

KANSAS FARMER

WITH WHICH IS COMBINED FARMERS ADVOCATE

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The Kansas Bull-Head

We note that the new fish and game Warden proposes a destructive campaign against the commoner sorts of fish in Kansas streams and the propagation, on a more extended scale, of the black bass and other aristocratic fish. This is all wrong. The propagation of the bass is wholly in the interest of the wealthy classes and against the masses. Even if all our streams were stocked with bass they would still be beyond the reach of the poor man. It requires more machinery to catch a bass than the common man could afford without putting a mortgage on his house. In order to get results, and bass, he must have a morocco book of expensive flies, a twenty-dollar split-bamboo rod, a five dollar reel, a tailor-made corduroy suit with macintosh wading pants, a landing net and a refrigerator lunch basket. Unless a man is up in style the lordly bass will see him in Missouri first, and then won't bite. The public money should not be spent in his propagation.

There is a fish however, that is democratic and should be cultivated by the warden in the interests of all the people. He never looks at the clothes of the fisherman, he does

not require expensive flies and he knows that the first duty of a fish is to be caught. In order to catch him it is not necessary to tempt his appetite with porter-house on an elaborate and expensive tackle. A common hook, a chunk of liver and a cistern pole are all that is needed. We refer to the bull-head.

The bull-head is the boy's fish par excellence though he is democratic in

all his instincts. The boy knows just where to find him and his methods suit the bull-head "clean down to the ground." It does not matter if the boy's shirt is sleeveless, his hat rimless and his "britches" a bottomless pit, the bull-head will bite for him just as well as though he were arrayed in a tuxedo and hard-boiled shirt. When the boy throws his hook and hunk of liver into the water he may not think of it again for half an hour but the bull-head is in no hurry. Nor does he

speculate as to whether the liver is fresh. He argues that here is a good thing and he cannot have too much of it. He swallows the liver and lies on the mud bottom thinking that if he can digest it before the boy remembers to jerk his line he is just that much ahead.

He has a great head for grasping ideas, or liver. He is not dainty about taking bait but takes it all the way down and this is his only fault, this and his horns. When the boy takes his knife and tries to follow his line down into the interior department of the bull-head and mine for his hook he feels that it is a waste of time that might be spent in catching another cat. When he strikes one of his horns he thinks other things.

The bull-head has no scales to cause trouble in preparing him for the table and his India rubber skin is easily removed with hot water. His flesh is not so choice as that of the bass or croppie but it fills up the stomach just as full and it "sticks to the ribs."

The bull-head is the fish of the great common people and is worthy of being restored by the Warden to that place in Kansas waters of which he has been robbed by that important snob, the German carp.



Maw's a-callin' from the milk house, callin' stern,
"Jim, ye lazy good-for-nothin', come and churn!"
Paw's a-callin' from the corn patch, callin' loud,
"Jim, ye hulkin', stupid loafer, time ye plowed!"

Nature's callin' from the "cat" creek, callin', whish!
"Son, ye poor, tired, lazy feller, come an' fish."
Stranger, if we just swapped places, put it clear,
Which of all these three a-callin' would you hear?

—I. D. G.

CITY MEN LEAD IN RUSH TO THE FARMS

Immigration officials of two trunk line railroads running into the Southwest report that one-third of the inquiries concerning land prospects now come from city workers, whereas formerly about 90 per cent of such inquiries came from village postoffices or rural routes throughout the country. This would indicate that the movement from the city to the country has already set in.

Several things are responsible for this new tendency, chief among them being the prosperity of the farmer in all sections of the country. He was the least affected by the financial panic of a year ago. While the city worker found himself short of funds and hardly knowing, for a few days, where the next meal was to come from, the farmer pursued the even tenor of his way, untroubled and undaunted. He knew that the country bank in which his savings were deposited was sound to the core. He knew that "high finance" would never wreck the institutions which tided him over between seasons and presented a safe repository for his funds after the harvest.

He knew the country banker was not speculating on Wall street or forming ice trusts at the expense of his depositors. The farmer did not have a moment's worry about where the next meal was to come from. He was raising the produce for it himself, without waiting for the aid or consent of any other man. From soup to pie he was able to fill the menu unassisted and his work and freedom from worry was adding a zest to his appetite.

The city man learned the lesson in those trying days. He looked at the farmer enviously. He began to cast up accounts, to take stock of where he was "at," while the meager bank account dwindled. Officials in a position to know assert that should the average city worker be thrown out of a position, within three months every cent of his savings would be exhausted and he would be compelled to join the bread line, beseeching charity. He has not himself to blame altogether for this condition. For several years past wages in the city, except in the new districts out West, have been practically at a standstill, while the

price of household living necessities has been constantly advancing. A few years ago the city man got three or four more pounds of sugar for a dollar than he does today, his loaf of bread was a couple of ounces heavier, his meats were several cents a pound cheaper, his tea and coffee was a better grade and cost less. Tempted by surface prosperity to take no heed of the morrow, the improvident man in the city has kept up his former manner of living, although his wages did not warrant it. The thoughtful find themselves but little better off, for try as they might it has been impossible to get ahead. Three months between them and the bread line, while but a few miles out from the city the farmer has been waxing more and more prosperous. Why should the man of the city continue there when better times and equally good conditions loom up just beyond the line where town and country meet?

A great many men and women driven to the country by the hard times of the city and the good times of the farm are going to be sorely disappointed.

They know little or nothing of farm conditions and farm needs. They are too hopeful. They have read glowing reports sent out by publicity bureaus of the new sections, telling what one acre will do, how land earns its own value in a year and smiling skies never frown on crops failures. They are going to be veritable babes in the woods until the experienced ones show them how to farm intelligently, how to swallow disappointments and know better the next time.

But the tendency is good. The farm boy and the farm girl have been going to the city for many years because they believed opportunity was beckoning them. Now the city man and the city woman are realizing that opportunities exist in the country many times greater than in the city. They will learn by bitter experience, perhaps that brain and brawn are alike necessary in order that these opportunities may be grasped, but when the lesson has been learned a better day will have dawned in America and the nation's prosperity will be more evenly and equitably distributed.

FARM INQUIRIES



ANSWERED BY
Prof. A.M. Ten Eyck

Fall Wheat on Prairie Sod.

Please inform me if it would be advisable to sow wheat on prairie sod next fall after cutting the hay and breaking it up this summer. I would like to raise a crop of wheat on it if it would pay. I have never had any experience in breaking up prairie sod and sowing it the same year, but think it would raise a pretty fair crop of wheat.—Frank O. Holland, Topeka, Kan.

It is a common practise to plow prairie sod during the spring or early summer, allowing the land to fallow through the summer and sowing it to wheat in the fall. The late breaking will not give as good results as the earlier breaking. However, unless the sod is exceedingly heavy you may doubtless secure a very fair crop of wheat by the late breaking, providing some extra cultivation is given with the disk harrow in pulverizing the sod and preparing the seed bed. The success of the crop on the new breaking depends, of course, very much upon the season. The new breaking will, ordinarily, be dryer than the older land or breaking which has lain during the summer, hence if the season is unfavorable, the wheat will be more apt to be injured when planted on the fresh breaking.

Do Not Sow Alfalfa in Mid-Summer.

I have a field that was in oats last year that I would like to sow to alfalfa. I have disked the ground and intended to sow about April 15, but on account of wet weather did not get to it. How would it be to disc the ground several times between now and the first of July and then sow? This is not a very weedy field but disking several times between now and the first of July would destroy what weeds there are. I thought that by sowing the latter part of June or first of July the alfalfa would get rooted better and would not be so liable to winter kill.—S. Miller, Chanute, Kan.

I would not advise to sow the alfalfa in middle summer. Better wait until the latter part of summer or early fall, say the last week in August or the first week in September. You could keep the land fallow, cultivating it to destroy weeds, or it may be best to plant some crop, millet or cow-peas, taking the crop off for hay in time to prepare the seed bed for alfalfa. The plan should be not to plow after taking off the crop but to prepare the seed bed by disking and harrowing. The objection to summer seeding is

that the alfalfa is very apt to be injured by heavy, beating rains or "cooked" or dried out by hot weather. If sown in a good seed bed by September 1, alfalfa should make a vigorous growth and there would be little risk of winter killing.

It may still do to sow this spring a little late, continuing the cultivation until seed time which should probably not be later than the middle of May, but the disadvantage again is the hot weather and heavy rains which are apt to occur and destroy the young plants.

Permanent Meadow on Bottom Land.

I have a small piece of bottom land which I want to seed down to some permanent meadow grass. I do not want alfalfa or clover as I want the hay for horses. Would Kentucky blue grass be good? I had some English blue grass but it did not make much hay on the wet spots. What kind of grass is best for upland? Will brome grass last for several years or does it have to be seeded every year?—Frank Van Hiltren, Greenleaf, Kan.

The Kentucky blue grass cannot be recommended for hay meadow but will make good pasture. English blue grass is better for hay, but for the wet places, I would advise sowing redtop or a combination of redtop with English blue grass and timothy. For horses there is no better hay than timothy and I believe you may produce good crops of timothy on this land which you describe, but it will be advisable to sow a little redtop with it in the wetter places, say about two or three pounds of redtop with about 12 pounds of good timothy seed per acre. It will be advisable, however, to sow a little red clover with the grasses. I prefer the alsike clover for the wet ground. Three or four pounds of clover per acre with the amount of grasses mentioned should really improve the quality of the hay for horses and will cause the meadow to be more permanent and productive.

Bromus inermis becomes sod bound in four or five years and does not produce well. However, this grass is well adapted for growing on upland in your section of the state but should be used in rotation with other crops. The bromus inermis is a perennial grass growing year after year from the same root and we have found it very hardy at this station.

Seeding Bromus Inermis.

Will you kindly inform me if bromus inermis can be sown in the fall with wheat and be successful? How many

pounds of seed should be sown per acre?

My land is in good tilth, is in corn this year. I would like a better pasture grass than the buffalo grass. Would it be advisable to seed to bromus inermis and then plow the buffalo grass pasture?—D. A. Burchard, Fargo, Kan.

Bromus inermis may be sown in the fall, but preferably without a nurse crop. I have not tried sowing it with wheat in the fall, and would not recommend this practise. There is no particular advantage to be gained from sowing bromus inermis in the fall with wheat, since if it be sown alone the grass should start well and make a good crop of hay the succeeding season, while if sown with the wheat it will produce nothing the next year unless perhaps a little pasture in the fall and the chances are that the bromus will be smothered or "dried out" by the growing of the wheat.

The only advantage from sowing bromus inermis with wheat or any other nurse crop will be to prevent the drifting of the soil. On certain light soils it is sometimes advisable to use a nurse crop for protection, but in your section of the state I would recommend sowing in the spring rather than in the fall either with or without a nurse crop. I would also advise to sow some alfalfa with the bromus inermis for pasture. The combination is more permanent and more productive than the bromus inermis alone and is practically a safe pasture for all kinds of stock.

Regarding breaking of the buffalo grass pasture, I would not advise to break it until you are satisfied that the bromus-alfalfa combination is superior to the buffalo grass pasture. Although bromus inermis is recommended as one of the best domestic grasses for western Kansas, yet I have often said that there is perhaps no domestic grass which can really take the place of the native grasses of the West. Better not break up too much of the prairie grass.

Cow-peas and Alfalfa.

I live in the western part of Miami county, Kan.; own only 80 acres, and would like very much to get some alfalfa started. I have six acres of the best soil on my place, also the best drained piece, which has been in clover for the last three years and has produced well, but it killed out this winter. I did not think it would be a good plan to try to break and seed it this spring, so thought I would try this fall. I think I have about 60 loads of manure that I want to put on it, that is, with a spreader of 50 bushels capacity. Would you scatter the manure over all the ground, or would you advise cutting down the acres and scattering it thicker? I would prefer sowing all the field at one time if I thought I could get a stand as it is a nice little field and I would hate to divide it.

I thought cow-peas would be a good crop to grow this summer. Would like to plow the ground and sow after hauling the manure. Would like to sow as early as possible so they would

make good hay and give me time to get the alfalfa sowed in good time. How soon would you advise sowing the peas? How many would you sow to the acre? What variety do you think makes the best hay? How would you sow them? Would you drill them in close rows or would you drill in rows and cultivate? If you know of any crop that would be better than the peas to precede the alfalfa, please mention it.—G. V. Pontious, Rantoul, Kan.

We have just prepared a bulletin on cow-peas which has been sent to the printer and should be ready for distribution in two or three weeks. I shall list you for one of these bulletins. Meanwhile I shall refer you to bulletin No. 318 of the United States Department of Agriculture, a copy of which you may obtain by writing.

Doubtless fall seeding for the alfalfa will be preferable in your section of the state, especially on the clover sod. In fact, you may have some difficulty in getting this clover sod well pulverized and in good seed bed condition for fall sowing. After growing clover, the soil in question should be in a good state of fertility and it may need no manuring. However, a dressing of manure will do no harm, and I would advise to give a light dressing of manure over the whole area, preferably spreading the manure after plowing, and then disking to mix it with the surface soil. The manure may be applied this spring before the cow-peas are planted or immediately after the peas are taken off, as you may prefer. As you have suggested cow-peas would make a good crop to precede the alfalfa but the crop should be removed as early as possible for hay, cutting not later than the middle of August which will require early planting of the cow-peas, say about the 20th of May. After the cow-peas are taken off prepare the seed-bed simply by disking and harrowing. Do not re-plow. When cow-peas are sown broad cast or in close drills it will require about a bushel of seed per acre. I prefer the Whippoorwill, New Era, Black Eye, or Warren's Extra Early. These are standard varieties. Seed of one or more of them can be secured from regular seedsmen. I should prefer to plant the peas in rows and cultivate, since if the cultivation be well done the land will be left in better condition for fall seeding of alfalfa. However, if the land is foul and there is a chance that the weeds will not be kept down by cultivation then it may be preferable to sow the peas in close drills. There is also an advantage in sowing the peas in close drills when they are to be cut for hay as the peas grow more upright and are more readily cut with the mower. The only objection to cow-peas preceding the fall sowing of alfalfa is the fact that the peas will be harvested rather late, and, if the latter part of the season is dry, the soil may not be in good condition to start the alfalfa. Another crop which is often used on fertile land to precede the fall sowing of alfalfa is millet. This crop may be cut earlier than cow-peas, and by disking and harrowing a good seed bed for alfalfa may usually be prepared.

Sources of Uncle Sam's Revenue.

Twelve articles or classes of articles pay three-fourths of the 300 million dollars per annum collected as tariff duties by the Government of the United States. The duties collected under the existing tariff law have averaged 300 million dollars per annum during the past three years, the largest sum being in the fiscal year 1907, when the total collections amounted to 329 million dollars. In that year, 1907, sugar paid 60 million dollars duty; cotton manufactures of fibers, 22 millions; manufactures of silk, 20 millions; manufactures of wool, 20 millions; raw wool, 16½ millions; spirits, wines and malt liquors, 16 millions; manufactures of iron and steel, 12 millions; earthen and china ware, 8 millions; chemicals, drugs, and dyes, 7½ millions; and fruits and nuts, 7 millions, the total for these 12 articles or groups of articles being 250 millions, or three-fourths of the 329 million dollars of tariff collected in that year.

These figures are a summarization of an elaborate statement published by the Bureau of Statistics of the Department of Commerce and Labor. The statement shows the amount of

duty collected in each year since 1820, the share of the imports which paid duty in each year, the average ad valorem rate of duty on all merchandise imported, and the average on the dutiable only, the duty collected per capita, and the amount of duty collected on each dutiable article in the more recent years. While the statement is a very elaborate one, covering in outline the tariff history of 88 years and showing the duty collected in recent years on thousands of different articles, its chief facts may be summed up in a few words. The amount of customs or tariff duty collected in 1821 was 19 million dollars, in 1830, 28 millions, in 1850, 40 millions, in 1860 53 millions, in 1870 192 millions, in 1880 133 millions, in 1890 221 millions, in 1900 229 millions, in 1907, the largest sum ever collected from tariff, 329 millions, and in 1908 283 millions; the annual average in the past three years being in round terms 300 millions per annum. The duties collected amounted in 1821 to 35 per cent of the value of the total merchandise imported, in 1830 to 45 per cent, in 1850 to 23 per cent, in 1860 to 16 per cent, in 1870 to 42 per cent, in 1880 to 29 per cent, in 1890 to 29 per cent, in 1900 to 28 per cent, and in 1907 to 23

per cent of the total value of the merchandise brought into the country.

The share of the imported merchandise which paid a duty on entering the country was varied greatly. From 1820 down to 1833 less than 10 per cent of the merchandise entering the country came in free of duty. From 1833 to 1844 the share admitted free of duty ranged from 25 to 50 per cent of the total. From that date to 1857 the share imported free of duty ranged from 9 to 17 per cent of the total. From 1857 to 1863 the share imported free of duty ranged from 20 to 27 per cent. From 1863 to 1867 the share imported free of duty ranged from 12 to 19 per cent. From 1867 to 1873 the proportion entering without payment of duty ranged from 4½ to 8½ per cent of the total. Beginning with 1873 the share of merchandise imported free of duty steadily increased, commencing with 27 per cent in that year and reaching 56 per cent of the total in 1892, 59 per cent in 1894, 48½ per cent in 1896, 49½ per cent in 1898, 47½ per cent in 1905, and 44½ per cent in 1908.

The share which the customs duties have borne in producing the revenues of the country has also varied with varying conditions. From 1781 on down

to 1848 small sums were collected as internal revenue, seldom, however, reaching as much as 1 million dollars. In 1863, however, the present system of internal revenue was established, the receipts therefrom in that year being in round terms 38 million dollars, while the customs receipts were 64 millions. In the period from 1864 to 1868 the internal revenue receipts averaged 217 million dollars per annum, and the customs receipts 137 millions per annum. With the close of the Civil war period internal taxes were modified, and the annual average of internal revenue receipts during the period from 1869 to 1897 was 133 million dollars per year, and the customs receipts 181 millions per year. During the Spanish-American war period from 1898 to 1902 the receipts from internal revenue averaged 264 millions per year, and the customs receipts 212 millions per year. With the modification of the internal revenue taxes following the close of the Spanish-American war the receipts therefrom again fell below those of the customs, and the annual average of the internal revenue receipts in the period between 1903 and 1908 was 245 millions, while those from customs was 284 millions.

SOIL FERTILITY INDISPENSABLE

By H. A. SCOVELL,

Director Kentucky Experiment Station.

Soils are made from disintegrated rock. Their composition and original fertility depend largely upon the kind of rock from which they were made. It would, seem, then, that if we studied the composition of the rock underneath the soil, we might know much about its fertility; but soils are not always of the same formation as the underlying rock. Some soils have been brought by glaciers from the far north. In the Mississippi valley, from Wisconsin to the Ohio river, glacier drifts have deposited from 80 to 100 feet in depth. Along the river bottoms soil has been deposited, made from rocks sometimes hundreds of miles above. In the mountain regions the disintegration of rock from toward the top of a mountain is carried down to the bottom and makes a soil even of different formation from the valley rocks. Many soils, however, have been made by the disintegration of rocks in place and are, therefore, of the same composition in the main as the underlying rock.

Some rocks are rich in phosphoric acid, others in potash, others in lime, etc. Soils formed by the disintegration of such rocks are rich only in these elements. The soil made from granite is generally rich in potash, while the soil from limestone, rich in fossils, should contain a large amount of phosphoric acid. The blue grass limestone soil is an example of the soil containing a large percentage of phosphate. Pure sandstone contains little of the elements which make a fertile soil. Knowing, therefore, the geological formation of the soil, we can often tell of its richness and durability so far as the elements of fertility are concerned. But a soil may be rich in plant food and yet not fertile. Its physical conditions may be such that plants do not thrive. In the study, therefore, to maintain soil fertility or to improve the soil, we must have in mind two things: First, its ability to produce plant food, and second, its physical condition.

FOOD OF PLANTS.

In studying the first of these, it brings us at once to the question, what do plants feed upon? It is evident that, in order to grow, they must accumulate matter. If we take a plant and analyze it, we find that it is composed of a number of elements, these elements being carbon, hydrogen, oxygen, nitrogen, potassium, calcium, magnesium, phosphorus, iron and sulphur. We must conclude, therefore, that it is these elements which make up the food of plants. A great number of experiments have been made and it is found that plants cannot thrive if any of these elements are absent in their food.

