he didn't get it. It would have been so little he could have done. I hope he may some day get it yet with a good working force to help him at the legislature.

Harveyville, Kan. AARON COX.

Give Dirt Roads a Hard Center

Mr. Editor—In this, Harper county, and I suspect in many other counties, the road making question is one of importance and the improvement is remarkable. But, they are never quite finished. As a rule when the work is thought to be complete there is a space of 8 or 10 feet in the center, the crown of the road, that is left so rough that travel takes to the side. Would it not be a good plan when the grading is done, the road rounded up into proper shape, to drag the center down smooth and then drive a wagon straight along the center of the road, making a track that the next comer would follow? Then when the driving formed ruts run a King drag over it and fill them up. In this way the top of the road would soon be the most solid, the track would be straight and not only pleaster to drive over but far more sightly in appearance. Years ago we were admonished to "keep in the middle of the road." If that meant our public highways it was blamed good advice.

Bluff City, Kan. James Glover.

Would Spend 3 Billions on Roads

By spending 3 billion dollars in the next 50 years for road construction and maintenance, Senator Jonathan Bourne, chairman of the committee of federal aid in the construction of post roads, declares 100 billion dollars can be added to the nation's wealth. His plan is to unite the nation and the states in a systematic plan of road improvement. He estimates the work of maintaining these highways would furnish steady employment for 400,000 persons except during the harvest season, when, the plan contemplates, they would be free to assist in farm work. Senator Bourne offers to mail a copy of his plan to anyone who writes him for it, care of the Senate office building, Washington, D. C. In a letter to the Farmers Mail and Breeze he says:

"With city population increasing three times as fast as rural population, there is surely need to make farm life more attractive. No public undertaking will aid more in this direction than improvement of highways, for good roads destroy the isolation of country life and improve market opportunities."

Allen Jennings, Arkansas City, Kan., writes: "I have no idea of letting the Mail and Breeze stop as it is the best farm paper I have ever seen. Enclosed find \$1 to renew my subscription."

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are made of the highest grade steel and each tool is accurately tempered to stand its required work. The handles of Keen Kutter tools are fashioned from straight-grained lumber and bent handles are really bent—steam bent. This insures remarkable durability.

If you buy any tool bearing the Keen Kutter trade mark and it does not prove absolutely perfect, your dealer will refund your money.

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The WOMEN FOLKS
Conducted by **Mabel E. Graves**



We want this department to be of practical use to the women who read Farmers Mail and Breeze. If you have any favorite recipe, any helpful hint, whether it concerns the family, the kitchen, the children, the house; or if you have anything to say which would be of interest to another woman, send it to the Home Department editor. Prizes for the three best suggestions received each week will be, respectively, a set of triple-plated teaspoons in the beautiful Narcissus design, a year's subscription to the Household magazine, and a year's subscription to the Poultry Culture magazine.

If others enjoy the grouch let them. You don't have to be a fusser just because they are.

Think of the pleasant things in other people instead of the unpleasant, and you'll be surprised to find there are so many.

How many readers of Mail and Breeze save the recipes from the paper? I do for one.—Mrs. E. J. Cottle, Fletcher, Okla.

This isn't the time of year for farm women to take a vacation, but it is the time to plan for one. Remember that you're going to have one, that you must have one, even if it's nothing more than a week spent in a hammock under a tree while the children or a neighbor's daughter do the work.

An Atchison woman rather astonished her friends the other day by saying there was no need for that semi-annual, or annual upheaval known as house cleaning; that the use of a wall mop, vacuum cleaner and keeping one's work up, was all that was necessary, with the exception of washing windows.

Try Frying the Beans.

The California way of cooking green beans is to fry them for 15 minutes the same as you would potatoes, turning them often. At the end of that time pour boiling water over them, salt to suit the taste and cook 30 minutes longer. They are nice and tender, much better than when boiled a long time. Don't be skeptical as I was; just try it once and you will never go back to the old way. Mrs. M. E. Bell, Norcat, Kan.

Beating the "Butcher Man".

It is generally believed it is impossible to butcher in warm weather and keep the meat, but that is a mistake. Any sized hog can be killed here in Oklahoma and kept perfectly. If the weather is very warm butcher early in the morning. Cut meat in rather small pieces, bones and all, putting in a piece about what you would cook at one time. Wash perfectly clean. Have a kettle of clear boiling water, drop the pieces in one at a time and boil about 5 minutes, or till hot through. Have a clean jar or tub and pack in as fast as heat-

ed. When all is in cover with the proverbial brine that will hold up an egg, pouring it on hot. Weight the meat down to keep it under the brine. It will not get too salty. It is good to fry, boil or roast, and will keep, for we used it last summer and know whereof we speak. Mrs. D. S. Clark, Dover, Okla.

Rule for Good Ice Cream.

[Prize Recipe.]