It must be stated, however, that plants do not take up these elements in their elementary state, but in combination with each other. Nitrogen combines with oxygen to form nitrates; nitrogen and hydrogen to form ammonia; potassium, magnesium and iron combine with sulphur and oxygen to form sulphates; with phosphorus and oxygen to form phosphates; with oxygen and nitrogen to form nitrates, and with carbon and oxygen to form carbonates. When calcium combines with oxygen, we have a compound called lime; when it combines with carbon and oxygen in certain proportions, we have a substance called carbonate of lime. When potassium combines with oxygen chemically we call the product potash. So, in speaking of plant food, we generally speak of salts or oxides of the elements which make up the plant.

AIR AIDS GROWTH.

The general impression is that the plant gets most of its food from the soil. This is not true. The soil does not furnish to the plant all of its food. In fact, it furnishes very little of it. The carbon, hydrogen and oxygen are furnished by the air. Carbon combines with oxygen and forms carbonic acid. It is taken into the leaves and formed into starch, sugar and wood fiber by the assistance of sunlight and chlorophyll.

This makes up the great bulk of the plant. When we burn a plant we have but a small portion of it left. This is the amount of food furnished by the soil in addition to the nitrogen which is taken up by the roots of the plant. Water, a combination of oxygen and hydrogen, makes up a large portion of

a plant. For instance, half-grown clover may contain as much as 90 per cent water, or more than is found in skimmed milk. The food which the soil furnishes to the plant is the only source of food supply which concerns us.

While the atmosphere furnishes the larger portion of the food, nevertheless it always furnishes it in abundance. We have no control over the water supply except in districts where irrigation is practised. The soil furnishes potash, phosphoric acid, lime, magnesium, iron sulphur, and stores up the nitrogen for the plant. Some plants, such as peas, clover, etc., possess the power of fixing free nitrogen of the air through the action of certain bacteria harbored by the roots. But nitrogen from the air, except through this agency, is not directly available to give the plant all the be furnished from other sources.

VARIATION IN SOILS.

A soil may contain all the elements of plant food, but it may be in such a condition that it is not sufficiently available to give the plant all the food at once for full growth. This is not usually the case with new soils. They generally contain plant food in abundance and in available forms. But a soil which has been cropped for many years, and especially soils on which have been raised one kind of crops for a number of years, is generally lacking in at least one or more of the elements of plant fertility. Some soils contain an abundance of plant food, but not in an available form; that is, not in a form that the young plants can utilize it as food fast enough to make a vigorous, mature plant.

On such soils rotation of crops may be one of the means of making available plant food. Especially is this true if deep-rooted crops are to be grown. Clover is such a plant. Its roots penetrate deep and take food from depths which other plants cannot, and bring it up to the surface. The dying roots contain the plant food for the next crop in rotation. The addition of lime or gypsum to such soils will assist in disintegrating and making available the potash which is stored up. Continued cultivation or deep plowing materially assist in making potash and phosphoric acid and other elements of plant food available.

A soil which is wanting in available nitrogen may be restored to its former fertility and increased in fertility by the same rotation of crops, using some leguminous plant for one of the rotations. As stated before, clover, cow-peas, soy-beans, alfalfa and other leguminous plants have the power of transforming the nitrogen of the atmosphere to soluble, available compounds by means of bacteria, which attach themselves to the roots of leguminous plants. These bacteria must be present in the soil in order to have these leguminous crops make

available the nitrogen to the air. They are present in most soils, but some soils, especially those which lack humus, may also be lacking in these bacteria.

VALUE OF MANURE.

The clover seed or other seed may contain these bacteria themselves, and often, if not found in the soil originally, they will multiply fast enough in a year or two to have the soil impregnated with them by this means. These bacteria are also often found in decomposing barnyard manure, and in such cases barnyard manure is not only valuable for the plant food which it contains, but for furnishing these bacteria and nitrifying ferments as well.

Turning under green crops not only returns plant food to the soil, but also puts the soil in a good physical condition. It gives it organic matter which is essential to all soils, and in any rotation it is well to turn under, if possible, the leguminous crops. Soils that are moderately rich may be maintained in fertility for a long number of years by a judicious rotation.

The best way to maintain soil fertility is to feed the crop on the farm. In other words, raise live stock and feed not only what is raised on the farm, but even buy feed in addition. It is evident that plants feed on the soil, and if these plants are fed on the farm and the manure cared for and distributed, the soil fertility will be maintained, especially as all soils are disintegrating continually and are making available each year plant food. And if products are bought and fed on the place, soils will be improved thereby.

The hay, corn and other grain fed to steers from calthood to maturity, contain an enormous quantity of plant food, the most of which is left on the place, for the steer when sold weighs not over from 1,200 to 1,600 pounds, and not all of this weight is plant food. Still less soil fertility is taken off the farm if dairy cattle are raised. When milk is sold, of course, nitrogen, potash and phosphoric acid are sold in it, but when butter is the product sold, very little, in fact, scarcely any, of these elements are sold from the farm.

WASTE OF PLANT FOOD.

The great waste of plant food comes from raising crops which are sold from the farm, as tobacco, corn, wheat, and even hay. The tobacco we ship out of our state alone is very destructive to soils. The average crop is estimated at 200,000,000 pounds per year. This would take from our soils say 1,200,000 pounds of phosphoric acid, 7,000,000 pounds of nitrogen, and 10,000,000 pounds of potash.

In order to return to the soil as much potash as it taken up by the tobacco crop, it would take 100,000 tons of commercial fertilizer containing 5 per cent potash, or 50,000 tons

containing 10 per cent potash, and this to supply the loss of potash in the tobacco crop alone. When we consider, then, the enormous amount of plant food taken in the other crops, as corn, hay, wheat, etc., the figures are so large as to be almost incredible.

Kentucky is an ideal state for the production of live stock. Farmers should give it much more attention than they do. Every animal bred on the farm is an enricher of the soil. Those states which are extensively engaged in live stock production are the richest in agricultural wealth. On those farms where but few animals are raised, some other method for keeping up the soil fertility is necessary. Some direct applications of manure must be made.

There is no better fertilizer than barnyard manure, but it is evident that if animals are not raised on the farm, the farmer will have very little of this to use. He must, therefore, look for his fertilizer from another source. He must not only rotate his crops and raise leguminous plants to assist in getting the nitrogen necessary, but he must keep up soil fertility by applying, sooner or later, potash or phosphoric acid, or perhaps both.

Panama Canal to Be Completed by 1915

PRESIDENT TAFT.

In "An Answer to the Panama Canal Critics," in the May McClure's, President Taft demonstrates that the lock type of canal is both safer and cheaper than the proposed sea-level type, and then discusses the question of time:

"The date of completion for the lock type of canal has been fixed as the 1st day of January, 1915. I hope that it may be considerably before that. At the rate of excavation now going on in the Culebra cut, it could probably be completed in less than three years, but the difficulty is that as the cut grows deeper, the number of shovels that can be worked must necessarily be decreased. Therefore, the excavation per day, per month, and per year must grow less. Hence it is not safe to base the estimate of time on a division of the total amount to be excavated by the yearly excavation at present. Then, too, the Gatun Dam and locks and the manufacture and adjustment of the gates may take a longer time than the excavation itself, so that it is wiser to count on the date set. The enthusiastic supporters of the sea-level canal, basing their calculation on the amount of material now being excavated, and upon the total amount to be excavated for a sea-level canal, reach the conclusion that the sea-level canal could be constructed in a comparatively short time as compared with the estimate of twelve or fifteen years, made at the time of the decision in favor of the lock type. They have fallen into the error, already pointed out, of assuming that the present rate of excavation could continue as the work of building the sea-level canal went on, which in the case of the sea-level canal is even more erroneous and misleading than in the case of the lock canal for the reason that the construction, below the forty-foot level above the sea down to the level of forty feet below the sea, is work of the most difficult character, more than half of it always under water, and necessitating either pumping or dredging in rock and working in a narrow space, which greatly reduces the possible rate of excavation."

The state of New York has built 1,800 miles of macadam road in the past ten years, but during the current year no contracts for new roads will be made. All of the appropriation asked for, \$1,500,000, will be needed to repair the roads already built, which are not on an average over five years old. The State Highway Commission is considering new methods of road construction; and apparently there is general agreement after such extensive experience that the automobile and the macadam road are incompatible.



A Kansas Home. The commodious residence of W. T. Lowe, Jewell City, Kansas, who owns one of the best herds of Shorthorn cattle in Northern Kansas.



CULTIVATION TO SAVE MOISTURE.

IN MORE than two-thirds of Kansas, a kind providence sends every season, without fail, moisture enough for the production of full crops of grains and forage. Over the entire state there come, every year, times of anxiety lest the rain shall be deferred until the crops shall be greatly injured. These fears, while usually not correct premonitions, are too often partially correct forecasts.

If when the skies seem as brass, the earth parched and vegetation discouraged some wise man could furnish a recipe for a sure and speedy remedy he would be hailed as a benefactor and would be compensated to the full extent of his asking.

But a wizard is not necessary and the crops need not perish for lack of soil moisture. The science of the soil, the science of moisture and the science of the atmosphere have been subjects of careful investigation during the last few decades, and methods have been described whereby ample moisture may be retained in the soil upon which it has fallen.

The first requisite is that the moisture shall be permitted to enter the soil. Rain that falls upon the hard packed highway nearly all runs off. If the road has been properly worked at proper times with a drag very little moisture will soak into it. But rain that falls upon a field that has recently been deeply plowed, subsoiled and harrowed passes into the soil until every opening between soil particles is filled. Some of this moisture will seep away into deeper strata, some may even find its way into springs and streams. But the sponge-like nature of the soil will hold generous amounts of moisture against the efforts of gravity to pull it downwards.

The second requisite is to prevent the sun and wind from carrying the moisture away from the surface. At this point the scientists have contributed their most valuable service. They have shown that the force—sometimes called capillary attraction, sometimes surface tension—which is capable of holding water in the soil against the attraction of gravitation, is also capable of replacing from the stores below that which the sun and air carry away from the surface. Unless, then, measures be taken to prevent the moisture from coming to the surface much of it is lost. If, however, efficient preventive measures can be used the problem is solved to the extent of saving the soil moisture for the use of the crop. That there may be sufficient of this soil moisture to produce a good crop has been repeatedly shown by computation and experiment.

The measure which has been found effective in keeping the soil water from coming to the surface and yet retaining it near enough to the surface for the use of crops is wisely timed cultivation. The condition of the surface soil which is favorable to the entrance of water that may fall upon it is that which is most efficient in retaining moisture already stored below the surface. The "dry farming" people of the regions of scant rainfall have found that by maintaining a pulverent condition of the surface soil they are able to accumulate in two years sufficient moisture to assure an excellent crop, whereas the entire amount that can be made available from one year's precipitation is generally not enough to make farming profitable. The fact that by cultural methods alone stores of moisture can be carried over from one season and made available for the next season's crop is significant of what can be done within the limits of a season in localities where each and every year brings enough rainfall if it be saved for a few weeks only.

The method used to carry moisture over from one season to the next has been often described. It is well, however, to recall it to mind. Having so cultivated the soil as to admit all the rain that falls, cultivation is so timed as to prevent the formation of a crust after a rain and yet to avoid puddling.

Some of the earlier advocates of cultivation for the conservation of moisture directed that cultivation should be continued even if it

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EDITORIAL

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SUBSCRIPTION PRICE.—\$1.00 per year; \$1.50 for two years; \$2.00 for three years. The date of subscription will be found on the label on your paper. We follow the usual custom of publications, and conform to the desire of most subscribers, by sending the paper until an order is received to discontinue it. We must be notified in writing when the subscriber desires the paper stopped. Returning the paper is not sufficient as we cannot tell from the label alone what the address is. Both names and address must be given and all arrearages paid.

ADVERTISING RATES.—25 cents per agate line, 14 lines to the inch. Announcements of reputable advertisers respectfully solicited. No medical nor questionably worded advertising accepted. Forms close Monday.

OUR GUARANTEE.—It is our belief that all advertisements in this paper are from reliable persons or firms. To show that we are in earnest in protecting our subscribers we guarantee the trustworthiness of our ad-

vertisers under the following conditions: We will make good the loss of any paid up subscriber who suffers by dealing with any fraudulent advertiser in our columns provided complaint is made to us within thirty days after the transaction. This guarantee means just what it says. It does not mean that we guarantee to settle all trifling disputes between a subscriber and an advertiser though we offer our good offices to this end. We do, however, protect you from fraud under the above conditions. In writing to advertisers be sure always to say: "I saw your advertisement in Kansas Farmer."

CONTRIBUTIONS.—Correspondence invited on all farm topics, live stock, soil cultivation, grains, grasses, vegetables, household matters, recipes, new and practical farm ideas, farm news. Good photographs of farm scenes, buildings, live stock, etc., are especially invited. Always sign your name, not for publication unless you desire it, but as an evidence of good faith. Address all communications to
KANSAS FARMER COMPANY,
Topeka, Kansas.

amounted to nothing but stirring the loose dust. If the surface be in the condition of loose dust no good purpose is promoted by stirring it. But a dashing shower upon such a soil quickly compacts the surface into a condition to crust as soon as the sun and wind strike it. Such crust furnishes a capillary medium for conducting stored moisture from below to the surface where it is quickly taken up by the sun and wind. This accounts for the often observed fact that a summer shower may do a crop more harm than good. The remedy is to quickly stir the surface and so prevent the formation of a crust.

Advantageous methods of so cultivating growing wheat as to prevent the theft of moisture have not yet been worked out. But corn and all other cultivated crops offer opportunities which are seized upon by some to retain moisture for use of the crop. The present scarcity of corn which must make the price high until after a large part of the next Kansas crop can be turned into cash either through the feed lot or through direct marketing will justify such careful attention to the details of planting and cultivating as shall make reasonably certain a liberal yield.

AN ESSENTIAL OF MODERN TIMES.

That advertising is an important, even an essential, element of the success of any enterprise wherein there is much buying or selling is called to mind by the recent celebration of the fortieth anniversary of the firm of N. W. Ayer & Son of Philadelphia, whose exclusive work in all these years has been in the advertising field. The growth of this work has been such that the number of employees who sat down at the anniversary banquet was 263.

The service rendered by the advertising agency is one of the essentials in the transfer of commodities from the producer to the consumer. The selection of advertising mediums, the preparation of effective advertisements and the supervision of their faithful insertion have come to require the services of experts in this line of work.

The great successes of several notable enterprises have resulted from two facts, first, that the product of the enterprise was meritorious; second, that N. W. Ayer & Son have so handled the publicity end of the business that the great consuming public was duly informed.

Ayer & Son have made a specialty of advertising staples. In the early days it was thought that advertising was appropriate only for proprietors of patent medicines, or, at best, for an owner of a specialty. This fallacy they have effectually exploded.

Many specialists have been made by advertising, and the staples of com-

merce have sold in this way to an extent the fathers never dreamed of.

As a single illustration of this point, witness the well-known soda cracker, which when given a name suggested by Ayer & Son, advertised by plans made by them, packed in a remarkable carton and marketed by a wonderful organization, has become a household word—Uneeda Biscuit.

CEMENT PRODUCTION IN 1908.

The total production of all kinds of cement in the United States during 1908, as shown by returns received by the United States Geological Survey from all the cement producers of the country, amounted to 52,775,925 barrels, valued at \$44,376,656. This total was made up as follows:

	Barrels.	Value.
Portland cement.....	51,002,612	\$43,472,679
Natural cement.....	1,821,862	208,609
Puzzolan cement.....	151,451	95,468

52,775,925 \$44,376,656
The corresponding figures for the calendar year 1907 are given below for purposes of comparison:

	Barrels.	Value.
Portland cement.....	48,785,390	\$53,992,551
Natural cement.....	2,887,700	1,467,302
Puzzolan cement.....	557,252	448,998

52,230,342 \$55,903,851
The Portland cement production showed a heavy decrease in 1908 as compared with 1907 in most of the Eastern and Southern states, the loss being greatest in Pennsylvania, New Jersey, New York, and Michigan. This decrease in the East and South was offset, however, by remarkable gains reported by plants in the Middle West and on the Pacific coast. The development of the cement industry in the gas regions of Kansas and Oklahoma is healthy on account of abundance of raw material and of the best fuel in the world.

The average price of the entire Portland cement output in 1908 was only 85 cents a barrel—36 cents below the average price in 1907. The 1908 price is the lowest on record, the previous low point, 88 cents a barrel, having been reached in 1904 as the result of business depression in that year.

CONCRETE FOR BRIDGES.

A significant action was that of the farmers of Leavenworth county, Kansas, who recently petitioned the county commissioners to authorize the construction of none but concrete bridges in the future.

There is no field of construction in which the use of concrete appeals more strongly to the practical business sense of the farmer than in the building of bridges. Bridge structures of wood and steel are really more expensive in the end than bridges and culverts of concrete, which are at once beautiful, permanent and fire-proof and require no painting or repairs. The somewhat higher initial cost of concrete bridges in some localities has retarded their adoption, but the vastly superior advantages of concrete cannot fail to ultimately im-

press the intelligent judgment of American farmers generally as they have the farmers of Leavenworth county.

According to the figures compiled by the Bureau of Statistics U. S. Department of Commerce and Labor live-stock receipts during March, 1908, at seven primary interior markets, 3,671,890 head, show considerable increases over March, 1908 and 1907, figures of 3,379,678 and 3,088,978 head. All the larger centers, with the exception of St. Joseph and St. Paul, show figures in excess of those recorded for March, 1908. The increase is due to larger receipts during the month of cattle, hogs, and sheep. Receipts at the same markets during the first quarter of the year, 10,449,993 head, were about 10 per cent below the corresponding receipts in 1908, Chicago, Kansas City, Omaha, and St. Joseph show considerable losses for the quarter, primarily under the head of hogs, but also under the head of cattle and calves. The calculated number of cars used in transporting the total number of live stock to market for the first quarter of the year, 178,915, was below corresponding totals in 1908 and 1907 of 200,434, and 188,692 cars, respectively, though the number of cars for March, 61,994, compares favorably with the March number for the preceding two years.

Alfalfa is the best possible pasture for hogs. But the farmer who turns in enough hogs to keep the alfalfa down will have occasion to regret it unless he intends to plow up the alfalfa. If, however, the alfalfa be given time to make a good start before the hogs are turned in, and if there are only hogs enough to eat the alfalfa about one-fourth as fast as it grows, and if there are two fields so that the hogs can be changed from one to the other every few days, the hogs, the alfalfa and the owner of will all do well. Four fair crops of hay may be made to be fed to hogs and other animals during next winter.

From the beginning of the time of man until now the increase in population has constantly beat upon the borders of civilization and men have moved out into the wilderness and planted new fields. There has been no limit to the amount of grain that could be produced save the number of men that were willing to engage in farming. Often so many engaged in wheat raising that here were over productions. Today the area of cultivation so nearly covers the total area of tillable land that the most important industrial problem is that of making the increase in production to keep pace with the increase in population.

The "Unemployed League" has been incorporated at San Francisco. The purposes as announced in the filing of papers are: "To promote the best interests of the unemployed men and women of California; to provide, without suggestion of charity or patronage, means for unemployed persons to live at moderate cost; to provide homes and farms where unemployed may reside; to maintain free employment agencies; to employ lecturers, and to agitate for national, state and municipal improvements, such as highways, buildings, drainage and other necessary works."

There is nothing in which the farmer can better afford to interest himself than the matter of using concrete about his farm. Concrete construction is comparatively simple. With a knowledge of a few essentials any intelligent man can use concrete to great advantage in making many things about the farm. Write for a copy of Bulletin No. 20, called, "Mixing and Placing Concrete by Hand." It is free. Address, Universal Portland Cement Co., 115 Adams St., Chicago, mentioning the KANSAS FARMER.

The Secretary of Agriculture has discontinued the weekly reports on weather and crop conditions. These were very valuable to farmers and their omission from the columns of KANSAS FARMER is regretted by numerous correspondents. It is to be hoped that the good work will be resumed for next season.

INTENSIVE FARMING

When a western farmer visits farms in the eastern states he is impressed with the fact that the truck patch, the orchard, the poultry yard, and the dairy are relatively of vastly greater importance than in the West where broad fields of corn, wheat, and alfalfa are in fashion and big bunches of beef cattle enliven the landscape. The great cities, some of them containing more people than the entire state of Kansas, must be fed from the farms. The products of the West are mainly such as may be readily transported over long distances. But milk, vegetables and many fruits are better as well as cheaper if produced near the place of consumption. The large cities consume and waste vast amounts of these.

Current discussion in much of the South is of cotton, its cultivation, its enemies, and its marketing. In the middle West millions of acres and millions of bushels of corn and wheat, millions of live animals and their diseases, the breeds, the prices of feeds and the course of the markets, the prices of land per quarter section, and various other large questions engage attention of large minded, practical men, of the experiment station's workers, and of the press. In the East the interest in agriculture is not of the overshadowing kind. Farming is of the intensive kind which yields large returns from small areas under expensive treatment as to both labor and fertilizers.

As great centers of population increase in the West, so will develop the kind of husbandry required to feed them. Already are Kansas City, St. Joseph and Omaha demanding the produce from ever widening belts of truck and dairy farms. The cities of the gas and oil belt of Kansas and Oklahoma, as well as some of the larger commercial centers of the more exclusively farming communities promise development of great consuming power which will make surprising demands that will produce interests in intensive farming that are likely to surprise old-time, frontier farmers.

The effect upon the prices of land well located for the small farmer is one of the notable features of the concentration of population in cities. But since only a few acres of good land are needed to furnish employment and remuneration for an active man, the total investment in the intensive farms is within reach of the man of moderate means.

Two current bulletins of the U. S. Department of Agriculture illustrate the increasing attention to kinds of farming which the frontiersman used to refer to the "women folks." One of these bulletins is devoted to "Onion Culture." The following from the "Summary" is instructive:

"The cost of growing an acre of ordinary onions by intensive methods will vary between \$50 as a minimum and \$150 as a maximum. In special cases, like the production of Bermuda and Spanish onions, the cost may run considerably higher. As a general average an acre of onions will cost in the neighborhood of \$80 when ready to market. This does not include the crates or bags in which to market them.

"An acre of onions will produce on an average 300 bushels, although large tracts are made to yield an average of 500 bushels an acre at a cost for growing not exceeding \$75. The price paid the grower in the field is sometimes as low as 35 cents a bushel, although 45 cents is about the ruling price, taking one year with another. A yield of 300 bushels at 45 cents a bushel gives a gross return of \$135 an acre, or about \$55 with the cost for growing deducted. The more successful onion growers, and they are many, count upon a net profit equal to the cost of growing the crop.

"In districts where the ordinary varieties of onions are planted in rows 3 feet apart and cultivated with horse tools, the yield is generally about 150 bushels an acre and the cost of production is frequently not more than \$10 or \$12 an acre. By this method the cost of production and returns are both comparatively low, but the margin of profit is very satisfactory."

The inevitable increase in the demand for products of intensive farming foreshadows changes that must greatly affect the future. The life of the frontier which alternated between strenuous effort, anxiety for the out-

come, and a free-and-easy existence in the saddle can never obtain where the net product of an acre is to average \$135 per year. "The man with the hoe" must be in evidence. Hand thinning and hand weeding must at least supplement the exhilarating exercise with the riding cultivator. The fight against insects will be in no wise less important than in the broad fields. While intensive farming has its aspects that attract the average agricultural writer, it is not all a holiday, neither is it all profits.

But with its advantages and disadvantages it is coming either in the farms of the small holding tilled by the owners with more or less help, or in larger areas under capable and strict supervision with systems of accounting as close and accurate as those of the banks.

HARD WINTER WHEAT FLOUR THE BEST.

That the merits of Kansas hard winter wheat need only to be known to be appreciated is evident from statements of Prof. G. L. Teller, of the Columbus Laboratories in an address before the recent convention of the Illinois Master Bakers' Association. This address was printed in the *Millers' Gazette* of London, England. Prof. Teller said in part:

"The flour producing wheats of the country may be divided into four general classes: the soft winter wheat, the hard winter wheat, the spring wheat and the durum spring wheat. These produce three distinct types of flours; but there are all kinds of variation among the different classes, more especially among the winter wheat flours. The characteristics of soft winter wheat flour are high color, a comparatively small amount of gluten, a comparatively small capacity for absorbing water, and comparatively small loaf volume for a given weight of flour. These characteristics do not make these flours so especially adapted for the use of the commercial bread maker as are the other grades of flour. Many of the extremely soft winter wheat flours, such as are produced in Illinois, Michigan and some other sections of the country, are so deficient in gluten that they will not meet the standards set by the United States Department of Agriculture on pure wheat flours in that they do not contain sufficient nitrogen. Nevertheless, I think it is the fault of the food standards and not of the flour, for these flours have been used with sat-

Consider These Points Before Buying A Sewing Machine



Do you know how long that cheap sewing machine is going to last?
Did your grandmother or mother have one?
What sort of work is that unknown machine going to do when put to the every-day, every-week test?
What are you going to do if it gets out of order?
Suppose it should spoil an expensive gown or frock?
These questions show some of the chances you take with unknown, obscure, cheap or "club plan" sewing machines.
It's ten to one your grandmother and mother used a SINGER—it's probably in use yet.
Be sure of your machine *before* you buy it.

Try a Singer at our expense and be sure

You can get a brand new SINGER in your home free of all charges.
You give it a fair trial.
If you want to keep it—terms arranged to please you.
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Just write for the free booklet, "A Wireless Message from the Singer Tower."

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SINGER SEWING MACHINE COMPANY,
ROOM NO. 1174 SINGER BUILDING, NEW YORK.



isfaction for many years in the production of bread as it is made in the household, and they serve an excellent purpose as a general household flour.

The hard winter wheat flours resemble in many particulars the spring wheat flours. They contain as much or more gluten, often take as much or more water to make a dough of the same stiffness, and have an excellent color as well as produce a loaf of good volume. They rival in these particulars the best hard spring wheat flours, and if better known would be much sought after by bakers. The spring wheat flours have been considered pre-eminently the bread flours. Of late years they have not been giving as good satisfaction as formerly because of unfortunate seasons which have rendered them deficient in gluten and in water absorption. While there are variations among these classes of flours, some of the better hard winter wheat flours have, during the past season, contained more gluten and had better water absorbing capacity than many of the spring wheat flours."

Along this same line of thought is the following from the "Baker's Helpers" (Eng.):

"Unless some change in the method of cropping the North-West is followed, it is imperative that the baker should look to the hard wheat reserves of winter wheat as sources of higher quality in flour. I do not mean to state that the North-West cannot produce good flour. It has sections that produce excellent wheat. I am speaking of the crop rather as a whole. The fact exists of a constant depreciation in quality. And to maintain this quality bakers should look to short patents from all-turkey wheat."

The Kansas hard winter (Turkey) wheat flour has failed of the recognition due to its merits for lack of proper exploitation. The millers interested in selling northern spring wheat flour have for many years been liberal advertisers and have thus created a demand for their product that brought it better prices than could be obtained for the more meritorious hard winter wheat flour. It is hoped that sometime the producers of this best of all flours will awaken to modern methods of securing recognition for their goods so that those who want the best may know what it is and where to be obtained, and so that the price to the farmer and to the miller may be commensurate with the value furnished.

Kansas hard winter wheat has failed

of proper recognition in the estimation of foreign millers because of faults of inspection and grading after it leaves the farmers' hands. This iniquity has been practiced largely at Kansas City where the high-grade product of the Kansas fields has been mixed with wheat of inferior grades and passed and sent abroad as No. 2 when so reduced in quality that the Kansas miller would not want it. When the English or the Scotch miller looked upon this mixture and looked upon the certificate stating that it was No. 2 Kansas hard winter wheat his opinion of the product of this section suffered a fall of several degrees.

It is hoped that the Kansas inspectors will hereafter see to it that no shoddy shall be certified as No. 2 hard winter wheat, however great the pressure brought to bear by the mixer and the shipper.

FOURTH DRY FARMING CONGRESS.

The Fourth "Dry Farming" Congress will meet at Billings, Mont., October 26, 27 and 28, 1909.

The International Exposition of Dry Farm Products will be held during congress week at Billings. Thirteen western states and territories, two Canadian provinces, Mexico and Russia will send exhibits.

Seventeen states and ten foreign countries will have delegates at this congress.

The promoters of the congress estimate that in the west 200,000,000 acres of arable land awaits development by dry farming methods. Texas has 25,000,000; Montana, Colorado and Wyoming, 50,000,000; New Mexico, Oklahoma, Utah, Idaho and Arizona, over 60,000,000.

They estimate that in ten years every drop of water available for irrigation possibilities are exhausted. It is claimed that non-irrigable land yields crops averaging 50 per cent the quantity reaped under irrigation.

In 1900 dry farm land in the west averaged fifty cents to \$1.50 an acre. Increased valuation where dry farming has been demonstrated indicates that within ten years this 200,000,000 acres will be held at \$10 to \$50 an acre.

The dry farming congress teaches farmers how to conserve moisture by intelligent cultivation, educates them in soil culture and seed selection and guides inexperienced settlers in methods.

READERS MARKET PLACE

HELP WANTED.

HELP WANTED—MAN AND WIFE TO work on farm. Steady work, good wages. Young people preferred with not more than one child. Users of liquor or cigarette smokers need not apply. R. J. Boyer, Meade, Kan.

WANTED—LADY OR GENTLEMAN AS local representative in every Kansas county. Splendid chance to make good wages without great effort and no expense. Write for particulars. Address Circulation Department, Kansas Farmer, Topeka, Kan.

FOR EXCHANGE.

WE CAN GET YOU WHAT YOU WANT in exchange for your farm, hardware, merchandise or other property. We have 500 propositions to choose from. Graham Bros., Eldorado, Kan.

SEEDS AND PLANTS.

ALFALFA 15C. CANE SEED 24C. J. S. Glenn, Farmer, Wallace, Kan.

FREE CATALOG OF SEEDS—1 CENT and up per packet. Send name and address to H. M. Gardner (Seed Grower) Marengo, Neb.

HORSES AND MULES.

FOR SALE—ONE REGISTERED BLACK 3 year old Percheron stallion, one imported French coach stallion, one black Shetland stallion and 5 Shetland mares. All good ones. Do not write, but come and see them soon and you will buy them cheap. W. H. Richards, Emporia, Kan.

FOR SALE—ONE BLACK PEDIGREED standard bred stallion, Patriotta 41336, weight 1,350 lbs.; best breeding, two crosses with Wilkes and two with Nutwood. I will trade for Percheron stallion, jack or real estate. Address S. A. Baughman, Marysville, Kan.

CATTLE.

SEE LESLIE OF ALYSDALE by Prince Consort, out of Lord Mayor dam, calved May 3, 1908. Best individual of our last bull crop. I want to show him to you. Also offer some cows and heifers at fair prices. Come and see them. C. W. Merriam, Columbian Bldg., Topeka, Kan.

SWINE.

BERKSHIRE BOARS FOR SALE—FROM 125 lbs. to 350 lbs. of Masterpiece and Lord Premier breeding. G. D. Williams, Inman, Kan.

POLAND CHINA BOAR BRED BY J. M. Kemp, sire On The Dot 106355, year old show hog, bargain. C. D. Williams, R. 1, Wichita, Kan.

MANURE SPREADER.

FOR SALE—A NEW MANURE SPREADER, never used, none better made. It is for sale for a special reason, at considerably less than the list price. If you have been thinking of buying a manure spreader, and every progressive farmer is thinking about buying one, here is your opportunity to get an absolutely new one at a special price. Write quick. Address A. Turner, care Kansas Farmer, Topeka, Kan.

LAWYERS.

A. A. GRAHAM, ATTORNEY AT LAW, Topeka, Kan.

POULTRY.

PURE S. C. B. LEGHORN EGGS \$2.75 per 100. Chas. Dorr, Osage City, Kan.

BARRED ROCK EGGS—\$1 FOR 15, \$4 for 100. Mrs. Sam Drybread, Elk City, Kan.

SINGLE COMB WHITE LEGHORN EGGS \$1 per 15, \$5 per 100. R. W. Yeoman, Lawrence, Kan.

PURE BRED NONRELATED BUFF ORPINGTON EGGS \$4 per 100. W. W. Patterson, Preston, Kan.

McDowell's Dueros.

Mr. F. G. McDowell, proprietor of the Red Star Duroc Jersey herd located at Cornling, Kan., starts an advertisement in this issue of Kansas Farmer. His herd is headed by the good boar McDowell's King by Colossal, he by the noted boar Golden Rule. His dam was Lady C by Ohio Major making her a granddaughter of the boar Kant Be Beat. Mr. McDowell has a fine lot of pigs sired by this boar and out of sows that carry the blood of such boars as Kansas Wonder, Crimson Wonder, Red Raven, etc. Among the finest sows are Lady Newton, sired by the very large boar Sir Thomas, a son of Kansas Wonder; Belle McDowell by Colossal, her dam Raven's Daughter by Red Raven. Miss Ina by Jolly Jim, a grandson of old Improver, Cherry Blossom by Crimson Wonder I Am, he by Crimson Wonder, Fancy by Johnny Boy, grandson of the noted Long John, and another good one by Ohio Chief 2nd, so it will be seen that Mr. McDowell has quite a nice variety of good breeding. He will hold a bred sow sale next spring but his young boars will be for sale at private treaty. They can be bought now and delivered later. When writing please mention Kansas Farmer.

Buffalo Herd of Dueros

We want to say something this week about the good herd of Duroc Jerseys owned by H. C. Stanfield at Buffalo, Kan. Mr. Stanfield is one of those modest breeders who has not been advertised in the stock papers, but has been raising and selling good Dueros for several years. We know that Mr. Stanfield sold last fall 25 better brood sows on the market than was put in a great many of the sales. Mr. Stanfield is not only a

Classified Advertising 3 cents a word

The rate for advertising in this department is low, only three cents per word each insertion. There is no more popular advertising than classified advertising. Every one reads classified ads, and just because they are classified. You can reach 50,000 farmers in Kansas and adjoining states, the best farmers on earth, through this page. All ads set in uniform style, no display. Initials and address count as words. Terms, invariably cash in advance.

POULTRY.

ROSE COMB BROWN LEGHORN EGGS—M. E. Hoskins, R. 1, Fowler, Kan.

B. P. ROCK EGGS FOR HATCHING. W. H. Molyneux, R. 1, Palmer, Kan.

BUFF COCHIN EGGS—CAREFULLY Selected, 15 for \$1.50. H. T. Housel, Jewell, Kan.

BARRED ROCK EGGS—\$1.50 AND \$2 per 15, from State Show winners. R. Harmon, R. 6, Newton, Kan.

ROSE COMB RHODE ISLAND RED eggs \$1 per 15, \$5 per 100. Fine stock. I. W. Poulton, Medora, Kan.

HOUDANS—AMERICAN AND ENGLISH strains. Eggs for sale. No more stock till fall. O. E. Henning, Wahoo, Neb.

BLACK LANGSHAN EGGS—\$1 PER SITTING, \$5 per 100. Baby chicks 10c each. Mrs. Geo. W. King, Solomon, Kan.

RHODE ISLAND REDS—WINNERS OF 40 premiums at State show. Send for egg circular. R. B. Steele, Topeka, Kan.

PURE S. C. BROWN LEGHORN EGGS—From the best laying strains, \$1 for 30, \$5 per 100. A. G. Dorr, Osage City, Kan.

BARRED ROCK EGGS FROM PRIZE winning stock, \$150 per 15; \$5 per 100. Express prepaid. L. D. Peak, Logan, Kan.

BUFF PLYMOUTH ROCK EGGS FROM birds with free range, good as the best at \$1 per 15 or \$5 per 100. H. M. Stephens, Munden, Kan.

CORNISH FOWL THE BEST TABLE and all purpose bird. Eggs \$1 per 15. L. C. Horst, Newton, Kan.

S. C. WHITE LEGHORNS—PURE WHITE and good layers. Eggs 15, 75c; 100, \$3. Mrs. J. E. Lynch, Gallatin, Mo.

EGGS—BUFF ORPINGTON, BLACK Langshan, R. 1, Red, Barred Rocks, White, Brown and Buff Leghorns, Polish, Harry Cure, Atchison, Kan.

PARTIDGE WYANDOTTES—EGGS from prize winners \$1.50 per 15. Run of farm, \$1 per 15. Address S. S. Jackson, Scranton, Kan.

BARRED PLYMOUTH ROCK EGGS FOR sale. Good layers. Farm range stock, \$1 per 15; or \$1.50 for \$5. Mrs. John Yowell, McPherson, Kan.

SINGLE COMB BROWN LEGHORN hens and pullets \$1 each. Most noted laying strains in this county. Eggs, 26 for \$1, \$3.50 per hundred. Col. Warren Russell, Odessa, Farm, Winfield, Kan.

EGGS—WYCOFF'S CELEBRATED S. C. White Leghorns. Ring and Empire strains. White Rocks. Each first pen \$2 per 15; second \$1.50; range lot, \$1. Incubator, \$5 per 100. Western Poultry Farm, Alma, Kan.

UTILITY BARRED ROCKS—TWENTY years' exclusive breeding. Pens contain best birds procurable, high scoring and ribbon winners. Eggs, \$2 per 15, \$2.50 per 30. Range flock, \$1 per 15, \$5 per 100. Mrs. Jas. M. Dilley, Beattie, Kan.

EGGS FROM LEGHORN PARK, PRATT, Kan.—At \$1 per sitting or \$1.75 per 30. My birds are large hardy and fine foragers. Are favorite fowls for farmers as they are too quick for hogs and hawks. I breed nothing but prize-winning R. C. W. Leghorns. They fill every want and fill the basket. G. S. Randle, Prop., Pratt, Kan.

breeder but a feeder and always has plenty of size on all the Dueros you see on his farm. The spring crop are doing fine. They are not fat, but are thrifty and growing vigorously, a condition vastly to the advantage of a buyer. As a proof that Mr. Stanfield raises good Dueros we can say that at the fair and show at Yates Center last fall Mr. Stanfield won seven first premiums and three seconds, taking either first or second in each class he showed in. For breeding and individuals you can find no better. One of the best boars used is Kansas Kant Be Beat by old Ohio Kant Be Beat, dam Ohio Pride, one of the best sows that Improver 2d ever sired. Kansas Kant Be Beat is assisted by a very promising young bear called Eminence, a great son of old Proud Advance, dam Our Choice by Field Marshall. Among the good sows in this herd we make mention of only a few. First, we like best Mollie Wonder 2d, sired by Robin Hood, a line bred Top Notcher boar and out of a Missouri Wonder sow. Wherever you see a Missouri Wonder sow you almost always see a good one. Mollie Wonder is a show sow, a typical Duroc type, one that has quality to spare. She has a fine litter of nine pigs that are worth looking at. Proud Anna, sired by old Proud Advance, has a fine litter of six pigs by Kansas Kant Be Beat. Peggy, a full sister to Proud Anna, has eight fine pigs. Anna Laura and Maud S., two full sisters tracing to the Wonder family, are two of the good, reliable brood sows in the herd. Both have good litters and are raising them. Mr. Stanfield is advertising for sale three fall gilts sired by Kansas Kant Be Beat, one out of Mollie Wonder 2d and two out of Mollie Wonder. Also two fall boars, one

POULTRY.

EGGS—R. C. R. I. REDS \$1.00 AND \$1.50 per 15. Mrs. J. C. Bailey, Springhill, Kan.

FOR EGGS OF THE FAMOUS WHITE Wyandottes write J. H. Brown, Boyero, Colo.

SINGLE COMB BROWN LEGHORN EGGS—\$3 for \$1, 100 for \$3. Mrs. F. E. Town, R. 3, Haven, Kan.

SINGLE COMB BROWN LEGHORN eggs, \$3 for 100. Mrs. G. Montague, Wakefield, Kan.

ROSE COMB BROWN LEGHORN EGGS \$1.50 per 30, \$3.50 per 100. Mrs. Henry Rogler, Bazaar, Kan.

15 EGGS \$3, 30 EGGS \$5—FROM THE best matings in the state. Frank McCormack, Morrowville, Kan.

BUCKEYE REDS—THE 300 EGG HEN, \$1.50 per 15. Rouen duck eggs \$1 per 13. Stella Weigle, Winfield, Kan.

BARRED ROCK EGGS FROM LARGE egg producing strain, 12 years exclusively; farm range \$1 15, \$5 100. C. E. Romary, Glendale Farm, Olivet, Kan.

FOR SALE—PURE BRED ROSE COMB Golden Wyandotte eggs from prize winning hens at county fair. Eggs 50 cents for 13. Mrs. W. J. Blison, Box 247, Eureka, Kan.