For 2 gallons of ice cream take 3 quarts of milk and 1 cup of sugar and place over fire to heat. Then take 3 tablespoonsful each of cornstarch and flour and mix with a small quantity of milk, also 6 or 8 eggs beaten very light. When milk is boiling add this mixture to the boiling milk and stir constantly

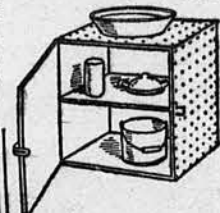
Participation in government is just a question of patriotism, love of one's city, love of one's state, interest in our nation. Government is not alone a man's nor a woman's problem. It is their mutual problem. And only when women are given their share of responsibility in the solution of public questions will the affairs of government be brought into the home for discussion.
—ARTHUR CAPPER.

till it thickens, then take from fire and add enough milk to make 2 gallons. If I have plenty of cream I use 1 quart of cream and the balance whole milk. Sweeten and flavor to suit taste, then pack with ice and salt and freeze. If the mixture is allowed to cool before packing it will take less ice. Putting the sugar in the milk before heating keeps the milk from scorching. Mrs. J. N. H., Holcomb, Kan.

An Iceless Refrigerator.

[Prize Letter.]

Take any box of convenient size—mine is 12 by 20 by 28—make a door to fit on and fasten with small hinges. Put a shelf through the center. Cover box and door with two thicknesses of burlap or some other heavy material tacked close with carpet tacks. Then take a pan with a small hole in the bottom, fill with water and set on the box. As soon as the burlap is wet it is ready for use. If the box is set in the sun and wind it will stay cooler than in a still, shady place, as long as the covering is damp. Try this for your butter, milk, and fresh and cooked vegetables. I know you will be pleased. Mrs. Charles D. Thompson, Webb, Colo.



Prizes for Farm Women. Preparations are already being made for the annual meeting of the International Congress of Farm Women, which is to be held in Tulsa, Okla., in October. The display of home products is to be one of the big features of the congress, and most of the prizes have already been announced. They range from a cream separator, garden drill and kitchen cabinet to silver knives and forks, and other things women love. The kitchen cabinet is to be given for the best bread on exhibition. Other prizes are to be for butter, pickles, cheese, woven baskets, and various other things. The farm woman who loves her home will be interested in the prize which is to be given for the best photographs of a farm home back yard. Those who are interested should write to the Head-

quarters for a premium list. Address Headquarters International Congress of Farm Women, Tulsa, Okla.

Ways of Canning Vegetables

BY MARY M. GIBBS.

I have found it very nice in winter to have a supply of canned vegetables, much more wholesome than any I could buy, and never have had any trouble to keep them from spoiling. Have the man of the house make a rack for the bottom of your wash boiler, about four strips lengthways and two or three across. Lath will do for the long ones, with crosspieces to hold the lath 1 1/2 or 2 inches from the bottom. Use glass jars, and if not new be sure to have perfect lids and new rubbers.

String Beans or Asparagus.

Prepare as for the table. Wash, cover with boiling water and boil about 10 minutes, then drain and cool. Fill the jars with the vegetables, then fill jars with cold water (previously boiled and cooled). Lay on the tops, stand the jars in the wash boiler on the rack and surround with cold water half way to the top. Cover the boiler, bring quickly to the boiling point and boil continuously for 1 1/2 hours. Scald the rubbers, lift one jar at a time, adjust the rubber and screw down the lid. Don't touch the lid to anything. Better leave it in the boiler on the tops of two other jars, inside down to the steam, so it will be clean and hot. The lids are to be put on at the end of an hour and the jars put back and the boiling continued for 30 minutes.

Peas and Young Lima Beans.

Fill the jars full with the peas or beans (not previously scalded), and finish the same as string beans, only boil continuously for 2 1/2 hours. Put on the rubbers and fasten down the lids at the end of two hours and continue boiling for 30 minutes. Be sure to keep them boiling all the time.

Makes a Fancy Bed Quilt.

Take apron gingham checked in half-inch squares, any color, blue, brown or green, and sew together as large as your quilt is to be. Get a spool of No. 8 cotton thread and cross stitch a pattern either in blocks or stripes, or in diagonal stripes from corner to corner. Cross stitch a stripe of four checks, then miss two or three checks, then cross stitch another stripe. This makes a serviceable quilt. Or by getting white checked dimity and using delicately tinted silko the result will be very pretty and dainty. Shams could be made to match. Mrs. M. M. S., Belleville, Kan.

Dressmaking Lessons Free

Complete Illustrated Course of Lessons Given to Women Readers of This Paper for a Short Time Only.

We have just published in one large volume one of the most valuable and most comprehensive courses of instruction in home dressmaking ever written. This course of lessons covers practically every phase of the subject of dressmaking. It tells you how to make most every garment, from the simplest house apron to the most elaborate evening gown.

This valuable book, "Every Woman Her Own Dressmaker," will be found of great assistance to beginners as well as experienced dressmakers. You can turn to this book and find a satisfactory answer to practically every dressmaking question which might come up. It illustrates and fully describes 200 very latest styles for ladies and children. It gives valuable instructions on fitting and finishing—instruction needed by every woman. Here are some of the interesting subjects taught in these lessons:

- How to sponge and shrink wool goods.
- How to shrink wash materials.
- How to make a tailored coat at home.
- How to make a plain shirt waist by the newest and easiest method.
- How to make a boned lining.
- How to make stylish suits, skirts, waists, dresses and dressing saques.
- How to make wrappers, kimonos and underclothes.
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- How to make baby clothes, long and short.

We are giving these valuable dress-making books away absolutely free just to introduce our popular publication. Send us your name and address at once, together with 4 cents in stamps to cover mailing expense, and secure one of these valuable books before the offer is withdrawn. Address ARTHUR CAPPER COMPANY, Dept. DM-11, Topeka, Kansas.



Are You FAT?

I Was ONCE.

I Reduced MYSELF.

I was Fat, Uncomfortable, Looked Old, Felt Miserable, suffered with Rheumatism, Asthma, Neuralgia. When I worked or walked, I puffed like a Porpoise. I took every advertised medicine I could find. I Starved, Sweated, Exercised, Doctored and changed climate but I ruined my digestion, felt like an invalid but steadily gained weight. There was not a single plan or drug that I heard of that I did not try. I failed to reduce my weight. I dropped society, as I did not care to be the butt of all the jokes. It was embarrassing to have my friends tell me I was getting Stout, as no one knew it better than myself.

SOMETHING HAD TO BE DONE

I began to study the cause of FAT. When I discovered the cause I found the remedy. The French Method gave me an insight. I improved on that. Removed the objectionable features, added more pleasant ones, and then I tried my plan on myself for a week. It worked like magic. I could have

SCREAMED WITH JOY

at the end of the first week when the scales told me I had lost ten pounds by my simple, easy, harmless, Drugless Method. It was a pleasure then to continue until I regained my normal self in size. I feel fifteen years younger. I look fifteen years younger. My Double Chin has entirely disappeared. I can walk or work now. I can climb a mountain. I am normal in size. I can weigh just what I want to weigh. I am master of my own body now. I did not starve, but eat all I wanted to. I did not take Sweet Baths. I did not use any Electricity, or harmful exercises, but I found the Simple, Sane Common Sense WAY of reducing my weight and I applied it. I have tried it on others. My Doctor says I am a perfect picture of health now. I am no longer ailing. I am now a happy, healthy woman. Now I am going to help others to be happy. I have written a book on the subject. If you are fat, I want you to have it. It will tell you all about my Harmless, Drugless Method. To all who send me their name and address I mail it FREE, as long as the present supply lasts. It will save you Money, Save you from Harmful Drugs, Save you from Starvation Diets, Harmful Exercises, possibly save YOUR LIFE. It is yours for the asking without a penny. Just send your name and address. A Postal Card will do and I'll be glad to send it so that you can quickly learn how to reduce yourself and be as happy as I am. Write today as this advertisement may not appear again in this paper. HATTIE BIEL, 1021 Barclay, DENVER, COLORADO.

Grind Your Coffee At Home



The perfect coffee is ground at home. The grocer's mill may have ground a dozen grades of coffee, whose leavings sift into your favorite blend. Moreover, ground coffee rapidly loses its strength and aroma.

The Crystal A Sanitary Coffee Mill

Keeps your coffee in an air-tight glass hopper, free from dust and deterioration. A turn of the crank and the coffee with all its delicious flavor intact goes into the pot. Slip your remittance in an envelope and the Parcel Postman will place one in your hands by return mail.

"The CRYSTAL"—Black enamel finish, \$1.00, Blue enamel \$1.50, Nickel plated, \$1.75. "Crystal de Luxe," Oxidized Copper finish, \$2. ARCADE MFG. CO., Dept. 20, Freeport, Ill.

SONG POEMS WANTED

12 Beautiful 7-Color 10 Scenic Post Cards

We now have ready for distribution a series of 36 of the most gorgeous scenic post cards ever printed. These cards are made direct from photographs covering all the most important points of interest in Colorado—Mountains, Peaks, Lakes, Valleys, Mines, famous buildings and places—practically every scenic spot of greatest interest is included in this wonderful series of post card views. The cards are printed on finest stock in from five to seven colors producing the most beautiful effect imaginable. These cards have an educational as well as artistic value as they provide true-to-life illustrations of the most-talked-of points throughout this mountain wonderland. Get a complete set for your album or collection, another set to mail to your friends—36 different views. BARGAIN OFFER. These cards would ordinarily retail at 2 for 5 cents, and they are worth it, too. We are wholesale distributors and just to get these beautiful cards introduced in all parts of the country we will for a limited time send postpaid 12 all different Colorado View Cards, for only 10 cents, or 36 all different for 25 cents. Send your order today—Stamps or coin. Address. COLORADO SELLING CO., 1024 Seventeenth St., Denver, Colo.