ROSE COMB RHODE ISLAND REDS EXCLUSIVELY 7 years. Range eggs \$1 per 15, \$5 per 100. Pen eggs, De Graff strain, \$1.50 per 15. Mrs. B. F. Weigle, R. 1, Winfield, Kan.

REAL ESTATE.

A GOOD RELINQUISHMENT CLOSE IN to trade for central Kansas town residence. State price first letter. C. C. Miles, Calhan, Colo.

FIFTY QUARTER AND HALF SECTIONS and some larger tracts of good farming land for sale in Edwards and Ford counties, Kansas. Thomas Darcey, Real Estate Agent, Offerle, Kan.

160 ACRES OF UPLAND, 60 ACRES IN cultivation, four room house and new barn, at \$3,500, \$1,500 cash, balance on time. Some of the best bargains in the Solomon Valley. J. S. Boyle, Bennington, Kan.

80 ACRES OF RICH CREEK BOTTOM, four miles from the center of Emporia, with fine improvements, five acres grass, good timber, splendid orchard and water. One of the best homes in Lyon county for \$6,200. Hurley & Jennings, Emporia, Kan.

GOVERNMENT FARMS FREE. OUR 112-page book "Vacant Government Land" describes every acre in every county in U. S. New secured free, 1909 diagrams and tables. All about free irrigated farms. Price 25c postpaid. Webb Pub. Co., Dept. 398, St. Paul, Minn.

DO YOU WANT A HOME?—WE HAVE 100 of the best farms in southeastern Kansas on the easiest terms of any land sold in the state. Send for copy of the Southeastern Kansas Homeowner, the best monthly land paper published—it is free. Address, The Allen County Investment Co., Longton, Kan.

FREE HOMES FOR EVERYBODY UNDER the homestead and desert acts. Sulphur Springs Valley, Arizona, is fast settling. Water obtained at a depth as shallow as four and one-half feet. As fine alfalfa land as there is in the world. For further information address the McCall Realty Company, Cochise, Ariz.

sired by Jerry Wonder, he by old Missouri Wonder, dam Maud S., one sired by Kansas Kant Be Beat, out of Pearl S. Please look up card advertisement on another page and write Mr. Stanfield. Kindly mention Kansas Farmer.

C. W. Merriam, owner of the Alysdale farm, herd of Shorthorn cattle at Topeka, Kan., writes that he has one bull of serviceable age left for sale at the farm now and that he is the best individual of any of the past year's crop. He is but a few days under a year old, is dark red in color and is well grown out. His name is Leslie of Alysdale, being sired by Prince Consort and out of Princess of Alysdale by Lord Mayer. From the granddam of this youngster has been sold over \$1,800 worth of calves. The buyer wanting something good in the way of a young bull would do well to get in touch with Mr. Merriam and find out more about this fellow. This is the last of the crop and Mr. Merriam will not have any more bulls for sale after this until in the fall when the present crop will be available and he will have 12 head of good ones. In addition to this young bull, Mr. Merriam offers a few head of cows and heifers at fair prices. See the ad and write Mr. Merriam or run in to Topeka and visit the Alysdale farm. See what they offer.

C. O. Anderson, Manhattan, Kan., is always ready to say a good word for the Dueros. Being a successful breeder himself he watches the good points of the breed carefully. He owns some of the best sons of the greatest prize winners of the breed. He has at the head of his herd Kants Model 52471 by Kant Be Beat 18239

REAL ESTATE.

NEFF REALTY COMPANY, THE SWAPERS. Trades a specialty. Trade anything, anywhere, at any time and any price. Omaha Kan.

FARM LOANS MADE IN ANY AMOUNT from \$500 up, at lowest rates and on most favorable terms. Betzer Realty & Loan Co., Columbian Bldg., Topeka, Kan.

POSSESSION—160 ACRES, 110 CULTIVATED, 35 wheat, 50 pasture and mow land, 10-room house, large barn, orchard, a homey place, for \$7,000. All kinds and sizes. Write for lists. Garrison & Studebaker, Salina, Kan.

DOGS.

FOR SALE—COLLIES OF ALL AGES. Natural born cattle drivers. Pedigreed stock. Write for circular. Harry Wells, Belleville, Kan.

FOR SALE—3 ENGLISH FOX TERRIER pups. Fine specimens. Silver Laced Wyandotte chicken eggs \$5 a 100. M. B. Caldwell, Broughton, Kan.

THE FIRST DRAFT FOR \$10.00 BUYS A good English sheep or cattle dog. He is three years old and has the courage of a bull dog. John F. Boettcher, Holton, Kan.

SCOTCH COLLIES—PUPS AND YOUNG dogs from the best blood in Scotland and America now for sale. All of my brood bitches and stud dogs are registered, well trained and natural workers. Emporia Kennels, Emporia, Kan. W. H. Emporia.

COLLIES OF ALL AGES FOR SALE—They are stock drivers, pets and home protectors. 260 head sold last year. Write for illustrated circular and prices. Would like to buy a few ferrets. Address Harvey's Dog Farm, Clay Center, Neb.

MISCELLANEOUS.

WASH TONGS. SAVES YOUR HANDS. Sample for 30c. F. Moffatt, Beaver Creek, Neb.

CONKEY'S ROUP CURE—POULTRY SUPPLIES of all kinds for sale. G. H. Harris, 210 W. 6th St., Topeka, Kan.

FOR SALE—FIRST CLASS NEW HOTEL in thriving town in southern Kansas. For particulars address A. Strickler, Fall River, Kan.

FOR SALE OR TRADE—A GOOD machine shop doing nice business, in a good town. Reese and Co., 215 E. Douglas Ave., Wichita, Kan.

GOOD NEW 14-ROOM HOTEL, FURNISHED, in Phillips county, Kan., \$3,000. Want small tract of land. H. W. White Land Co., Phillipsburg, Kan.

SPITZ PUPS FROM BLUE RIBBON winners at Topeka bench show, 3 months old, males \$10, females \$5. Mrs. A. P. Woodruff, R. 2, Topeka, Kan.

FOR SALE—BROWN WATER SPANIEL puppies from registered stock at \$5 and \$10 each. Also Fox Terriers at \$3 and \$5 each. Thorndale Kennels, Wayne, Kan.

FOR SALE—ONE FIRST CLASS Threshing Machine in good repair, 25 horse power, double engine. \$850. Separate. Price and terms right. C. L. Wells, Great Bend, Kan.

MACK BROS. & CO.'S REMEDIES—Mack's Lump Jaw Cure, Mack's Colic Cure, Mack's Wire Lintment, Mack's Sweeney Lintment. Send for circulars. Mack Bros & Co., Spencer, Iowa.

PORK MAKER WORM EXPELLER FOR hogs. Farmer agents wanted to handle our remedy. Liberal commission. Write for particulars. Supplies furnished free. Miracle Remedy Co., Hebron, Neb.

FOR SALE OR TRADE—MY FINELY located hardware store in Chicago, doing good business. Stock and furniture \$15,000. Must get sale or trade at once as I must get outside employment. Want improved alfalfa farm of about same valuation as store. Address F. E. Care Kansas Farmer.

EVERYTHING IN BEE SUPPLIES AT lowest prices. Italian bees \$5.50 per colony. I have some second hand 8-frame hives in good condition with new frames and starters, 75 cents each. Supers with new sections and starters ready for the bees, 50 cents. O. A. Keene, Topeka, Kan.

PUBLICATION NOTICE.

(First published in Kansas Farmer, May 8, 1909.)

State of Kansas, Shawnee County, ss. In the matter of the estate of Christian States late of Shawnee County, Kansas.

NOTICE OF APPOINTMENT.

Notice is hereby given that on the 2d day of November, A. D. 1908, the undersigned was, by the Probate Court of Shawnee County, Kansas, duly appointed Executor of the estate of Christian States late of Shawnee County, deceased. All parties interested in said estate will take notice and govern themselves accordingly.

MARGARET STATES, Executor.

Bargains in Farms, Ranches, and City Property;

FORD COUNTY Famous wheat prospect has no equal. Lands range in price from \$9.50 to \$30 per acre. The crop alone will pay for the land. Best of climate, soil and water. Price list furnished upon application.

G. L. PAINTER & CO., Kansas.
Dodge City.

MARSHALL COUNTY BARGAINS.
Large list of improved farms for sale at \$40 to \$100 per acre. 200 trading propositions. Can match you on anything. Write for complete list.

TROSPER & BLACKNEY, Kansas.
Frankfort.

A SNAP FOR SOME ONE.
640 acres of fine land 6 miles from Dodge City, Kan. 230 acres in wheat, one-fourth goes with land if sold by June 1. This is all nice level land except about 40 acres and will come in in good shape for pasture; no other improvements. Price \$17.50 per acre. Terms can be arranged on part, at 7 per cent.

C. L. WELLS, Kansas.
Great Bend.

LARGE TRACT OF LAND.—If you are looking for a snap in a big proposition it will pay you to come to Great Bend and talk to me in regard to the best of land in Ford County at the price. Consists of 8000 acres. Practically all farm land, 2000 acres in cultivation, 800 in wheat all goes with land, 500 to corn, one-fourth goes, 200 acres now in alfalfa, 1000 acres of alfalfa land, 20 miles of three wire fence, 15 head of team, six room house, barn for 15 head of stock, 4000 bu. granary, only 8 miles from good market. Price \$21 per acre, terms on \$65,000, perfect title. **C. L. WELLS,** Great Bend, Kan.

160 ACRE Farm Bargain. 7 miles north-east of Ness City. Small frame house 2 rooms, frame barn for 4 horses, hen house, small granary, good well and windmill, 75 acres in cultivation, 35 acres in wheat, one-fourth with place, 12 acres alfalfa. Land can all be plowed, nearly level, 1 mile to school. Price \$2,500. \$2,000 must be cash. **J. C. LOHNES & SON,** Ness City, Kan.

TOO LATE TO CLASSIFY.

POLAND CHINAS.—Headed by Expansion Type. Among my sows is Flashy Lady 2d, top of Garrison's last sale at \$83. Good pigs for sale later. **J. K. BRADLEY,** Blue Springs, Neb.

BIG KIND OF POLAND CHINAS.
Mammoth Hadley a worthy son of the \$500 Big Hadley heads herd. Sows in herd are daughters of Johnson's Chief, Prince Youtell, First Quality, Over Chief, Logan Chief, Highland Chief Jr. and Chief Teacumseh 3d. 5 choice pigs to price for fall delivery.

GEO. W. SMITH, Nebraska.
Pawnee City.

MENEHAN'S POLAND CHINAS.
I have for sale an extra choice big type fall yearling boar, sired by Hunch Jr. by Big Hunch, dam Beatrice Logan by O. K. Price. Pig has white face and is a good individual. Write for complete description and low price.

J. F. MENEHAN, Neb.
Burchard.

DUROCS, DUROCS, DUROCS.
Headed by Standard Model 80435, carrying the blood of Duroc Challenger and El-lere, winner at leading shows in 1904. Our other sire is Crimson Monarch 80429, rich in the blood of Crimson Wonder and Ohio Chief. Sows in herd representatives of the best families. Fine lot of spring pigs.

O. A. TILLER, Nebraska.
Pawnee City.

HEREFORD BULLS FOR SALE.

12 head sired by Onward 18th and Majestic Baron by Imp. Majestic ranging in age from 12 to 26 months. All good ones. At least four of them herd headers. Very low prices considering quality. Will also spare few females.

S. W. TILLEY, Kansas.
Irving.



Beau Brummel
10th 187719.

Modern Here-fords. Herd bulls Beau Brummel 10th 187719, Beau Beauty 192235, and Proctocol 2d 917715. Robert H. Hazlett, Hazlett Place, Eldorado, Kan.

Bill Brook Farm Seed Corn

Buy your seed corn of the grower. Pure bred Boone County White, carefully selected, tipped, butted and graded, \$1.75 per bu., sacked and on board cars. Plenty of seed on hand. Orders filled promptly.

H. O. TUDOR, Holton, Kan.

PLANTS

Cabbage—Early Jersey Wakefield, Early Winingstadt, Early Summer, Succession, 35c per 100, \$2.50 per 1,000. Tomato—Early Tree, Early Dwarf Champion, Early Dwarf Stone, Early Kansas Standard, Earliana, Beauty, Matchless, Stone, 35c per 100, \$3 per 1,000. Large Ruby King Pepper 15c dozen, 75c per 100. All varieties of sweet potatoes May 10th. **F. P. RUDE & SON,** North Topeka, Kan. Both Phones.

Hon. Geo. B. Ross, breeder of Percherons and Shorthorns, at Alden, Kan., says it is really surprising to him to learn of the demand which exists in central and western Kansas for pure bred Percheron mares. Senator Ross had a large stud of good Percherons at the beginning of the season and the buyers from the wheat belt have practically taken everything he had. A few years ago it would have been practically impossible to sell a Percheron in this region.

"WE CAN SELL your property, send description." Northwestern Business Agency, Minneapolis, Minn.

NORTH CENTRAL KANSAS.—Send for list of farms. Best in state, price, quality considered. Do it now. Grimes & Stull, Minneapolis, Kan.

SPECIAL BARGAINS.—80 acres 3 miles from Clyde, second bottom, \$50 per acre. 160 acres near Green in Clay Co., 39 under plow, well improved, \$50 per acre. 160 acres pasture near town, \$3,500. Write for fine large list. Walter Nelson, Clyde, Kan.

COMPLETE DESCRIPTION
Texas Panhandle, covers 25 years, 32 pp., complete birdseye view and wall map Amarillo, 15,000 population, in heart of Panhandle, sent prepaid for 35c; clubs of four, \$1. Order today—edition limited. Minor Publishing Co., Amarillo, Texas.

CHEAP LAND.
If you are looking for an investment in land that is sure to increase in value 25 per cent in the next six months you can get it by seeing or writing
HALE & ENGLISH, Kansas.
Dodge City.

HODGEMAN COUNTY LANDS.
Map, Booklet, New List and general information sent promptly on request. Cheapest farms, quality considered, in the state.
WINN REALTY CO., Kansas.
Jetmore.

FOR SALE OR TRADE.
Large livery barn and bus line, in a good town, doing a nice business. Everything first class. Will sell for cash or would trade for good farm. Price \$10,500. Address
C. R. CANTRELL, Kansas.
Fredonia.

GRAY COUNTY, KANSAS.
75,000 acres of alfalfa and good farming land that is decidedly the best proposition for homeseekers or speculators to be found in the West. Big new list of farms upon request. **G. N. DAVIS & CO.,** Cimmaron, Kan.

SEE NESS COUNTY.—The wheat, alfalfa, and corn county of Kansas. Land is smooth, level, rich and well watered. No rock, sand or obstructions. Easily cultivated. Can buy your choice at \$10 to \$25 per acre, on easy terms. See or address **LOHNES & CASON,** Ness City, Kan.

WASHINGTON COUNTY LAND FOR SALE.—Two hundred acres 4 miles from good town. 70 acres wheat, 5 room frame house, new barn 30x60, granaries, cribs, etc. All under fence. Price \$45 per acre. Very easy terms. **W. J. GORDON,** Washington, Kan.

SCHUTTE AND SHINEY, THE RUSH County, Kan., real estate hustlers; 30 years in the same old place. Good farmers raised from 20 to 47½ bushels of wheat per acre here last season. We can sell this land at from \$20 to \$35 per acre. Good improved ranch land. ¼ good farm land, at \$15 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us or write us at La Crosse, Kan.

HERE IS A BARGAIN.
160 acres of land in Rush county, Kansas, three miles from railroad station and market, close to school, about 45 acres under cultivation, no improvements, 100 acres of good plow land on the tract, balance quite rolling but good grass and pasture land. If sold quick can be bought for \$2,000.

JAMES H. LITTLE,
The Rush County Land Man,
La Crosse, Kansas.

160 ACRES.—1 mile of Quinter, good 6 room house, cistern, well, new steel windmill, water in house; new barn 12 foot to the square, holds 12 head horses and 11 tons hay. All other kinds of buildings, fruit, fine blue grass and ever green yard. 7 acres in alfalfa, 8½ acres seeded down to timothy and clover this spring. 30 acres pasture, balance broke. Price \$8,000. Have several other good places for sale at right prices. **Quinter Land Man, W. V. Springer,** Quinter, Kan.

IDAHO AND WESTERN WYOMING irrigated, improved lands on railroad, \$15 to \$30 per acre on easy terms. Good schools. Alfalfa 4 to 5 tons per acre; wheat 45 bushels, barley 80 bushels, and oats over 100 bushels. Unexcelled home market; poultry and dairy business extremely profitable. Choice dry farming claims to be homesteaded. Timber for fuel and improvements and cedar posts free. White pine lumber \$14 per thousand. Large and small game and trout fishing; year around free range; fine climate and water. We pay part of your transportation; come while you can make a good selection. Write today. **Northwestern Land Co.,** Rock Springs, Wyo., or Twin Falls, Idaho.

ARKANSAS.—"Don't you wish you had bought when you were here before?" That is what they all say; and then, buy before it doubles up again. What have you got that half equals it? You can't find it in America. Think of the money bags being hauled in by a single farmer. Thrashing and hauling \$1,000 a day and more—getting the cash the same day. We have other propositions that will beat your best; besides, the best climate, best roads, best water and fine people, and anything else you want. I own the cheapest land on Grand Prairie and can make you terms—won't price you out. Also, fine timber lands. **F. W. Houston,** Stuttgart, Ark.

LOOK AT THIS.
No. 503.—Here is a ranch of 2,960 acres, that we can recommend as good a cattle ranch as there is in the county; all under fence, plenty of water, 600 acres fine bottom land, suitable to grow alfalfa; the improvements, stone house, barn 50x35; stone shed 100 feet long; and all other necessary improvements that are required on a ranch of this kind. The survey of the new railroad running from Garden City to Stockton, runs near or through this place. Rural telephone and postoffice on the place. Price \$12.50 per acre, part time will be given.

TEED & ORBISON, Kansas.
Jetmore.

SAN LUIS VALLEY, COLO.
Big bargains in the greatest irrigated valley in Colo. Prices from \$25.00 to \$60.00 per acre. Guaranteed water supply. We handle trades of all kinds, such as merchandise for land and San Luis land for mdse. or real estate in any part of the country. **A. W. Wilson,** Alamosa, Colo.

GOOD FARM CHEAP.—160 acres, 130 in cultivation, all fenced, 3 room house, barn, cow shed, poultry house and well and wind mill, only 4 miles to R. R. where an elevator will be built this summer. Will take a small cash payment and give 5 years on balance. Price \$2,500. **KIRBERG & MILLER,** Ness City, Ness Co., Kan.

A BEAUTIFUL HOME.—135 acres river bottom land that does not overflow. It is first class corn and alfalfa land, 25 acres in pasture, 6 acres in alfalfa, balance in high state of cultivation; located 9 miles from Wichita, 3 and 4 miles from two other good railroad towns. Improved with good 7 room cottage with bath, china closet, basement, 2 porches, blue-grass lawn around house, milk house, wood shed and butcher house, large barn, cribs and granary, good well and wind mill, fenced and cross fenced. Improvements all new and in best of repair. Price \$100 per acre. **The Nelson Real Estate & Imp. Co.,** Wichita, Kan.

SOLD, and you did not get it. The 155 acre farm advertised last week is sold and is now on the market for 30 days only at \$6400. I now have two other bargains on my list.

160 acres 4 miles from Mound Valley, small two room house, stable for 8 horses, creek running through farm, land all in cultivation. Price \$4,800.

155 acres adjoining town, brick sidewalk right into city, 110 acres in cultivation, balance pasture with creek running through it, fair 6 room house and stable, telephone, rural route and natural gas privileges; an extra good location. Price \$8,000. Come and see, or write.

J. P. DONOHUE, Kansas.
Mound Valley.

FOR SALE—THE CHEAPEST FARM IN EASTERN KANSAS.

This splendid little grain and stock farm is situated 3 miles from Moran a town with three railroads and in the eastern part of Allen Co. 100 acres of this farm is first bottom land that does not overflow and a soil that is not surpassed in any country. About 100 acres is rolling but produces big grass and is fine pasture land. This farm is fenced on the outside and cross fenced with wire and hedge. There is a good 5 room cottage dwelling (new) and a very good barn and along the creek that flows through this farm there is a fine body of young timber and in this timber there is no less than 1,500 young black walnut trees that range from 6 to 12 inches in size. In the creek there is a never failing supply of good, clear, stock water. This farm is offered for \$7,500 if sold by July 1, 1909. It is owned by a non-resident. Is clear of incumbrance, and the owner will give long time on the major part of the purchase price if time is desired. For additional information write **J. O. SMITH,** Moran, Kan.

General Stock of Merchandise for Sale

Invoice about \$7500.00, including fixtures, stock of drygoods, groceries, boots and shoes. Doing about \$2,500.00 worth of business a month. P. O. in connection, good live railroad town and farming country. Only one other store in town. A snap for some good young man. Good reason for selling. Also good 200-acre farm, well improved for \$8,500. Address, **AGENT, BOX 111, McFARLAND, KANSAS.**

EUREKA.

No. 48, a splendid 160 acre farm, rich soil, all can be farmed, 65 acres in crop, ¼ with farm, 8 miles of Dodge City, county seat, for the low price of \$2,700. Got to have money; if you want a bargain get next: "nough said!" Send for big list. Address

STINSON & WEYAND, Kansas.
Spearville.

Farm Bargains.

320 acres good land, 5 miles from town, 250 acres in cultivation. 200 acres wheat, one-third crop goes to purchaser. House, barn, well, some trees, fine alfalfa, corn, and wheat land. Price \$35 per acre.

YOUNG & GILES, Kansas.
Great Bend.

200 TRADES.

Large list of farms, ranches, income property, merchandise and hardware stocks, hotels, livery stocks. List your property with us, giving complete description. We can get what you want. No sale, no pay. Is our motto. Write at once.

BERSIE REAL ESTATE AGENCY,
Eldorado, Kansas.

500 TRADES.

We have the largest list of farms, ranches, income property, merchandise, hardware, hotels, liversies, etc., of any firm in the West. We print description of your property on our list, and will get you a good honest trade of just what you want.

GRAHAM BROTHERS,
Eldorado, Kan.

TEXAS STATE LAND \$1 TO \$4 AN ACRE

School lands in different counties; more than 1,000,000 acres to be sold before June 30; one-fortieth cash and the balance in 40 years; you can buy 320 acres of the best; pay \$32 cash and no more for 40 years, but 8 per cent interest on the balance; as good land as Kansas—Missouri or Illinois at \$150 per acre, and better climate. Write us for further information. Inclose 6c for reply.

INVESTOR PUBLISHING CO., Amarillo, Texas.
Dept. B.

ARE YOU LOOKING FOR A HOME?

No farmer should think of buying a home before seeing a copy of **THE FARM AND REAL ESTATE JOURNAL.** It contains the largest list of farm lands, city property and stocks of goods of any paper published west of Chicago. It reaches 50,000 readers each issue, 85 per cent of whom are farmers. Every one who has any property they wish to advertise will find this journal one of the best advertising mediums published. Advertising rates, 2c per word each insertion. Send 75c and we will mail you the journal for one year, or for 10c in silver or stamps we will send it for two months on trial and stop it at the end of the two months unless you renew your subscription. **FARM AND REAL ESTATE JOURNAL, TRAER, IOWA.**

THREE EXTRA FINE BARGAINS.

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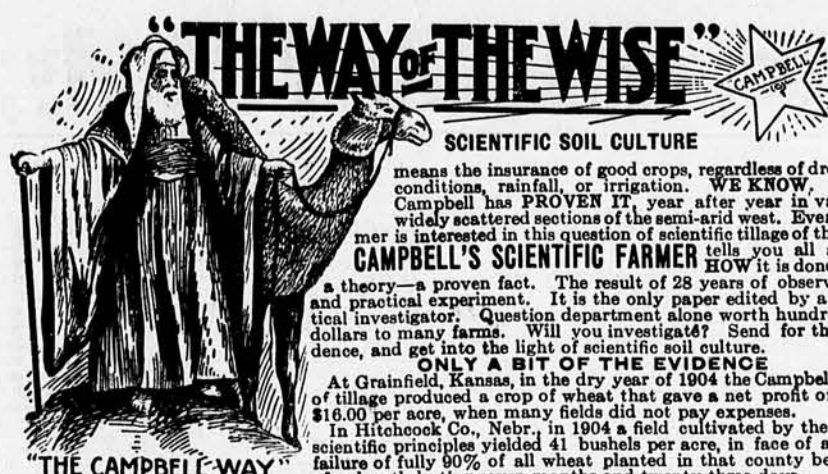
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The Stray List

Jackson County—J. W. Martin, Clerk. **STEER.**—Taken up March 20, 1909, by J. L. Dougherty, in Pottawatomie Reservation, one 3-year-old roan steer; K. C. on left side and split in left ear; valued at \$30.



THE CAMPBELL WAY

At North Platte, Nebr., at the branch experimental farm of the State Agricultural College, by following the Campbell method of tillage to the letter in 1907, 62 bushels of winter wheat were grown per acre, and in 1908, 87 bushels. Near Guyman, Okla., in 1908, a marvelous demonstration of the fact that scientific soil culture as outlined by Mr. Campbell does bring results, was demonstrated. A very large percent of the wheat was a failure because of drouthy conditions beginning in August, 1907, and continuing until after wheat harvest, yet this field produced 53 bushels to the acre. Wheat at the nearest station was worth 90 cents. "Think of it" \$47.70 gross income per acre, just because he had learned how while nearly all his neighbors got nothing because they did not know how.

WHY NOT BE WISE? The magazine is \$1 per year. We send you a trial subscription of 3 months for 10 cents; a sample copy and soil culture literature free for asking. Write today and learn the Way of the Wise, CAMPBELL SOIL CULTURE COMPANY, 1417 O ST., LINCOLN, NEBR., DEPT. C.

Keeps Food Perfectly Without Ice

The W. M. Iceless Refrigerator Quickly Pays for Itself in Money Saved and Then Earns Big Dividends for YEARS Afterward.

The discovery of how to keep food without ice in all weathers is saving the housewives of this country thousands of dollars each year. Think of having your food always sweet and fresh with never a penny to pay for ice. This saving alone soon pays for the W. M. Iceless.

Or, if you don't use ice, the saving on food which would otherwise have to be thrown into the swirl tub because spoiled and unfit to eat would pay for it in a short time.

And after the W. M. Iceless has saved its cost then it earns dollars for you by saving them for years and years afterward—for it is so durable, sturdy and strong that it should last practically a lifetime.

The idea of keeping food without ice is brand new—although the principle on which it is done is as old as the hills.

When we dig a hole eight feet deep, or more, and keep it covered at the top, a thermometer placed at the bottom will not show more than a few degrees difference in temperature all the year round. The lower down we go, the colder it gets. Eight feet deep gives sufficient cold to keep any kind of food—or milk—or vegetables—better than the highest priced refrigerator you can buy and WITHOUT ICE. This may seem hard to believe until you remember that it is even temperature more than extreme cold that prevents spoiling. A refrigerator is never twice the same. It gets warmer as the ice melts. And some parts inside are always colder than others. In the W. M. Iceless the temperature is always even and unchanging—not more than a degree or two difference, whether 100° in the shade or 20° below zero, above ground.

So you see the



ICELESS Refrigerator

is really a cold storage plant which never needs ice. The illustration shows how it looks. The refrigerator slides up and down in an iron frame to just above high water mark in well or deep cistern. It works just as well in a hole specially dug. Even when filled with food, a child can raise or lower it without effort. It seems to only weigh a pound or two. The cover follows it down and automatically closes the opening so nothing can get in.

It can't wear or break or get out of order. The refrigerator part is steel, heavily galvanized—won't rust. The rope or cable is galvanized steel wire, practically indestructible. All other parts are iron. It's a wonderful invention.

To show you and every hard-worked woman what a wonderful time, labor and money saver it is we will send it anywhere on

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If you can bear to let it go after using it this long, we'll gladly take it back. Understand, there is not the slightest obligation to keep it or even to decide whether you want to keep it or not until you have tested and tried it right in your own home for a whole month. Write today for catalogue which tells of the different styles and select the particular one you wish to try. We'll send it at once. Be sure to write TODAY.

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KILLS LICE MITES TICKS KILLS

ERADICATES MANGE ON ALL ANIMALS.
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either Regular or with Self Feed. Lightest draft, greatest capacity and most simply constructed. Our FREE Catalogue contains reading matter that will be of much interest to you. Ask for it. EAGLE MFG. CO., 1005 Hickory St., Kansas City, Mo.

In Hay Baling than any other work the average farmer can do, especially if he uses an "EAGLE" STEEL PRESS



LIVE STOCK



Whitewash can be satisfactorily put on with a spray pump if the mixture is carefully strained before putting into the pump.

Seed in well-prepared soil which has been compacted will germinate much quicker than where the soil is too coarse and loose.

"Glucose," says Doctor Wiley, the purefood expert, "should be entirely eliminated from table syrups, and the pure products from the maple grove, the sorghum and cane fields used."

The Kansas Turkey Red fall wheat, which in the Northwest is said to ripen nearly three weeks sooner than the Blue-stem Spring, is now rapidly superseding the latter in the Walla Walla district in the state of Washington.

John W. Groves, secretary of the American Shorthorn Breeders' association, has notified the Yukon exposition live stock department that the executive committee appropriated \$2,500 in cash for special premiums to be competed for by exhibitors of Shorthorn cattle.

Is not the Texas Farmer unnecessarily worried? It says:

"Corn can be bought in South Africa at from 20 to 26 cents per bushel and laid down in New York at a cost of 52 1-2 to 58 1-2 cents per bushel, including all charges and duties. When the African cotton industry assumes anything like half the proportions it is capable of, the American will have more to worry him than he has yet encountered."

Watch the colt carefully. If he is kept tied in a stall without daily exercise he is sure to suffer from unsoundness, weakness of the joints and muscles and troubles with the digestion. At this time even deformities may be prevented. If the colt has a tendency to toe out and thus become knock-kneed it indicates that the hoofs are higher on the outside than they should be. By rasping this off so that he will stand flat he will outgrow this tendency.

Most people like some one breed of cattle, hogs or horses better than the others and there are still some who argue that grades or cross breeds are just as good as the pure breeds. There ought to be no two opinions in these modern days about the value of pure-bred stock. The difference between the pure bred and the scrub is just the difference between the self-binder and the old fashioned cradle. They will both harvest grain but at what a difference in economy?

The alfalfa growing in Kansas approximates nine hundred thousand acres, and but three cultivated crops exceed it in annual area, viz: wheat, corn and oats. In combination with these, alfalfa furnishes Kansans with the most complete and cheapest rations anywhere available for the maintenance of live stock, for the excellence of which they are famed. It is a perennial blessing to those so fortunate as to have an area devoted to its growing.

F. D. Coburn.

Observers estimate that there is an epidemic of hog cholera in Kansas about every three or four years. It may not be general in any one case but it is expensive. It is thought that such an epidemic costs the farmers of this state in direct results and after effects from a million to a million and a half of dollars. The average farmer may not know or care much about these general statements but when the cholera strikes his hogs he knows that he suffers heavy loss. This is why there has been for so many years such a great interest in so-called cholera cures and such great losses from enthusiasm the results obtained by experiments with the newly developed serum and be ready to lend a hand to assist those who are investigating and disseminating their knowledge.

Alfalfa vs. Clover and Timothy for Horses.

Have you any data bearing on the relative food values of red clover and timothy, mixed, and alfalfa for stock? —E. E. P., Barclay, Kan.

Alfalfa contains about twice as much digestible protein as the mixture of red clover and timothy, and for cattle it is undoubtedly a superior hay especially for growing animals. The chief use of timothy hay is in the feeding of horses and its value here lies mainly in the fact that it is almost invariably free from dust. A good many horsemen prefer to have some red clover mixed with the timothy as the red clover really has a higher feeding value. A great many horsemen use alfalfa for horses, but there is some difference of opinion as to just the extent to which it may be used for this purpose. Owing to the large quantity of nutrients which it contains there is considerable danger of a horse getting too much. The great liability to dust likewise makes it in many cases undesirable. As a general statement I would say that good alfalfa hay is superior in feeding value to a mixture of red clover and timothy.

Cholera Serum Test At the Kansas City Stock Yards.

Through Dr. C. J. Sihler, who was formerly in charge of the Government Bureau of Animal Inspection at Kansas City, the Union Stock Yards Co. propose to make an extensive series of tests with the cholera-serum for the cure and prevention of hog cholera.

This serum was first discovered by the Bureau of Animal Industry but developed by Dr. J. W. Conaway of the Missouri Experiment Station, who has experimented with it as far as the means at command would allow but never on a very extended scale.

As there are now about 3,700,000 hogs passing through the Union Stock Yards at Kansas City each year and as some of these hogs are always ef-

WOOL

We are in the market for all grades.

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YOU BELIEVE IN

Clean Cattle? Sure.

YOU KNOW clean cattle are worth several dollars per head more than cattle that are mangy or lousy.

YOU KNOW that cattle free from flies and insect pests will thrive better, give more milk and make more beef.

PERHAPS you don't know that by spraying your cattle about once a month at a very small cost you can keep them free from all flies and insects.

PERHAPS YOU don't know that you can buy a Seabury Spraying Machine for a price so low that you will save its cost in less than a year's time. Only \$125 and upward. Cost of spraying is only a few cents per head.

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ABSORBINE, JR., for mankind, \$1.00 per bottle. Reduces Varicose Veins, Varicocoele, Hydrocele, Gout, Wens, Strains, Bruises, stops Pain and Inflammation.

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The best and cheapest ear mark made. It possesses more points of merit than any other tag. Send for sample. Mention Kansas Farmer.

H. C. STOLL, Beatrice, Neb.

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CRITTENDEN & CO., Dept. 32 Cleveland, Ohio.

When writing to advertisers please mention Kansas Farmer.

fecting this will afford an extraordinary opportunity for testing the value of the serum. Heretofore the test had been made in small and isolated herds but the new proposition will have a large influence with hog raisers throughout the country as about ten thousand hogs per day are received there from many different sections. The Stock Yards Co. will start this work but its proportions are so great that the legislatures of Kansas and Missouri will be given an opportunity to assist in a financial way for the benefit of their citizens.

Why Hog Product Is Popular.

"Every immigrant reaching an American port from Europe means increased consumption of hog product and they are landing by the thousand now," said a provision expert. Recent arrivals from Europe are not beef eaters. They can get so many kinds of hog product, from pigs' feet to sausage, and cook it in so many ways that it forms their exclusive meat diet. Of mutton they know nothing and care less, except it be the Greeks who are heavy consumers of low-grade muttons, picking up the refuse of the market. In the South hog product enjoys undisputed popularity by reason of its palatability and the ease with which it is preserved. High-priced and poor beef, consequent on scarcity of corn, has seriously contracted consumption of that meat, while more pork is being eaten than ever before. Burdensome stocks, once the rule, never occur now and packers cellars are usually as bare as the average corn-crib. Retailers handle lambs, bacon, lard, pork loins and other hog product at relatively smaller margins of profit than either beef or mutton, so that these meats are well within the reach of the masses even when business is depressed. Hog product has been properly termed the strongest and cheapest food on the market and its popularity never will wane. It is doubtful if during the next decade production will increase at a more rapid rate than consumption or that hogs ever will be cheap.

Profit in Hogs.

The first requisite in economic swine production is the proper selection of the sire and dam. The brood sow should not only be right to start with, but by proper care and management be so kept until old age, or just as long as she is profitable in her sphere as a mother and producer of good, strong, healthful litters.

In selecting my brood sows I choose them in reference to certain qualifications. I select a sow that has a strong, short head, with medium size ears, set wide apart. I want her to be deep and wide, with plenty of room in the region of the heart, so as to insure plenty of vigor and constitution, to withstand the hardships that she will be called upon to endure as a faithful mother in the herd. I want her long from the fore flank to the hind flank, giving her plenty of room for a strong, well-developed udder.

I want a slightly arched back, nearly level and wide. A high-arched back is nearly always a narrow one. I want her to have all the scale and bone that is consistent with good quality. Then I want her to have a good disposition. A good disposition is represented by a quiet temperament and an inclination to recognize the rights of the herdsman around the hog house at farrowing time. The eye bespeaks the disposition to such a degree that a large, mild eye can be relied upon to give you a sow that will prove satisfactory.

Let me suggest that a noisy sow is not always a vicious one. I would much rather have a sow that was at all times alert to the best interest of her brood than one so sluggish as to lie down on her pigs and be lulled to sleep by their dying squeals.

CARE IN SELECTING MALE.

I select a male of excellent individuality, backed by a strong pedigree. I want him to come as near to the requirements of the standard adopted by the association representing the breed to which this hog belongs as possible. I select both sire and dam from large litters, and consider this to be a very important point, as I know that you can breed fecundity into a herd of hogs the same as any other characteristic.

I feed my brood sows on a bone-and-muscle-producing ration, and try to have them gaining nicely at mating time, which time is when they are from 12 to 15 months of age. After they are bred I continue to feed

them a protein ration, so they will be able to farrow a large, strong litter of pigs, with plenty of bone. A feed of shorts, oats and a small quantity of oil meal, with a very little corn, will give the desired results. There is nothing so helpful as plenty of good, succulent pasture for the brood sow while she is carrying her litter of pigs.

I keep a record of the date of breeding, and place the sow in her individual farrowing pen a week before she is due to farrow. This gives her plenty of time to become reconciled to her new environments, and eliminates any risk that might come about by leaving her with the other sows. My farrowing pens are some 6x8, and some are 7x9 feet, so as to have suitable pens for the largest sows.

I at one time regarded fenders as a great protection for the little pigs against the carelessness of their mothers, but as I rarely ever lose any pigs by their mother's lying down upon them, I have of late years discarded them altogether. I do not condemn the fenders, however. In my own case I would rather have the room they take from the sow in the pen than the fenders themselves. I have my hog house sufficiently free from drafts so as to require very little bedding at farrowing time.

I find if I provide my sows with large quantities of bedding they construct a large, bowl-shaped nest, and some of the pigs roll off and fail to get back to the sow, and they chill and are lost. The pigs that are left will roll down into the basin of this nest, and the sow cannot help lying down upon them and smothering them in that way. So, as said above, I just want the mother to have enough material to satisfy her motherly instinct in the premises.

BE ON HAND WHEN PIGS COME.

I like to be present with my sows at farrowing time, but do not make my presence a source of annoyance to the sow by handling her pigs too much. I do not make a practice of putting the pigs in a basket or box and return them to the sow after she is through farrowing, but rather leave them to be guided by their own instincts in finding their first meal or nourishment. I have, however, by being present saved pigs that had wandered away from their mother and would have died, the same pigs sometimes growing into the choicest members of the whole litter.

A few hours after the sow has farrowed I give her a drink of milk-warm water, but not a bite of food until at least 36 hours. Now I give her a light ration of laxative nature if she has not been running on pasture. I want the pigs to be at least five or six weeks old before I get the mothers on full feed. Here is where 90% of the bad luck comes in. I believe all this so-called bad luck can be traced directly or indirectly to a deranged condition of the pig's digestive system, brought about by an improper feeding of the mother during the first month or six weeks of the pig's life. I give my pigs a fresh, clean, dry bed two to three times a week. Just as soon as the little fellows can wobble, and weather conditions will permit I make them get out and take exercise.

FEED FOR THE PIGS.

I now make a creep where I can feed the pigs to themselves a ration that will make them grow, for at the age of eight or ten weeks I want to wean them and breed the sows for an early fall litter. I shut the sows away from all pasture and put them on a scanty ration of strictly dry feed, and allow the pigs to go and come at their pleasure.

The pigs will soon find out that their mother is not giving milk enough for them to fool with, so they soon cease to go, and almost before they know they are weaned, and the sows have made the swing around the circle, and have not lost a single teat.

I now breed my sows for early fall litters. My pigs I give plenty of good, rich clover and blue grass pasture, and increase the corn in their ration. When they are six to eight months old and weigh from 200 to 225 pounds I send them to market.—W. D. M'Kee, Ray County, Mo.

The fact that the price of bread took a considerable rise coincident with the big bull speculative operations in wheat tends to concentrate the anathemas of breadeaters upon those who speculate in the material from which the staff of life is made.

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CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, most BLISTER ever used. Removes all bunches from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.

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Never failing cure for Spavin, Carb, Splint, Ringbone, all Lameness. Also a great family liniment. \$1 a Bottle for \$5. Ask druggists. "Treatise on the Horse" free at drug stores or address Dr. B. J. KENDALL COMPANY, Keosauqua Falls, Va.