Good Qualities

large varieties and right prices are the three strong points that make the demand for Big Store's merchandise. You will always find what you need here whether your requirements are for serviceable or luxurious garments, fabrics or furnishings.

When you order by mail you will get as good merchandise and attentive service as when you come to the store to shop.

Remember our offer to refund railroad fare according to purchase, or pay express and parcels post on mail orders in Kansas.

THE MILLS DRY GOODS CO.
Topeka, Kansas

HOME DRESSMAKING

These patterns may be had at 10 cents each from Farmers Mail and Breeze.

No. 6067, Ladies' Dress, is made with a four-gore skirt. For summer wear the high collar can be omitted and a bit of lace put across the front. The pattern is cut in five sizes, 34 to 42 inches bust measure. Size 36 re-



quires 6 yards of 36-inch material and 5-8 yard of 22 inch all-over lace.

Girls' Dress No. 6036 is cut in sizes 6, 8, 10, 12 years. Age 8 requires 3 1/2 yards of 44-inch goods.

Ladies' six-gore skirt No. 5548 is cut in five sizes, 22 to 30 inches waist measure. Medium size requires 2 3/4 yards of 50-inch material.

USE THIS COUPON FOR PATTERN ORDERS.

Farmers Mail and Breeze, Pattern Department,
Topeka, Kan.
Dear Sir—Enclosed find cents, for which send me the following patterns:
Pattern No. Size

Name

Postoffice

State

R. F. D. or St. No.

BE SURE TO GIVE NUMBER AND SIZE.

Rule for Dill Pickles.

In answer to a request from a reader I will send my mother's dill pickle recipes: Take small cucumbers, wash, and to a gallon add a handful of salt. Pour boiling water over them and let stand over night. The next morning drain, and put into fruit jars with clusters of dill mixed between. Pour boiling vinegar (good cider vinegar) over them, then seal the jars tight, and in a few days you will have good dill pickles to eat. For a change we put a few onions in some, and in others mixed spices and mustard seed. These pickles will keep a long time and always remain nice and crisp.

Dill Pickles No. 2.—Take ripe cucumbers, not over ripe, pare and quarter, and scrape out the seeds with a spoon. Put the cucumbers into a jar, and for a gallon put in 1/2 cup salt. Cover and let stand over night. In the morning drain and wipe dry with a clean cloth. Pack into fruit jars and to a half-gallon of the cucumbers add three clusters of dill, a tablespoonful of mustard seed, and a few onions. Pour cold vinegar

over them, and seal. They will also keep quite a while in a stone jar if a bag of mustard seeds and a layer of dill are put on top, and then a weight put on.

Gilead, Neb. Anna Vorderstrasse.

Some Little Things That Help.

What we housekeepers need is to use our brains a little more—study out a plan to reduce our daily tasks to a minimum number of steps and motions. This may be accomplished largely by a convenient and systematic arrangement of kitchen furniture and utensils, giving prominence to those articles most frequently used. Then we need to make our hands and feet co-operate with our heads; in other words, have a system.

How many housekeepers have their salt and pepper for seasoning in pantry or kitchen cabinet, several yards away from the stove, when they might much more conveniently be kept in the warming closet of range or on top of the stove?

How many dip water from a pail into the tea kettle with a small tin cup when they might just as well use a quart or half-gallon dipper?

How many when canning fruit fill up their jars with a tablespoon instead of using a can funnel and a half-pint ladle or dipper?

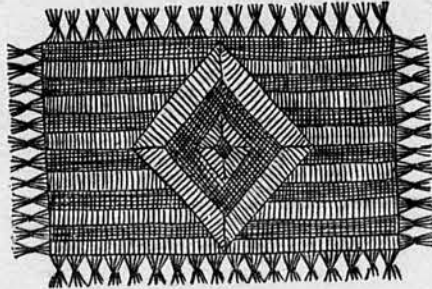
How many have worked themselves into a nervous fit of worry because the stove would not bake, when perhaps it had not been properly cleaned out for six months? Understand me, I am not speaking now of a wornout stove or a poor chimney draft. Life is too short to be wasted in such unnecessary vexations.

How many have no fit paring knives, and have their carving knives and scissors so dull they would put to a test the patience of Job? I always keep conveniently at hand a coarse and a fine whetstone, and if necessary use a grindstone. They serve the purpose far better than a crock or stove pipe.

Mrs. Theo Hartman.

A Rug From Gunny Sacks. [Prize Letter.]

How many women know what pretty rugs can be made out of gunny sacks? I wash the sacks and color them. A combination of bright red and dark green makes a lovely rug. I make a foundation piece 24 by 36 inches, ravel it out on sides and ends, then take a few threads at a time and tie into knots.



Rug may be any pattern.