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Newton's Heave, Cough, Distemper and Indigestion Cure. A Veterinary Remedy for Wind, Throat and Stomach troubles. \$1.00 per can, of dealers, or express prepaid. Send for booklet. The Newton Remedy Co., Toledo, Ohio.

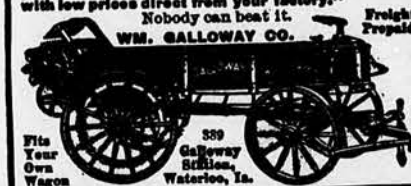
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Buy direct from the biggest spreader factory in the world—My price has made it—Save dealer's jobber and catalog house profit. No such price as I make on this high grade spreader has ever been made before in all manure spreader history. Here's the secret and reason: I make you a price on one based on a \$5,000 quantity and pay the freight right to your station. You only pay for actual material, labor and one small profit, based on this enormous quantity on a

GALLOWAY

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MODEL "J-650" Shown above, equipped complete with lamps, horn, rubber apron, full fenders, 1 1/2" solid rubber motor tires and roller-bearing axles. Price, \$825.00.

7 other Breeze Models from \$425 to \$850

The practical wisdom of using an automobile in the country, is best proved by the success of the "Breeze"—built strong and sturdy and simple—built to travel the roads and do the work you would require of it with the least trouble and bother to you.

Its 14 horse-power engine is readily understood and kept in order, and can be driven at a speed of anywhere from 4 to 25 miles an hour.

The "Breeze" goes through deep sand and mud, over high hills and along rough roads with ease, in good or bad weather. It means greater convenience, greater saving of time, greater comfort for all the family.

The "Breeze" is beautifully upholstered in green leather and handsomely painted.

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We still have some vacant territory in Kansas. You need no cash or previous experience. You earn cash profits selling our line of teas, coffees, extracts, toilet articles and veterinary remedies on the plan of \$20 worth of products for \$10.

REQUIREMENTS. The applicant must possess a clear character and be willing to work. Give names of two or more reliable and responsible people as references.

THE K. F. KING CO., 150 Kansas Avenue, Topeka, Kansas.



If dairying pays at all, fix to give the cows better care and feed and increase the profits.

"From nothing, nothing comes," is a trite old saying that is especially applicable to the man who thinks he should make money out of the old cow without giving her either feed or shelter.

The dairy farmer who wants to make money must read and study. He is engaged in business in which brains are more needed than brawn and the active head will keep up with the times.

It takes very little more feed and time to feed a skim milk calf that will gain two pounds per day than it does to feed it so that it will become a runt, but it does take thinking, patience, and careful attention to the little things.

More care will be found necessary in selecting a male to head the dairy herd than is given in the selection of the cows. If a herd is to be built up by raising the heifer calves, it will be found true that the bull is more than half the herd.

It is a filthy habit some farmers have of washing the farm machine only once a day when it has been used two times for separating. If the farm separator is not washed after or before each separating it becomes a factory for the manufacture of tainted milk and cream. Indifferent cow keeping is a money losing operation.

The experiment station of Wisconsin is conducting experiments in all parts of the state to determine the amount of butter fat produced by all pure herd herds of Holsteins. The tests were begun last fall. All reports are sent to the station and there placed on file to be published in bulletin form later.

Fly Repellant.

Soon the flies will begin to annoy the cows and calves. Here is a recipe for a repellant which is said to be quite effective: Resin, 1½ pounds; laundry soap, 2 cakes; fish oil, ½ pint; enough water to make three gallons. Dissolve the resin in a solution of soap and water by heating, add the fish oil and the rest of the water. Apply with a brush. If to be used as a spray, add ½ pint of kerosene. This mixture will cost from seven to eight cents per gallon, and may be used on

cows or calves. One-half pint of this mixture is considered enough for one application for a cow; a calf, of course, would require considerably less. It will be more economical to apply this only to the parts of the animal not reached by the tail. At first it will be necessary to give two or three applications per week, until the outer ends of the hair become coated with resin. After that, retouch those parts where the resin is rubbed off. This formula has been used by the Kansas Agricultural College successfully and recommended to Kansas farmers.

Success Of The Milking Season.

The success of the cow's milking season depends largely upon the treatment before calving. It pays to feed a few pounds of corn meal beginning six weeks before calving, getting her into good flesh and strong and if the grass is not good or sufficient to move the milk producing glands to activity we begin feeding bran a few weeks later, or we aim to have a cow so fed that she will be in condition to do her very best at production immediately after recovery from calving. A poorly fed cow will come fresh in a run down condition having made no preparation for milking, and the feeder will spend a month or six weeks of valuable time feeding the cow to her capacity and in nine out of every ten cases he will fail to get as good yield as if the feed had begun six weeks sooner. By careful, judicious feeding there is no danger in this process of treatment and it will pay enormously. Prof. Cottrell, of Manhattan says, and he knows, that a cow allowed to give a low yield for two months after calving cannot by any system of feeding known to him be brought to a high standard the remaining part of the year. If you are seeking the greatest return from your cow begin feeding before calving.

Supplement Short Pasture With Green Forage.

To the Kansas dairyman the most critical period of the milk season is that of the summer or fall when from drouth or hot winds the pastures are short and if not short the grass is too dry to sustain the milk flow. Unless some good feed is given at that time what might have been a successful milk season will become a disastrous failure. Fresh cows will so shrink that no quantity of winter feed will restore the flow and cows fresh in the spring will often dry completely or at best so shrink as to give an unprofitable quantity on winter ration, and even the dry cow, the cow to calve in the early

The Most Perfect Cream Separator That Money Can Buy.

The United States 1909 Models

Nos. 14 and 15, like all other sizes, are absolutely unequalled.

They are the standard Separators of the world.

They are entitled to this claim of being **Standard** because they won out in the greatest contest of Cream Separators ever held at any National or International Exposition in 50 consecutive runs, lasting through one month, on the milk of 10 different breeds of cows. The **De Laval Disc Separators** and the **Sharples Tubular Separators** were entered in this contest and were **beaten**.

The United States Separators are used by a very large percentage of the leading breeders in all the 10 leading dairy breeds of cows.

The United States Separators are used by progressive dairymen and creamerymen everywhere.

The United States Separators have **handsome frames, cast in one solid piece**. They have **waist low supply cans**. The **gears are all enclosed, dust proof and self oiling**. The bowls are most **simple in construction and easily washed** thoroughly in all parts in from two to five minutes. No long goose neck pipe in the United States to get foul and difficult to clean.

Dairy women as well as **experts consider that the United States is now the easiest cleaned, turns easiest, skims cleanest and wears longest**.

The United States was the originator of the enclosed, dust proof, self oiling gears. All others using this feature are imitators.

Send for illustrated catalogue and circular, No. 91

VERMONT FARM MACHINE CO.
BELLOWS FALLS, VERMONT



fall, will suffer from the scarcity of nutritious and milk stimulating food. Cows neglected at this time of the year are loath to forget and will surely take vengeance on the careless owner by retaliating at the milk pail.

To supplement short pasture give Kafir corn or sorghum night and morning, or Indian corn fed at this time with a good nubbins on each stalk will never yield a greater profit. Alfalfa fresh cut or hay is an ideal feed. After feeding green sorghum we have not only sustained the milk flow, but have made such gains that its use was continued, even after rains had put the pastures in reasonably good condition. In fact the feeding of these green feeds has been so highly successful in milk yield and so economical in production that I believe the practice of the soiling system in the early fall will permit our small farmers to double their dairy herds and enable them to produce at a greater profit than under present practices.

Dairying after the soiling system is not an impossibility in Kansas and

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Only 33.50 and up
"BATH IN OIL"
High Grade Separator—Direct
Save \$25 to \$50 direct at my factory price—freight prepaid. Get the only Separator that runs in "Bath of Oil," like a \$5,000 automobile. This alone is worth \$50 extra, but costs you nothing extra.
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Why pay \$85 to \$110 to dealers or agents who cannot sell you a separator equal to the Galloway—easiest skimmer—easiest run—easiest cleaned—10-year guarantee. Send for BOOK FREE
W. G. GALLOWAY CO.
888 Galloway Bldg., Waterloo, Ia.

when she has become truly a dairy state I predict that it will be practiced largely.

Skim-milk and Hogs.

KANSAS FARMER expects to spend a large part of its time endeavoring to convince farmers that skim-milk is one of the indispensable feeds produced on the farm. Its value is apparent when fed to stock of all kinds and no farmer can afford to consider making dairying a success without utilizing his skim-milk to the best advantage. A good cow will, in the course of a year, produce milk enough to supply four calves, and after her own calf has been reared it leaves an abundance for three hogs the remainder of the season. Milk so fed will yield the farmer a greater profit on his grain, his calves, pigs and chickens. The money value, of course, depends on the way it is fed and the amount. In this connection experiments conducted in Canada throw light on the value of skim-milk as a hog feed, and a bulletin says:

"Generally speaking, skim-milk may be said to be worth from one-sixth to one-fifth as much as an equal weight of mixed meal. By mixed meal they mean a meal composed of oats, peas and barley in equal parts, with as much corn as the other three. We would not go very far astray if we regarded it as worth from one-sixth to one-fifth as much as a mixture of oats and corn, half and half by weight. Its value, however, depends on the amount of the mixture of the milk and meal. The station found that where two pounds of milk were fed per day, one pound of corn was equal to 1.53 pounds of skim milk. If three pounds were fed per day it would require 3.23 pounds of skim-milk to equal one pound, not of corn, but of mixed grain. When 5.4 pounds of milk were fed per

Here are the Facts About Different Styles of Cream Separators

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OUR book contains *facts*, instead of *claims*, about cream separators, because the Empire Company is the only manufacturer that makes *different styles* of cream separators, embodying the two models of bowl construction that are *recognized* as standard. So you are offered not only the *choice* of styles which others do not give, but you get the uncolored *truth* about each style when you come to headquarters. There is no one "hobby" here for which everything must be claimed in order to make a sale. Take your choice of *Pattern, Capacity and Price* from

The EMPIRE LINE of Quality Cream Separators

The Frictionless Empire—The Empire Disc

In each pattern we offer you the best machine made in that style. EMPIRES differ in design but not in quality. They differ in price simply because one model costs more to produce than another. But—All are Backed by The Empire Guaranty—As Good As a Government Bond.
So, no matter what you have planned to pay, see the Empire Line. Remember, that the cheapest, flung-together, job-lot machine may look well and even skim well for two or three months. But they are "little white" separators. Money spent for such a separator is wasted. There are 365 days in the year. You want a separator that will do the work—one that is easy to turn and easy to clean, and that will stand the racket twice a day for many years.
Every EMPIRE, regardless of style, size or price, is that kind of a separator. Get an EMPIRE and be sure of service, satisfaction, profits.

DISC OR CONE BOWL

We show here the EMPIRE Disc. There are other disc separators—some higher priced, but there is no other disc at any price.

EMPIRE CREAM SEPARATOR COMPANY, Chicago, Ill. Factory—Bloomfield, N. J.

that will skim as close, turn as easily or is as easily cleaned as the EMPIRE. In fact, no other disc separator can be kept perfectly sweet and sanitary like the EMPIRE. The bowl of the EMPIRE is the only simple disc bowl. The reason is, the greatest separator experts, inventors, the top-notch mechanics are Empire men; these men are given the best materials and the best facilities in the world to work with. The original cone bowl separator is the Frictionless Empire. This machine established the name EMPIRE in its leading place years ago. Hundreds of thousands of these favorite separators are in use today. We have books of letters praising it, we will send you the story, as told by the users, if you say the word.
The point that must interest your pocketbook is that either one of these EMPIRES will make more money for you than any other separator to be had, regardless of style and price. Furthermore, no matter how few or how many cows you have, you will find just the right sized separator at the right price in both styles of Empires.
And whether you buy the highest priced or the lowest priced Empire, your separator will be backed by the same Empire Guaranty, as good as a Government Bond.
Write For The Book of Facts. It is FREE.



May 8, 1909.

head per day, it would require 5.38 pounds of skim-milk to equal one pound of the mixed grains, while when 15.17 pounds were fed it required 7.34 pounds of skim-milk to equal one pound of the mixed grain."

This corroborates experiments made at other stations, or, in other words, it establishes the facts that the smaller amount of milk is fed in proportion to corn the greater the money value of the milk. The way, therefore, is to feed milk in connection with corn; not milk for awhile and then corn for awhile, not milk to a few hogs and corn to the rest, but feed what milk you have to all, and the smaller proportion of milk you feed the more value you get out of it per pound.

Keeping Up Fertility.

No one will accuse Hoard's Dairyman of unfriendliness towards the dairy industry. But, Hoard's Dairyman is honest above all things. In its last number it sounds the following warning:

"Twenty-two years ago, that veteran Wisconsin dairyman, Chas. R. Beach, in an address before the Wisconsin Dairymen's Association at Sparta said:

"I know that many seem to entertain the opinion that to make a farm productive one has only to stack it with cows. Nothing can be more fallacious. I have long held to the opinion that under our present system of farming, the man who fully stocks his farm with cows and sends the milk to a factory, cannot maintain the fertility of his farm, if he depends exclusively for feed upon what he grows on his own farm."

"That was true twenty years ago; it is true now. Yet thousands of farmers are deceiving themselves with the idea, that because they keep cows and buy no outside feed or fertilizer, they can keep up the farm. It is a most serious mistake, one that has destroyed the productive power of eastern farms very greatly and will in time do the same for the farms of the Middle West.

"If these men were the students they ought to be, if they would study the nature of their soil, look into the science of the thing a little, they would understand what Dr. Hopknis of Illinois and Prof. Whitson of Wisconsin mean, when they urge upon the farmers to save their soil before it is too late.

"Take the one crop of oats, for instance. All over Southern Wisconsin a serious complaint has come from the farmers that they cannot raise oats as they used to. The straw makes a good growth but the well developed grain is not there. The same is true of many portions of Michigan, Illinois and Iowa and is beginning to be felt in Southern Minnesota. Long years of constant cropping has taken the phosphate out of the soil and not a pound have these farmers put back by any special effort. It is high time the farmers everywhere began to listen to these scientific men who are spending a life time in close, accurate study of the soil and what it needs."

While the kind of dairying followed in Wisconsin, wherein the whole milk is taken to the creamery, carries far more fertility from the farm than does the method in Kansas where only the cream is sold, yet every kind of dairy farming is more favorable to the maintenance of fertility than is grain farming. The warning to conserve fertility as a resource difficult to replace deserves most careful consideration on the part of every owner of land.

Some Experiences With Cows.

Charles Foss of Stephenson county, Ill., is a dairyman who isn't afraid to feed his cows liberally on a balanced ration, no matter what the price of feed. He believes it pays and gives the following figures in proof: After carefully weighing the feed he found he was using \$17.50 worth per week for twelve cows, and he knew that these twelve cows were returning him \$36.25 worth of butter-fat per week, besides 2,400 pounds of skim-milk estimated at \$6, making the total receipts \$42.25, and the net profit \$24.75 per week. These cows returned \$2.45 for every dollar's worth of feed consumed. Last year his herd returned on the average \$116.36 worth of butter and \$20 worth of skim-milk; a total of \$136.35 per cow. The feed cost \$52, leaving \$84.35 per cow net profit. The herd returned as the average of the year, \$2.62 for every dollar's worth of feed consumed. Mr. Foss has two cows which have several weeks this winter averaged him a return of \$4.28

for every \$1.50 worth of feed consumed.

Mr. Foss reports other experiences, as follows:

Cow No. 1 has a record of 272 pounds of butter-fat; cow No. 14, of 246 pounds. The calves of these cows were sired by a pure bred Holstein of good type. These calves have grown to cows and in three lactation periods one of them has produced respectively 303 pounds, 345 pounds and 361 pounds of butter-fat in 12 months, her last year's record exceeding her dam's by nearly 3,000 pounds of milk and 89 pounds of fat. The other has a record of 254 pounds, 272 pounds, and a gain of 28½ per cent in the first five months of the present lactation period. Here is an increase of about 100 pounds of fat over the four years' record of her dam. The improvement in both cases is due to the use of a good sire.

Cows No. 1 and 14 returned an average net profit of \$50 each per annum; their daughters, \$80 each, an increase of \$35, or 70 per cent, over that of their dams. A herd of 20 cows like these daughters is equal to a herd of 34 cows like their dams.

In order that heifers may develop into profitable cows they must not only be well-bred, but must be well-nourished on nitrogenous food and kept in clean, dry quarters from birth to maturity. We need not look for much improvement in our dairy herds unless we give the calves proper care and food. The most valuable feed for calves is skim-milk, alfalfa, clover hay and silage.

A Bushel of Corn East and West.

Correspondent of KANSAS FARMER raised the question of the amount of corn contained in a bushel as reported to the U. S. Bureau of Statistics and suggested that in New England a bushel of corn may mean a bushel of ears whereas in all the West a bushel of corn means 56 pounds of shelled corn. To get the best possible information on this subject KANSAS FARMER passed the inquiry up to the Bureau of Statistics from which the following reply was received:

I beg to acknowledge receipt of your letter, referring to the question of the unit of measurement of corn used by the Bureau of Statistics in its estimate of the yield per acre in the United States.

The schedule which this Bureau sent to its correspondents last November, in which was asked the yield per acre of corn, had the following wording:

"Corn—Average yield per acre—Bushels of 70 pounds in ear."

You will observe, from this statement, that it is made definite that the yield per acre, as estimated by this Bureau, is understood to be in units of 70 pounds per ear corn. A bushel of ear corn weighing 70 pounds is understood to be equivalent to a bushel of shelled corn of 56 pounds.

Inasmuch as our query specifically calls for the yield per acre in bushels of 70 pounds in ear, there appears to be no reason to believe that in these sections where but little of the corn is shelled a measured bushel is indicated in the reports. In other words, the estimates of all states are made on the same basis. In comparing the yield per acre in the New England states with the yield per acre in some of the Western states, it should be remembered that cultivation in the New England states, as a rule, is on a more intensive scale than in the West. The average size of a corn field in Kansas is between five and ten times greater than the average size of a corn field in the New England states.—Victor H. Olmsted, Chief of Bureau.

In the further evolution of our democracy, many matters present themselves for consideration and adjustment. Chief in importance, however, is the matter of governmental regulation. Repugnant as the doctrine of socialism may seem to many, and so utterly foreign to the very spirit of our constitution, I believe that the machinery of our government, without restricting growth, should be so adjusted as to regulate great and powerful establishments of the country, agricultural, railroad and industrial, and to punish and prevent all corporate abuses.—Henry Cleues.

Grazing privilege in the Flint Hills of Kansas is this year costing the cattle man \$4 to \$4.50 per steer. This is nearly double what was paid a few years ago.

Some of the best thinking is done while watching the furrows turn over.

REAL AND FAKE CREAM SEPARATOR IMPROVEMENTS

A year ago, in keeping with its policy of ALWAYS HOLDING A POSITION FAR IN ADVANCE OF ALL ATTEMPTED COMPETITION, the DE LAVAL Company put on the market an entire new line of Improved Farm and Dairy sizes of cream separators.

They were brand new in every part, from the supply can at the very top to the shape of the base at the very bottom, and reflected the result of three years of study, experiment and test by the DE LAVAL engineers and experts throughout the world, based on thirty years of experience in cream separator invention, development and use.

Every good feature of previous DE LAVAL machines was bettered and many new and novel ones added, accomplishing greater simplicity of construction, ease of cleaning and replacement of parts; less cost of repairs where necessary; easier hand operation; more complete separation under hard conditions; greater capacity, and a material reduction of prices in proportion to capacity.

A year of practical experience in the actual sale and use of 100,000 of the new machines in 1908 but served to suggest still greater refinement of manufacture and a few finishing touches of perfection in the details of construction of the new line of machines as they are now offered to 1909 buyers.

The 1908-1909 changes in the DE LAVAL machines on the whole have been SO COMPLETE AND REMARKABLE that the man who hasn't seen and used an Improved DE LAVAL really cannot know what the perfect, up-to-date cream separator is TODAY.

The new DE LAVAL machines literally "SWEEP THE FIELD" in 1908 and competition was driven to such desperate extremity that THIS YEAR most of them have come out with all kinds of CLAIMED advertising and catalogue "improvements." Nearly everybody has an "IMPROVED" 1909 machine and is making a PLAY for business on that basis.

But we make the POSITIVE STATEMENT that there is not A SINGLE NEW OR ACTUAL IMPROVEMENT in any of them, and while some features have been bettered it has been merely through the appropriation of DE LAVAL ideas from TWO TO TWENTY YEARS OLD and in most cases long since discarded in DE LAVAL construction.