This makes a fringe. Take a strip of red and a strip of green, each 4 inches wide and as long as the sack is, and ravel out 1 1/2 inches on each side, which leaves 1 inch in the middle. Lay the two colors together, double the strip lengthways and sew on your rug. Repeat this operation until rug foundation is covered, sewing the pieces on so the fringe always lies to the outside. You can make any pattern you wish.

Achilles, Kan. Pearl Bacon.

Knows the Ways of Boys.

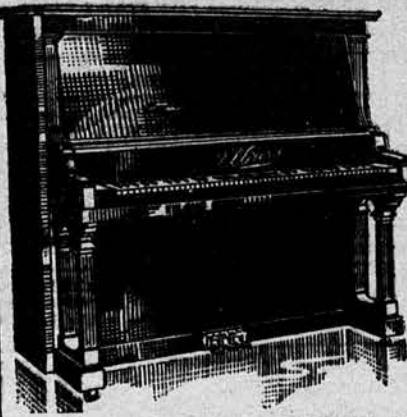
Farmers Mail and Breeze is being sent to my husband for a few months and we all enjoy it very much. I especially like the Home Department, and thought I would send you a few hints that have helped me.

To put buttons on so they will stay lay a pin across the top of the button and sew over that, thus holding the thread loose. When the pin is removed wrap the thread a few times around the stem thus formed between the button and the cloth, and the buttons will stay on as long as the garment lasts.

When making boys' blouses run a shoe string in the casing at the bottom instead of a tape. It will not require a tape needle, and if the string happens to draw back in the casing it can easily be run out again.

Mrs. Harvey Mitchell.
R. 4, Geneva, N. Y.

Dependable Pianos They Pay!



Dependable Pianos—made by factories of recognized reliability—sold strictly on their merits, and exactly for what they are—and not only warranted by the makers but by Jenkins—that's the way pianos are sold here. Strictly one price—and a popular price—a price that takes advantage of every saving that comes from perfect organization, economical selling methods and a tremendous volume of business—that's the Jenkins way.

Steinway, Vose, Kurtzmann, Elburn

pianos on comfortable payments. Write for catalog and prices—\$125 and up. High class guaranteed Player Pianos \$435 and up. Call or write.

Amarillo, Tex. Gentlemen—Received the piano today. Got it in first class shape and think it is finest tone I ever heard. I know I have the best piano in Amarillo. I am well pleased with it. Thanking you for past favors,
T. B. BURTON.

J. W. Jenkins Sons Music Co., Kansas City, Missouri

MAYOR'S WALNUT OIL HAIR DYE

Recolors gray hair or beard to all shades desired from light brown to black within 24-48 hours. A high class, meritorious, harmless and cleanly compound; very simple, easily applied, quick and sure. Does not stain the skin or scalp or rub off on the pillow, keeping the hair soft and glossy, that curling with hot-iron or shampooing will not affect. If skeptical send for TESTIMONIALS from DRUGGISTS, HAIRDRESSERS or INDIVIDUALS selling or using our remedy. Ask your druggist for it or write us direct. Price postpaid by mail: trial size 60c; large treble size, \$1.10. Address MAYOR WALNUT OIL CO., Dept. Z. V. O., 2927 Wyandotte St., Kansas City, Mo., U. S. A.



Shinn Lightning Rods

Now protect more valuable property than any other rods made, because they are scientifically perfect. Made and sold under \$75,000 bond. ASK YOUR DEALER For Shinn rods, the kind that are put up by experts and work inspected by our state inspectors. If he has none don't accept any substitute but write for full particulars about guarantee and for catalog. W. C. SHINN 110 1/2th St., LINCOLN, NEBRASKA

6 Beautiful Narcissus Silver Tablespoons FREE

To Match Our Teaspoons
Extra Special 20-Day Offer
To Mail and Breeze Readers!

Here is a chance for every housewife who reads the Mail and Breeze to secure absolutely free a set of 6 of our famous Narcissus Silver Plated Table Spoons. During the past 5 years we have given away thousands of sets of these beautiful table spoons, but never before have we been in a position to make such an attractive offer as we are now making to the women folks who read the Mail and Breeze.

Owing to our large purchases we have secured a price on these spoons which we believe is about one-fourth the price any local dealer would ask for the same grade of goods.

We have searched through the silver plate markets of the world and have never been able to find, at anything near the same cost, goods of such remarkable wearing qualities and of such beautiful design as this justly famous Narcissus set.

Full Standard Length and Weight

These are not small sized dessert spoons which are usually offered as premiums. These spoons are all full standard table spoon size, 8 3/4 inches long—handle 5 1/4 inches long, bowl 3 inches long and 1 3/4 inches wide. They are silver plated and handsomely engraved and embossed in the beautiful Narcissus design, same as the Narcissus teaspoons which we have been giving away for more than two years. Bowl is highly polished and the handle finished in the popular French gray style. The Narcissus design extends the full length of the handle on both sides. The gray finish of the handle contrasts with the bright polished bowl and produces an effect that is decidedly pleasing.

We could send you hundreds of enthusiastic letters from those of our readers who have received these spoons on other offers we have made in the past. We know they will please you, too—and if they don't you can send them back within 5 days and we will cheerfully refund every penny of your money.

Here Is Our Offer:

For the next 20 days, or as long as our supply lasts, we will give one set of 6 Narcissus Table Spoons free and postpaid to all who fill out the coupon printed below and send \$3 to pay for a three-year new, renewal or extension subscription to Farmers Mail and Breeze.

We will send one set free and postpaid for three one-year subscriptions to the Mail and Breeze at our regular rate of \$1 per year. One of these subscriptions may be your own renewal, but the other two must be new subscriptions.

If you want to be sure of securing one of these beautiful sets before our offer is withdrawn clip out the coupon and send it in today. Address

FARMERS MAIL AND BREEZE,
TOPEKA, KANSAS.

Use This Coupon Now!

Publisher Mail and Breeze, Topeka, Kansas.
I am enclosing L. with \$2 to pay in advance for a three-year subscription to Farmers Mail and Breeze. You are to send me as a free premium, postpaid, one set of 6 full size Narcissus Silver Plated Table Spoons.
This is a (new) (renewal) (extension) subscription.

Name.....

Address.....

(If you send 3 one-year subscriptions use a separate sheet of paper for the 3 names.)



WHAT BREEDERS ARE DOING

FRANK HOWARD, Manager Livestock Department.

FIELDMEN.

A. B. Hunter, S. W. Kansas and Oklahoma, 1124 So. Market St. Wichita, Kans.

PUREBRED STOCK SALES.

Claim dates for public sales will be published free when such sales are to be advertised in the Farmers Mail and Breeze.

Poland China Hogs.

- Aug. 12—H. Fesenmeyer, Clarinda, Ia. Aug. 13—John B. Lawson, Clarinda, Ia. Aug. 13—J. W. Pfander & Sons, Clarinda, Ia.

Duroc-Jersey Hogs.

- Oct. 17—Moser & Fitzwater, Goff, Kan. Oct. 30—A. T. Cross, Guide Rock, Neb. Oct. 31—A. M. Rhinehart & Son, Smith Center, Kan.

Shorthorn Cattle.

- June 4—John M. Bay, Aledo, Ill. June 6—C. S. Nevius, Chiles, Kan.

Aberdeen Angus Cattle.

- Oct. 22—W. F. Eckles, Green City, Mo. Holstein and Ayrshire Cattle.

Hereford Cattle.

- Dec. 30-31—Mousel Bros., Cambridge, Neb. Feb. 12-13—Nebraska Hereford Breeders' association, at Grand Island, Neb.

The Kansas State Agricultural college honors a Kansas breeder of Guernsey cattle by selecting one of his herd bulls for use on the state herd of Guernseys at the college.

F. S. Cowles, of Lawrence, Kan., has at the head of his Poland China herd a splendid young boar that he secured of J. O. James of Braddyville, Iowa.

At the age of 8½ months he weighed 400 pounds and by show time could be made to weigh close to 600 pounds, and with all this size he has quality that makes him eligible for herd header or show yard honors.

G. C. Norman, of Winfield, Kansas, has a Duroc-Jersey sow which at the age of three years, eight months and three days is the mother of eighty-three pigs, all farrowed alive.

S. W. Kansas and Oklahoma

BY A. B. HUNTER.

It will doubtless be of interest to our readers to note the prolificacy of the Royal Scion herd of Duroc-Jerseys owned by G. C. Norman of Winfield, Kan.

Holdeman's Good Holstein Sale.

H. N. Holdeman, Meade, Kan., whose sale was held at Hutchinson, Kan., May 28 sold 23 Holsteins at very satisfactory prices.

FEMALES.

- Gerben Clita Parthenea, Hammond & Buskirk, Newton, Kan. \$270.00 Lady De Kol Gerben, B. C. Franklin, Larned, Kan. 215.00

MALES.

- Princess Lad Sarcastic, C. F. Coleman, Wichita, Kan. 115.00 Artesian Sarcastic Lad, Frank Schoen-daller, Hays, Kan. 95.00

S. E. Kansas and S. Missouri

BY JOHN W. JOHNSON.

J. H. Harter, Westmoreland, Kan., has some choice fall boars for sale. Mr. Harter is one of the best known Poland China breeders in the state and his herd is of the very best.

Thos. F. Walker, Alexandria, Neb., has a very fine September boar sired by Blue Valley and out of a Blue Valley Exception dam that is for sale.

Howard R. Ames, Maple Hill, Kan., a Poland China breeder of that place is offering his spring pigs, both sexes, for \$20 each and will pay the express to their destination.

H. B. Miner, Guide Rock, Neb., is a Duroc-Jersey breeder that was cleaned out last February with cholera. He made two of the good sales last season, one in November

and one in February. He is now a strong advocate of immunizing as advocated by the agricultural colleges at Manhattan and Lincoln.