That's a PLAIN STATEMENT, made in plain words that no one can fail to understand. It has the knowledge, experience, reputation and capital of the DE LAVAL Company behind it. Some people won't heed it; some people won't believe it. That will be their loss. Those who do will profit and benefit by it.

We stand ready to PROVE IT to any one desirous of buying a separator for the first time or of trading in an old and out-of-date machine for a new one.

THE DE LAVAL SEPARATOR CO.

4 E. Madison St.,
CHICAGO
1213-1215 Filbert St.
PHILADELPHIA
Drum & Sacramento
SAN FRANCISCO

General Offices:
165 BROADWAY
NEW YORK.

173-177 William St.,
MONTREAL
14 & 16 Princess St.,
WINNIPEG
107 First St.,
PORTLAND, ORE.

HORTICULTURE



The Strength of Timber Treated with Preservatives.

With the increasing use of timber, preserved in one way or another against decay and fire, it is important to determine the effect which the preserving process has upon the strength of the preserved timber. Many engineers believe that creosoted timber is more brittle and less capable of withstanding strains than the same timber before being treated with creosote. This is particularly true with bridge timber and piling.

Most of the tests hitherto made with preserved timber were made by comparing results of tests on treated sticks with results on untreated sticks. In many instances these turned out in favor of the untreated timber. The reason why such tests are unfair to the preservative is that in the process of preservation two factors enter: (1) The actual process of impregnation with a preserving substance, and (2) The preliminary processes of steam seasoning, in the majority of treating plants in the United States. A piece of timber subsequently treated with creosote may be steamed to such an extent that the timber becomes exceedingly brittle. This, obviously, will be the fault of the steaming and not of the creosote.

Timber preservation divides itself broadly into three stages: First, the preliminary preparation; second, the actual preservative process; and, third, the treatment of timber following preservation. The final strength of the timber may be influenced materially by each of the stages.

The Bureau of Forestry erected an extensive plant for carrying on a series of investigations of the methods for preserving timber, and of the influence various preservative processes have upon the strength of timber.

A general plan was pursued in accordance with the following outline:

(1) To determine the effect of the preliminary processes, such as steaming, on the mechanical properties of the timber.

(2) To determine the effect of preservatives on the strength of timber, eliminating the effect of the preliminary processes.

The effects of the preliminary processes were determined only on loblolly pine. Both green and seasoned timber was used. The preservative fluids investigated included only creosote and zinc chlorid.

In testing the influence of preliminary processes a 3-foot section was cut from one end of each timber and sawed up into test pieces, which furnished a basis of comparison between (1) the results of tests on these "control" pieces, and (2) the results on test pieces taken from the remaining 8-foot section after the latter had been subjected to the various preliminary seasoning processes in the treating cylinder.

In testing the effect of preservatives themselves the entire 11-foot timber was subjected to the preliminary seasoning processes, after which a 3-foot section was cut from the end of each timber. The 3-foot section thus having been subjected to the preliminary seasoning processes formed a basis of comparison with the remaining 8-foot section, which was treated with the preservatives. In this way the separate effects of the preliminary processes and the effects of the preservatives could be isolated and determined.

The test pieces were subjected to crossbending strain, compression along the grain under both static and impact conditions, and under shearing parallel to the grain and compression at right angles to the grain under static conditions.

Ordinarily the strength tests were made immediately after treatment in the cylinder. In order, however, to determine what weakness might be introduced by changes in the physical condition of the preservatives in the wood through lapse of time, a complete series has been set aside for subsequent operations. An additional set of test pieces has been loaded with different percentages of the strength, as exhibited under the ordinary tests, and this load allowed to act for long

periods of time, the deflections being measured from day to day.

It is found that the steaming process weakens the resistance of the wood fiber to both static and impact loadings. It may be stated that this diminution of strength is very nearly in direct proportion to the length of time that any given steam pressure is applied. The diminution of strength was found to be 25 per cent after a pressure of 20 pounds was applied for ten hours to green loblolly pine, and 10 per cent when a pressure of 20 pounds was applied for four hours. This diminution of strength increased very rapidly when the pressure rose above 20 pounds, and amounted to about 25 per cent when a pressure of 50 pounds was applied for four hours.

It will be easily seen that when the conditions of time and pressure are made very severe, the conditions prevailing in a pulp mill industry will be approximated. Evidently it is well to avoid when possible the use of these preliminary steaming operations in the wood preserving industry.

With relation to the effect of preservatives themselves, the latter is distinct from the preliminary process. It may be said that the treatment with zinc chlorid does not seem to further reduce the strength of timber beyond the effect of the steaming process. This might have been expected when it is considered that the strength of the zinc chlorid solution ordinarily used does not exceed 2½ per cent. The strength of timber that had been treated with the 2½ per cent solution of zinc chlorid after having been steamed four hours at 20 pounds pressure was the same as that of timber which had been steamed without the subsequent application of zinc chlorid. The same statement may be made of timber treated with an 8½ per cent solution of zinc chlorid.

The effects of the creosote appears to be the same as that of an equal amount of water in weakening the fiber. That is to say the strength of creosoted timber is that of green timber. The difference is that while green timber gains strength upon seasoning, the creosote oil remains in the wood, and, it appears from analysis of a pile 35 years old, that the oil remains in a liquid condition. Consequently, comparison between seasoned timber and creosoted timber will always result to the disadvantage of the latter as far as its strength is concerned.

How to Fight Woolly Aphis.

F. M. Funk, of Canada, Kan., in a letter to KANSAS FARMER and a subsequent letter to T. J. Headlee, gives account of damage to his orchard trees and to his gooseberries from which the following description is compiled:

"The apple trees were planted in the spring of 1897 and grew well until the last four years, when they began to die. Some were blown down that seemed healthy, but in looking at the roots, it was found that all, except one or two, were decayed. The first years corn was planted in the orchard, later on no corn was planted, but the orchard was kept in cultivation. The soil is black with porous subsoil. Water is 12 feet below surface. A nursery man who examined the trees and their roots claimed the woolly aphis was the cause of it, and advised to use powdered tobacco on their roots.

"Some of the apple trees showed a sickly appearance previous to dying, but some did not. In examining the roots of the sickly looking trees the knots and whitish wax on the roots were found. The Missouri Pippin, the Gano, and the Yellow Transparent have suffered most from knotty roots and whitish wax. A Keeper tree, a late variety, looked bright and green to the day it was blown down; and when looking at it found, it had but one sound root, the other roots were decayed close to the trunk.

"Our gooseberries are covered with a whitish fungus when they are about half grown. When so affected they either drop or get dwarfed. The gooseberry bushes are about ten years old.—F. N. Funk."

Some Lightning Rod History



ORIGINALITY—Over 20 years ago Prof. Dodd was nearly killed because he was standing near the screen door when the house was struck by lightning. He is of an investigating nature and much given to scientific research, and when the thunderbolt came so near to him his thoughts naturally turned in that direction. He wondered why it was more dangerous near the screen door than some other places. He wondered why some houses were struck and others not, and to help him in his investigations he arranged a machine to make a stroke of lightning, and with this he experimented and investigated until he learned why some things were never struck, and he satisfied himself that lightning never occurs without a cause. His next step was to discover the most satisfactory means of removing the cause. It was about three years before this was done, but the record of buildings protected by the lightning rods he invented shows that his method is correct.

STABILITY—It is understood by everybody that many of our most important inventions are lost to general use because the successful inventor does not have the proper training nor the inclination to properly handle the sales of his invention, and no one cares to buy an article unless it is made by a firm with sufficient capital to stand behind the goods manufactured, and it is here that Mr. A. D. Struthers, business manager of Dodd & Struthers, has proved his mettle. When Prof. Dodd was satisfied that his invention was of value, he looked about him for a man to manage the business—someone who could finance it, buy the materials to the best advantage, look after the details of manufacturing, and direct the sales force. Mr. Struthers was just the man he wanted—he was a man of rare judgment, a keen business man, with years of experience and with success a part of his make-up. For him to take hold of a business guaranteed its success. This, however, was his biggest undertaking. The lightning rod business was in disrepute, and lightning rods were being sold mostly by men who were thoroughly unscrupulous, and his first work was to get the business on a higher plane. Prof. Dodd lectured to insurance companies, and Mr. Struthers talked with leading business men everywhere, and the result was to establish as sales agents for Dodd & Struthers a clean, honest, conscientious list of business men, and the grafters were largely driven out. Now Mr. Struthers' time is largely taken up in handling the finances of the great business built up by the combined efforts of these two men. This business now covers the largest part of the United States, and their goods are sent to the farthest corners of the earth.



QUALITY—One of the basic principles of business is that the article sold shall be worth the price it sells for, and quality is an important factor. In buying lightning rods especially the quality must be of the very best, for the lives and property of the customer depend upon its doing the work for which it was intended, and here is where Dodd & Struthers stand in a class by themselves. In the cable they manufacture they use wire that is as pure as copper wire can be drawn, for uprights and points the material is carefully selected and no poor points can get past the inspector. For the making of couplers, and insuring them to be the best, a foundry is maintained, in fact Dodd & Struthers manufacture the goods they sell and can therefore know that they are right. In this way they can not only talk quality, but they can and do deliver it. The quality of the D. & S. goods is such that goods bearing their trade mark, D. & S., are recognized everywhere as the Standard, the acme of lightning rod construction.

REFERENCES and ENDORSEMENTS

—The National Association of Mutual Insurance Companies of the United States in convention assembled endorsed Prof. Dodd and recommended the use of the Dodd & Struthers lightning rods. Many other companies, both Mutual and Stock Companies, make discounts where the D. & S. rods are used. We received the highest award at the World's Fair at St. Louis and the Jamestown Tercentennial Exposition the highest award was also received.

C. H. Martin, President Peoples Savings Bank, Des Moines, Iowa, says:

We are pleased to recommend to you the firm of Dodd & Struthers, of this city, who have been customers of ours for many years. We have always found them honorable and upright in all their dealings and would consider them perfectly good for any contract they may make.

Geis Botsford, Secretary The Commercial Club, Des Moines, Iowa, says:

Dodd & Struthers are well known to us. We have watched this business grow and we look upon them as one of the leading institutions of our city.

Can you afford to risk any other Lightning Rods than these?

DODD & STRUTHERS,

Des Moines, Iowa



Professor Headlee furnishes a complete reply as follows:

Your account points clearly toward woolly aphis as the main cause of your trouble. Taking into consideration the injury that it has already accomplished, it would seem well to wage vigorous warfare against it wherever it appears. Unfortunately the methods of carrying out this warfare will not completely eradicate it and must be repeated as needed.

According to recent experiments performed by Professor Gillette in Colorado, the best time to treat for this louse above ground is in the early spring, a week or ten days before the buds open. Trees thoroughly drenched at this time with lime-sulfur wash were largely freed from woolly aphis, and by the same act rendered comparatively free from fungous diseases. It is probable that spraying with kerosene emulsion, soluble oils, tobacco or whale-oil soap solutions would also destroy the lice, but these sprays would not have the additional

advantage of destroying injurious fungi. The lime-sulfur should be home-made, fire-boiled, using 15 pounds of sulfur, 15 pounds of good unslaked lime to from 30 to 40 gallons of water. Following is a method of mixing the ingredients, taken from one of our circulars.

PREPARATION OF HOME, FIRE-BOILED LIME-SULFUR WASH.

To prepare 50 gallons of spray per hour place a thirty gallon iron kettle over an open fire or better over one confined by brick walls, place 7 to 10 gallons of water in kettle, put in 15 pounds of good unslaked lime, and add water as needed to keep slaking lime from sputtering. When the lime has broken up into a pasty mass, add 15 pounds of sulfur that has previously been rendered somewhat pasty by the addition of water, stir constantly and keep boiling for from 45 to 60 minutes, adding water as needed to prevent sputtering; by this time the liquid should have a dark red color. When the dark red color appears at

Stop! Look! Listen!

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The train for discriminating travelers—every comfort and luxury of the most up-to-date hotel—electric lighted throughout—a reading light in every berth. Meals served a la carte.

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Dining Car Meals and Service
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E. L. LOMAX, G. P. A., Union Pacific R. R. Co., Omaha, Nebr.
H. G. KAILL, A. G. F. & P. A., 901 Walnut St., Kansas City, Mo.

After 45 to 60 minutes of boiling, the mixture has reached its maximum efficiency. Careful chemical studies of the wash have shown that at this time the effective chemical compounds are best developed. Shorter boiling fails to produce them and longer boiling tends to destroy them.

The cooked wash of which there will be about 25 gallons, should be strained through a fine brass or wire strainer (about 20 threads to the inch) into the 50 gallon spray tank. The tank should be filled up with water and sprayed out at once upon the planting. Lime-sulfur wash, which has stood over night, will be less effective. If 100 gallons of spray is needed per hour, the mixture may be cooked in a 45 to 50 gallon kettle, or two thirty gallon kettles should be used.

The treatment of the roots should be closely followed by the application of Tanglefoot bands about the bases of the tree trunks, so that the lice can not migrate to the tops. A strip of strong paper, underlaid with a thin strip of cotton batting, should be tacked about the trunk of the tree a few inches from the ground. If the tree trunks are smooth and regular, nothing more will be needed to prevent the passage of lice beneath the band, but if rough and uneven it may be necessary to add cotton. The Tanglefoot, which is the same as that on "Tanglefoot" fly paper and which is handled by O. W. Thum Co., Grand Rapids, Mich., should be spread all over the outer surface of the paper band and renewed, as often as is nec-

essary to keep it sticky, through the summer.

Root treatments of the apple trees for woolly aphis is of only temporary value and to be resorted to when trees are evidently being injured. In such cases remove the earth to a depth of six inches from over the main roots for a distance of several feet on all sides of the tree and thoroughly drench the exposed portion of the roots with 10 per cent Kerosene emulsion, a similar strength soluble oil, or with Black Leaf Dip (1 to 50). As soon as the liquid has soaked in, the soil should be returned and packed in about the base of the tree. If the soil be very porous, the same result may be obtained by use of carbon bisulphide. Gillette obtained good results by applying the carbon bisulphide as follows: "A shovel was thrust deeply into the ground about 18 inches to two feet from the base of the tree with the blade broadcast to the tree. The handle was then tipped forward and the carbon bisulphide poured into the bottom and at the center of the opening at the back of the shovel. The shovel was then withdrawn and the earth packed upon the spot treated. The liquid was not poured directly upon the roots. From three to six holes were treated in this way about each tree and about three ounces of the liquid used. At this rate the cost of the material did not amount to as much as three cents per tree."

The root treatment must be renewed as often as the condition of the tree indicates the need.

Pure Bred Corn Pays.

Over in Missouri the Experiment Station sent out a lot of samples of pure bred corn to farmers in 80 counties. This corn was planted in the fields and tended as was the common corn. Reports from these farmers showed that the "pedigreed" corn brought a yield of 10 bushels per acre more than the other kinds with which it was compared. This was not up to the possibilities, by any means, but furnishes abundant food for thought.

Now suppose a case. In Kansas, last year, there were 7,057,535 acres planted to corn from which the farmers harvested a total of 150,640,516 bushels, or an average of about 21 bushels per acre. Suppose they had used pure bred seed with the results as good as those obtained by the Missouri farmers. This would have increased the average yield to more than 31 bushels of corn per acre or a total yield for the state of more than 225 million bushels. The value of the corn crop thus increased would have put nearly \$40,000,000 more cash in the pockets of our farmers than they did get and would have raised the average yield to the verge of respectability.

Now let us suppose that this extra \$40,000,000 which the farmers would have had if they had planted pure seed corn were invested at 5 per cent interest. The annual returns would endow the Agricultural College and Experiment Station with a greater fund than they have ever had but only with what they are entitled to and should have.

Green Bug Scares.

Scares about "green bugs" have been very few in Kansas this season. The KANSAS FARMER had a complaint from McPherson county which presented an apparently serious case of green bug invasion. The matter was referred to Professor Headlee of the State Agricultural College, who, in cooperation with Warren Knaus an eminent entomologist of McPherson, investigated the situation thoroughly. Green bugs in plenty had come in as described by the KANSAS FARMER correspondent, but they proved on expert examination to be a comparatively harmless kind. To be really dangerous, green bugs must be of the kind which entomologists call *Toxoptira graminum*.

Several reports of green bugs in Oklahoma were made public. These were investigated by L. A. Lovett, acting entomologist of the Oklahoma Experiment Station who states as follows:

"There is only one authentic report of the insect in the state. Mr. R. A. Robinson of Altus, Okla., sent in some specimens a few days ago of a supposed 'green bug' which is working on the oats there. This proved to be the *Toxoptira graminum*. In the letter which accompanied the sample, he remarks that the insects are making no headway. Various insect enemies seem to be getting in their work. I am fairly satisfied that this change for more temperate weather will prove the death knell of the green bug."

WYANDOTTES.

WHITE WYANDOTTE eggs for hatching from choice matings. \$1.50 per 15, \$5 per 100. S. W. Arts, Larned, Kan.

EGGS that hatch from stock that lay, win and pay, \$1.50 per 15. Special matings \$2 and \$2.50, in Silver Laced and White Wyandottes and Buff Rocks. D. A. Chacey, P. J., Leavenworth, Kan.

PARTRIDGE WYANDOTTES.

Eggs from birds scoring 93% to 98%, correct shapes, fine mahogany color, \$1.50 per 15, \$4 per 50. Birds have farm range. MRS. MINNIE K. OLARK, Lawrence, Kan.

Box 4, R. 2, Lawrence, Kan.

RHODE ISLAND REDS.

PURE BRED, undefeated, single comb Reds. 15—\$2.00, 100—\$6.00. Belle Tyler, Haven, Kan.

R. C. R. I. REDS exclusively, fine layers; eggs from selected pens \$1.50 for 15 eggs; from utility flock \$4.50 per 100. J. H. Cannon, Preston, Kan.

EGGS OF THREE GREAT VARIETIES. White Plymouth Rocks, White and Buff Wyandottes at only \$1 per sitting. I can also furnish White Rock and White Wyandotte eggs at \$6 per 100. My stock is first class. Order direct from this ad. MRS. W. C. TOPLIFF, Eshon, Kan.

ROSE AND SINGLE COMB RHODE ISLAND REDS.

In the last 6 years I have built up a flock of heavy weight, vigorous all the year round laying Reds. Have 200 females in 10 yards, mated to males scoring 90 to 94, to furnish eggs for hatching. Prices within the reach of all wanting fancy or utility stock. Illustrated catalog free. All stock sold I can spare this spring.

H. A. SIBLEY, Kansas.

BUFF ORPINGTONS.

BUFF ORPINGTONS—Ckls., pens, baby chicks, eggs. More first prizes State Fairs and State Shows than all other breeders. My Poultry Book, containing information worth hundreds of dollars to farmers sent for 10 cents. W. H. MAXWELL, R. 95, Topeka, Kan.

EGGS FOR HATCHING

FROM FINE STOCK—NONE BETTER.

S. C. Buff Orpingtons, extra fine in shape and color, standard weight, Cook strain. 1st, \$2 per 15, \$5 per 50, \$9 per 100; 2nd pen, \$1 per 15, \$3 per 50, \$5 per 100.

S. C. White Orpingtons, the big white beauties. Eggs \$2 per 15, \$5 per 50. All second pen eggs sold.

White Rocks, Fishel strain, and Rose Comb Reds, extra fine. Eggs same price as Buff Orpingtons. Baby chicks 20c and 30c each from any of above.

Diamond Jubilee Orpingtons, a few sittings at \$5 per 15, in sitting lots only. These Diamond Jubilee were the S. E. Wisconsin winners including 1st and 2nd hen. Baby chicks 50c each.

MRS. LIZZIE B. GRIFFITH, Emporia, Kan.

LEGHORNS.

S. C. B. LEGHORN EGGS—1st pen \$1.50, 2d pen \$1 per sitting. Range \$5 per 100. F. C. WILSON, Galva, Kan.

S. C. B. LEGHORNS—Range birds and vigorous. Eggs \$1.25 per 15, special prices on 100 or more. MRS. FRED FINUF, Olsburg, Kan.

JOHNSON'S LAYING STRAIN rose comb Brown Leghorns. Eggs 15 for \$1, 50 for \$1.75, 100 for \$2.50, 100 for \$4. Write H. A. Johnson, Formosa, Kan.