A Good Judge of Values.

L. J. Calloway, Lebanon, Kan., a young, purebred stock man, has natural ability as an auctioneer. He embarked in the business two years ago.

M. T. Shield's Poland Chinas.

M. T. Shield, Lebanon, Kan., is a breeder of Poland Chinas and has 78 early spring pigs. Logan Chief, the herd boar in service in this herd and the boar that sired all of these pigs but three litters was sired by W. E. Will's big boar, Chief Logan.

Schwab's Purebred Stock.

In this issue will be found the advertisement of Geo. W. Schwab, Clay Center, Neb., one of the best known and best advertised breeders of Red Poll cattle, Percheron horses and Duroc-Jerseys in the West.

FOR SALE OR EXCHANGE

EXCHANGES—all kinds—free list. Foster Bros., Independence, Kan. GROCERIES for land or land for mdse. F. Gass, Joplin, Mo. WRITE Fred L. Kent, Uniontown, Bourbon Co., Kan., for honest prices on farms.

MISSOURI

WRITE Morris & Walker for list of south Missouri farms. Mountain View, Mo.

HOMESEEKERS farm list. Southwestern Land & Imml. Co., Springfield, Mo.

Chicken ranch, \$600. Terms. Other farms. Pictures, maps, free. Box 594, Mt. View, Mo.

\$5 DOWN, \$5 monthly buys 40 acres grain, fruit, poultry land near town. Price \$200.00. Other bargains. Box 372, Carthage, Mo.

VALLEY FARMS, \$25 to \$50; unimproved lands, \$6 to \$20; orchard and berry farms, \$40 up; water and climate unexcelled. Literature and free list. ANDERSON REAL ESTATE CO., Anderson, Mo.

A SNAP. 97 acres improved, every acre tillable, 1 1/2 miles from railroad town. Price \$4,000. Finest 1,800 acre ranch in Missouri, \$15,000 improvements, \$35 per acre. Missouri Land Co., Humansville, Polk Co., Mo.

SOUTHERN MISSOURI LANDS—If you want to become independent, buy a farm in Scott Co., Mo., in the rich drained lands that raise anything and raise it certain. All we ask is a chance to "Show you." Prices very reasonable. Write F. S. Bice, Oran, Mo.

ONE of Howell Co., Mo., good farms. 270 a.; 17c. cult., 9 room house, good cellar. Large barn, other buildings. Orchard, fine water. 3 mi. railroad town, 1 mi. county seat, West Plains, on R. F. D. and phone line. 1/2 mi. school. \$40 a. No trade. A. P. COTTRELL LAND CO., Pomonca, Howell Co., Mo.

BATES COUNTY FARMS

ranging from 40 to 800 acres; \$40 to \$75; located 60 miles south of Kansas City, Mo. J. D. SAGE, Amsterdam, Mo.

A SNAP FOR THE CASH.

200 acres, 160 fenced, 120 cultivation. 2 1/2 miles to postoffice, 1 mi. to school, 10 to county seat. Good house and barn; everlasting spring, fruit; price \$4,000. Will give terms. KIRWAN & LAIRD, West Plains, Mo.

OZARK LANDS FOR SALE.

40 a., all fenced with woven wire, 36 a. in cultivation, bal. pasture, new 5 room house, large barn and other outbuildings, fine water, 1/4 mi. school; mortgage \$500 due 4 yrs. at 5 1/2%. Price \$1,400. List free. JAS. B. WEBB, West Plains, Mo.

POLK COUNTY FARMS. Ideal climate, pure water, fine pastures, short feeding season, productive soil, prices and terms to suit. HARRY T. WEST REALTY CO., Bolivar, Mo.

Ozark Unimproved Farm Bargain

150 acres of good unimproved farming land, near Van Buren, county seat of Carter Co. Fine pasture land, good for dairy, fruit and in fact you can raise almost anything you can raise in the North. Located in the Ozarks of Missouri. Makes the climate the very best. Excellent water. Price \$10 per acre. For full particulars write JOHN M. CARNAHAN, Van Buren, Mo. (County Recorder Carter Co.)

ST. JOSEPH STOCK YARDS

ST. JOSEPH, MO.



Capital and Surplus
\$200 000



Live Stock Com. Co.
ALL MARKETS

NATIONAL
LIVE STOCK COM. CO.
SOUTH ST. JOSEPH, MO.

Chicago St. Louis Kansas City Omaha Ft. Worth

P. S. Shipping live stock to a good firm is like making love to a widow—you can't over-do it.

DAVIS & SON
Live Stock Commission Merchants
So. St. Joseph, Mo.



We have seen the St. Joseph market grow from its infancy, having been here 25 years. We count our patrons by the thousands because we have their confidence. We have their confidence because we have done their business right. Write us, wire us and ship us.

CATTLEMEN	OFFICE	HOGMEN
L. A. Kent	A. H. Baker Vera Dunn	A. H. Baker
H. M. Dort	SHEEPMAN	E. E. Gabbert
Bert Williams	N. E. Bradbury	

BYERS BROS. & CO.
Live Stock
Commission Corporation
STOCK YARDS

30 Years In Business All Phones, 245 South
So. St. Joseph, Mo.

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Receivers and Shippers of
**GRAIN, HAY AND
MILL FEED**

821 to 823 South Seventh Street
ST. JOSEPH, MO.

Excello Feed Milling Co.
St. Joseph, Mo.

Manufacturers of Excello Brands of Molasses Grain feeds. A balanced ration feed for all kinds of draft and driving horses. Excello Dairy feed that shows results. Send for prices and testimonials.

EXCELLO

Your Good Friend

Is the Friend Who Helps to
Better Your Condition
from Year to Year

In a nutshell, that is one of the reasons why shippers of the West and Southwest are becoming more friendly to the St. Joseph Live Stock market every year.

The competition established by St. Joseph brought the whole Missouri River market to a parity with the East, regardless of freight differentials.

This in turn has made the St. Joseph trade territory the richest, most prosperous the world has ever known.



**WHILE THE
STOCK IS
FATTENING
YOU DO
THE THINKING**



A. G. Frey, Pres C. G. Dixon, 2nd V. Pres. R. L. Austin, Treas.
L. E. Cooper, 1st. V. Pres. H. B. Hamill, Secy.

PREY BROS & COOPER
LIVE STOCK COMMISSION
CO.
LIVE STOCK EXCHANGE BUILDING
SOUTH ST. JOSEPH, MO.
TWELVE YEARS OF SUCCESSFUL BUSINESS

Drinkard Emmert & Co.
LIVESTOCK
Leading Commission Firm
South St. Joseph, Mo.

WE SELL SHEEP AND LAMBS ONLY
THE KNOLLIN SHEEP COM. CO.
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South St. Joseph, Mo.

Chicago Kansas City So. Omaha Denver

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Sheep Yards: 158 South, Bell
Office: 179 South Bell
Office: 179 South Home

H. B. BLACK, Salesman
and Manager
C. M. PURNELL, Ass't
Salesman



**Some Saddle
Right Price**
Weight 35 lbs., 17-in. bulge
\$32.50

Features of this saddle: The weight, 35 pounds; 17-in. swell bulge; the price, \$32.50. Order now—the price is right—don't delay. This saddle sent C. O. D., freight prepaid for examination. If saddle is not as represented return at our expense.

H. & M. HARNESS SHOP,
Stock Yards, St. Joseph, Mo.

Transit House



Finest, Best equipped Hotel connected with any stock market in the West. Sixty rooms, hot and cold water, baths, elevator and all modern conveniences.

Unexcelled Cafe. Best service; moderate prices. When you come to St. Joseph, try the Transit.
A. W. MACDOUGALL, Manager.

SWANSON NEW COMER
4-WHEEL RIDING LISTER.

Screw shaft regulates suction, whether lister runs deep or shallow. Requires only 3 horses. For prices and terms write

SWANSON-ST. JOSEPH
PLOW CO.
ST. JOSEPH, MO.



A Montgomery Ward & Co. Honeymoon



Drawn Expressly for Montgomery Ward & Co. by Henry Hutt

Henry Hutt, whose beautiful cover designs you have seen on leading publications such as *The Ladies' Home Journal*, *Life*, *The Saturday Evening Post* and other national magazines, was asked to give his idea of the message of Montgomery Ward & Company's new Catalogue. He said "I believe more young couples have been able to start on their honeymoons, relieved of care through the savings made by buying through Montgomery Ward & Co.'s Catalogue than you can ever realize."

So we commissioned Mr. Hutt to convey this message to you because we knew he was right.

Naturally the birds who are building their nests have no time to talk about how they are doing it.

In after years many a contented young couple write us saying how impossible it would have been to spread out their little available cash if they had not been able to buy the furnishings of their new homes so economically through the Ward Catalogue.

That is part of the joy of this great business—but it is not confined to the young people.

Both old and young are realizing more day by day how much better it is to conserve their dollars by buying in the modern way through Bargaintown's great text book—our new Catalogue of 1000 pages.

Have you seen a copy of this great book? Have you studied the hundred thousand articles graphically pictured and truthfully described.

If not, there is a copy waiting for you. And it will be sent without a cent of expense—except the cost of the stamp spent in writing to us.

Simply sign the coupon on this page and send it to us now.

This will be no obligation on your part—except to look through its pages.

Cut out this coupon, sign and send it today to

Montgomery Ward & Co.

Dept. X16

CHICAGO

KANSAS CITY

FT. WORTH, TEXAS

(We have establishments in each of above centres. Send to point nearest to you.)

I would like to receive and look over your New Catalogue. Send me a copy without any cost or obligation on my part.

Name _____ Town _____

State _____ R. F. D. _____