GALVA POULTRY YARDS—Breeder of R. I. W. Leghorns and White Wyandottes. Some Leghorn pullets to sell. Eggs in season. JOHN DITCH, Prop., Galva, Kan.

ROSE COMB BROWN LEGHORN and Black Langshan eggs from all my exhibition pens balance of season \$1 per 15, \$5 per 100. F. L. DUNABLE, Clay Center, Kan.

S. C. BUFF LEGHORNS—No stock. Eggs from prize winners. Pen No. 1, \$2.00 per 15; No. 2, \$1.50 per 15. Incubator lots, \$5.00 per 100. Mike Klein, Clay Center, Kan.

ROSE COMB BROWN LEGHORNS EXCLUSIVELY. Farm raised. Eggs per sitting of 15, \$1; per 50, \$2; per 100, \$3.50. F. M. MAHON, R. R. 3, Clyde, Cloud Co., Kan.

EGGS, EGGS, EGGS. R. C. B. Leghorns headed by cockerel scoring 94%, \$1 per 15, \$5.50 per 100. None but fresh eggs shipped. H. B. Walter, Effingham, Kan.

R. C. B. LEGHORNS and M. P. Duck eggs \$1.00 per 15. M. B. turkey eggs \$1.50 per 9. Also baby chicks 15c each. Hen eggs in incubator lots. Mrs. J. E. Wright, Wilmore, Kansas.

S. C. BROWN LEGHORNS. Prize winning, egg laying, money making kind. Pure standard bred. Eggs only \$1 per 15. \$1.50 per 30, \$2 per 50, \$2.50 per 100. L. H. HASTINGS, Quincey, Kansas.

LIGHT BRAHMAS.

LIGHT BRAHMA EGGS from birds scoring 93 to 94 by Judge Rhodes, \$1.50 per 15, large flock \$1 per 15, \$4 per 100. Baby chicks each month \$2 per dozen. MRS. A. P. WOOLVERTON, R. 8, Topeka, Kansas.

LIGHT BRAHMA eggs from high scoring birds, \$1.50 for 15, \$2.50 per 30, \$5 per 100. N. VAN BUSKIRK, Blue Mound, Kan.

BUFF COCHINS.

BEST BUFF COCHINS IN KANSAS. This variety exclusively. Can furnish eggs from prize winning stock at \$1.50 and \$2 per sitting. J. C. BAUGHMAN, Topeka, Kan.

POULTRY



The farmer's wife who has a few hundred laying hens these days of high-priced eggs, has a veritable gold mine right in her barnyard.

It behooves the poultry breeder to feed his hens quite liberally, even though chicken feed is high in price; for he must remember that eggs also are high in price and the laying hen will more than pay for her board no matter how high the feed market soars.

It will also pay to keep feeding the growing chicks all they will eat. Keep pushing them clear up to maturity; for it is the early-hatched pullets that will lay eggs next winter when the prices of the latter is bound to reach an abnormal height.

Charcoal has an important place in the feeding of poultry and granulated charcoal should be within the reach of fowls at all times. While charcoal has no strict nourishing properties; yet it is a powerful absorbent and will correct many disorders of the digestion and induce the fowls to eat more than they otherwise would.

A flock of lively chickens in an orchard will pick up thousands of insects and worms and the eggs that hatch them. The eating of these will supply them with animal food and do them lots of good and at the same time it prevents the insects from damaging the trees. To entice them into the orchard scatter grain along the path that you want them to take to get there. After they once get a taste of the bugs they will want to go again.

The Local Egg Market.

The following item from the daily Capital of last week shows the condition of the local egg market:

"The flurry in wheat on the Chicago stock exchange has evidently frightened the Kansas hen. At least, eggs are said to be higher now for this time of year than for twenty years. Eggs usually sell for 10 to 15 cents a dozen the last of April, but this year they are retailing for 18 cents. The grocers report a scarcity, and say they cannot buy enough to supply their trade.

The cold storage men are harder hit than the grocery man. This is the time when eggs are put in storage for next year. When hot weather comes, the eggs are heated and will not keep through the winter. But the cold storage men say that there are few eggs to be had. The result will be that they will be higher than ever next winter.

"I have been in business in Topeka twenty years," said E. E. Montgomery, yesterday, "and I never saw eggs scarcer and demanding a higher price this time a year than right now. The farmers are bringing in but few. They say that their hens have not begun to lay yet, which is unusual for this time of year.

"Another reason why eggs are high is that the supply was small last year, and few were put in cold storage. Then hens molted earlier than usual in the fall; this cut off the supply sooner than usual.

"Eggs will go up to forty cents a dozen next winter. This will be on account of the scarcity this spring."

The same conditions prevail over most of the country. Besides the reasons noted above, accounting for the scarcity of eggs, another may be stated, and that is, the high prices paid last fall and winter for hens induced the farmers to sell more of them than usual, which of course reduced the normal supply. The scarcity of hens means the scarcity of eggs. But the high prices now paid for eggs should not allure farmers to sell eggs for commercial purposes to such an extent as to leave an insufficiency for hatching purposes. On the contrary he should hatch all the chickens he can and get them out as early as possible so as to have plenty of laying pullets next winter when

eggs are bound to be exceedingly high in price.

"Peggy."

Peggy was always puny and of no account. Her father was one of those long necked, spindle legged, White Leghorn roosters that had very little vitality to transmit to his offspring, and her mother was a nervous, flighty little hen, so it wasn't much wonder that Peggy, who grew up on the College Campus, and was frightened half to death most every day by the horrible noises made by the bugler boys during drill hour, never amount to much.

Then besides, she was hatched by a lousy old Plymouth Rock hen, and had to scratch and fight lice all her life. Peggy started in her first winter with a bad case of roup, which developed from a neglected cold she contracted by roosting in an apple tree, during a cold wet spell of weather.

So she had a time of having her head dipped in coal-oil, her feed spoiled with a nasty medicine and her coop made almost uninhabitable by being washed with an ill smelling disinfectant. But she finally got well in spite of all the doctoring. As often happens in life, the strong vigorous ones succumb to the first little sickness while the weakling lives through everything.

When spring came with its warm sunshine and green grass, Peggy was singing around as blithely as any of the hens, so she was put in a feeding and laying experiment with a number of other young hens and all in the world she got to eat for a year, was a dirty ill-smelling beef scrap and shelled corn. She laid seven eggs that year.

The next year she fared a little better, having oats added to the bill of fare, and that year she donated 11 eggs toward her board bill.

This year she contracted another cold which caused a tumor to form in her face and very near caused her death. The superintendent removed the tumor taking one eye along with it, filled the hole with an antiseptic powder and Peggy got all right again.

The third year she got indigestion from having to eat the same kind of food all the time and had to be dosed with remedies for several weeks. This year she also laid only a few eggs. So she was put in a pen with several other worthless ones.

Everything has an end, and Peggy's came in the following manner: "One day a request came from the Domestic Science department for some hens to cook for faculty dinners. So Peggy was sent with the rest and went the way of all chicken flesh, if they live long enough.—W. A. Lamb, Manhattan, Kan.

How to Handle Geese.

We often asked, "Will it pay to raise geese? We have found in our 12 years of experience with geese that there is no stock on the farm that will give as much clear profit as our geese.

To make profit on any kind of stock one must give it reasonably good care and feed, and have good stock to start with. We have found that there is very little profit in scrub stock of any kind. It does not require any more feed to keep good stock than it does a scrub. Some people think because they do not have a lake or a creek for the geese they cannot raise them. We have raised hundreds of them without water to swim in. They will do just as well if they have all the water they want to drink, as if they have a lake to swim in, in fact the young are better off without swimming until fully feathered, at least.

THEIR WANTS ARE FEW.

There are several things in favor of raising geese. They do not require expensive buildings, as any ordinary shed will do that will keep off the snow and rain. In bad weather they will take to shelter, but in nice weather they prefer to be out in the open,

PLYMOUTH ROCKS.

PURE BRED BUFF ROCKS exclusively. Eggs 45 per 100; \$2.50 per 50; \$1 for 15. Mrs. W. Lovelace, Muscotah, Kan.

BUFF ROCKS—Vigorous, farm raised, prize winners. Eggs \$5 per 100; \$1 per 15; select matings \$2.50 per 15. Circular free. W. T. FERRIS, Box 406, Effingham, Kan.

BARRED ROCKS—Blue winners, 31 premiums at Clay Center. Eggs from double matings \$2 per 15, \$2.50 for 30; utility flock \$1 for 15, \$5 for 100. Address Mrs. D. M. Gillespie, Clay Center, Kan.

WINNERS AND LAYERS.

Send for 1903 mating and price list for our superb strains of Barred and White Plymouth Rocks.

SMITH & KNOFF, Mayetta, Kan.

R. D. S.

BARRED ROCK BARGAINS.

After May 1 eggs from my high scoring pens only \$1.50 per 15. Four settings for \$1. Range eggs 75c per 15.

MRS. CHAS. OSBORN, Eureka, Kansas.

Member A. F. A.

SHELLEY BROS. BARRED ROCKS WON

AT KANSAS STATE POULTRY SHOW.

Ten premiums with eleven birds entered. Eggs 15, \$2, 30, \$5 from best pens. Circular free, giving full information of stock and other winnings. Lock Box 7, Elmdale, Kan.

Lindenwood Barred Rocks

Win in best class in show room. My utility flock unsurpassed for eggs and market fowls. Prices for eggs from pens \$2 to \$3; from flock \$4 per 100. Send for circular. C. C. LINDAMOOD, Walton, Harvey Co., Kan.

EGGS! EGGS!

from Toulouse and Emden geese, Rowen and Pekin duck eggs, 18 for \$1. Colored Muscovy eggs, 12 for \$1. Bronze turkeys, Barred, White, and Buff Plymouth Rocks, Rose Comb and Single Comb White, Brown, and Buff Leghorns, Houdans, Buff Cochins, Cornish Indian Games, Partridge Cochins, Silver Spangled Hamburgs, Black Langshans, Rhode Island Reds, Buff, White, and Silver Laced Wyandottes, Buff Orpingtons, Pearl and White guineas, Seabrights, Buff Cochins and Black Breasted Game Bantams, rabbits, dogs of all kinds, and all kinds of fancy pigeons. Poultry eggs, 15 for \$1, and eggs by the hundred. Write for free circular. D. L. BRUEN, Platte Center, Neb.

EGGS FOR SALE.

From all the standard varieties of poultry. The best and cheapest place in the West to buy pure bred eggs. Write for circular and price list now, don't put it off or you will get left. Others are ordering now, why not you? Address

WALTER HOGUE, Nebraska.

SUNNY CREST.

Stock, fruit and poultry farm. Eggs to sell from M. B. turkeys, R. I. Reds and Leghorns. Registered Jersey calves and Poland China hogs for sale. Write me. MRS. W. M. BRITE, Pierce City, Mo.

BLACK SPANISH.

White Faced Black Spanish

Exclusively for 13 years, winning at Kansas and Neb. state fairs, Kansas City and World's fair. Eggs \$1 per 15, \$5 per 100. H. W. CHESTNUT, Centerville, Kan.

Johnson Says: Send Your Name to Me—BOOK READY

Tell my old and new friends that my new 1903 Poultry Book is ready. Over 200 pp. and 1200 pictures and to send me their names and addresses for it. My New 1903 Old Trusty Incubator is Metal Encased. Safer and surer than ever—75% better hatches guaranteed—40, 60 or 90 Days' Trial. Write me this year. M. M. JOHNSON, Incubator Man, Clay Center, Neb.

Johnson Pays the Freight

and any fence three feet high will turn them. They are not troubled with lice and other ailments, as are chickens and turkeys. It requires four weeks to hatch all goose eggs except the Chinese varieties, which take nearly five weeks. They can be hatched with chicken hens, but the mother goose often makes the best of incubators. We have never tried to hatch them in incubators.

THE YOUNGSTERS.

After they are hatched the first thing they eat is tender grass. We do not feed before they are 24 to 36 hours old, then we feed stale bread dipped in milk, squeezed dry, for a few days. Then we feed bran two parts, cornmeal one part, a little fine chick grit or coarse sand, mixed with milk or water to a crumbly mash (never sloppy). When about 10 days old we add beef scrap, a little at first and increase to about 10 per cent. As they grow older and have good pasture three times will do until feathered, then only night and morning. They should always have a supply of water to drink in a fountain deep enough for them to get their heads in over their eyes. With the above feed and plenty of grass you can nearly see them grow.

It is no uncommon thing to make Toulouse geese weigh 20 to 25 pounds when fully matured and fat, but for breeders they are better off not crowded so fast. Their eggs will hatch better and the young will be

stronger if the laying stock is only fair flesh and not over-fat.

THE RETURNS.

The profit to be had from geese will depend somewhat on your market. Good, large, fat geese usually sell well in most markets. The feathers are an item of profit not to be overlooked, they can be plucked two or three times after the breeding season is over, but should never be picked while laying. Some pick the young, but we never do, as we like them to develop as large a frame as possible, and for breeding purposes would prefer to not have them picked the first season. We have found the Toulouse to be the largest and easiest raised.

The white Embden is also a very good breed. Some prefer the Embden on account of its white plumage, which usually sells better than the colored. If you want something stylish and very pretty then try the white Chinese. They are the Leghorn of the goose family and admired by all. If you have never tried the breeding of geese try a pair of any of the above breeds, and if they do not pay you a good profit then there is something wrong, either with the breed or the feeder.—B. F. Kahler in National Stockman and Farmer.

Shorthorns Sell Well at Fredonia.

The seventh annual sale of H. M. Hill, LaMontaine, and S. C. Hanna, Howard, Kan., which was held at the fair grounds, Fredonia, Kan., on Tuesday, April 20, was considered one of the good sales of the season. The offering was perhaps the most uniform and best that has been put in any of the Fredonia sales. This was distinctly a breeders' sale, and the crowd present contained the big breeders from all over the country. The sale was an excellent one under the conditions which existed. It was interrupted by a heavy downpour of rain which compelled the removal of sale operations to a sheltered place. This fact, considered with the other fact that most of the animals in the sale were less than one year old, makes the sale average a fair one. The top price was \$300 which was brought by Spicy Secret, 14 months old heifer by Prince Royal, Mr. Hanna's young herd bull. The attendance at the sale was mostly from Kansas and Oklahoma; the demand was good and every animal cataloged was sold in addition to two extras. Following is a list of the sales:

BULLS.

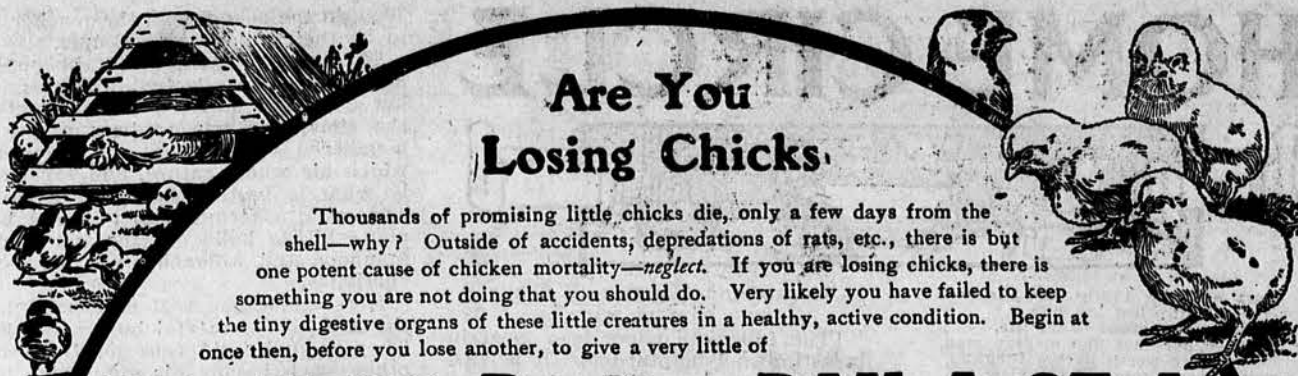
Substitute—Reflection, 12 months, sire Imp. Collynie, T. J. Hudson, Fredonia, Kan. \$100.00
Lot 2—Mistletoe Archer, 13 months, sire Prince Royal, J. F. Thompson, Fredonia, Kan. 172.50
Lot 3—Collynie's Choice, 23 months, sire Imp. Collynie, Ellis Hughes, Gage, Okla. 117.50
Lot 4—Bonnie Maxwellton, 18 months, sire Rosewood, J. F. Stodder, Burden, Kan. 170.00
Lot 5—Ingleside For Me, 18 months, sire Rosewood, T. P. Bapst & Sons, Auburn, Kan. 150.00
Lot 6—Royal Archer 2d, 12 months, sire Aberdeen, Marshall Bros., Burden, Kan. 150.00
Lot 7—Collynie Prince, 12 months, sire Prince of Collynie, Snyder Bros., Winfield, Kan. 112.50
Lot 8—Victoria Goods, 10 months, sire The Choice of All, W. K. Craig, Garnett, Kan. 55.00
Lot 9—Victorius Knight, 17 months, sire Seraphina's Victorius, W. K. Craig, 60.00

COWS.

Lot 10—Spicy Secret, 14 months, sire Prince Royal, Edward Cook & Son, Freeport, Kan. 300.00
Lot 11—Golden Harmony, 19 months, sire Archer, T. K. Tomson & Sons, Dover, Kan. 110.00
Lot 12—Village Princess 2d, 5 years, sire Goodwin, J. H. Downing, Coffeyville, Kan. 125.00
Lot 13—Rosebud Columbia, 10 months, sire Rosewood, T. J. Hudson, 72.50
Lot 14—Victoria Lavender, 16 months, sire Imp. Collynie, Edward Cook & Sons, 100.00
Lot 15—Sycamore Violet, 15 months, sire Golden Chief, I. L. Swinney, Sycamore, Kan. 97.50
Lot 16—Victoria of Meadow Farm, 9 years, sire Baron Goldust 3d, T. K. Tomson & Sons, 135.00
Lot 17—Thistle-down, 17 months, sire Imp. Collynie, Edward Cook & Sons, 100.00
Lot 18—Jossie Cowslip, 6 years, sire Imp. Lord Cowslip, I. L. Swinney, 175.00
Lot 19—Sycamore Faithful, 12 months, sire Royal Hampton, T. K. Tomson & Sons, 115.00
Lot 20—Bonnie Day, 17 months, sire Imp. Collynie, Edward Cook & Sons, 57.50
Lot 21—Strawberry Secret, 9 months, sire Fortune, Kansas Agricultural College, Manhattan, Kan. 65.00
Lot 22—Collynie Rosebud, 14 months, sire Prince of Collynie, T. K. Tomson & Sons, 67.50
Lot 23—15th Elder Lawn Mary, 6 years, sire Gallant Knight, T. K. Tomson & Sons, 135.00
Lot 24—Collynie's Maud, 2 years, sire Imp. Collynie, John Steinhook, Coffeyville, Kan. 82.50
Lot 25—Carrie 10th, 6 years, sire Lord Mayor, H. Hudson, Fredonia, Kan. 150.00
Lot 26—Kinnelard Lucy, 20 months,

Our Name Will Get \$2 Eggs For 50 Cents Per Sitting

The White and Brown Leghorns are the greatest layers in the world. I keep 2000 of the celebrated Chamberlain laying strain on my Experimental farm, and to increase the sale of my Perfect Chick I will send to any one who will send me their name I can send them my Perfect Chick Feed Catalogue for 25 cents. I will also send them 25 eggs for the 25th sitting. Not less than 25 eggs sold. Eggs by the 100, \$5. White or Barred Plymouth Rock or Rhode Island Reds or Silver or White or Black Minorca Eggs, \$1 per sitting. Large or Small White Holland Eggs, \$1 for 10 Eggs. Large or Small Pekin Duck Eggs, \$1 for 10 Eggs. This is a rare chance to get a star of extra fine stock. Send early. Fine Roosters for breeding, \$2.50 each. F. CHAMBERLAIN, (The Perfect Chick Feed Man) KIRKWOOD, St. Louis County, MO.



Are You Losing Chicks

Thousands of promising little chicks die, only a few days from the shell—why? Outside of accidents, depredations of rats, etc., there is but one potent cause of chicken mortality—neglect. If you are losing chicks, there is something you are not doing that you should do. Very likely you have failed to keep the tiny digestive organs of these little creatures in a healthy, active condition. Begin at once then, before you lose another, to give a very little of

DR. HESS Poultry PAN-A-CE-A

once a day.

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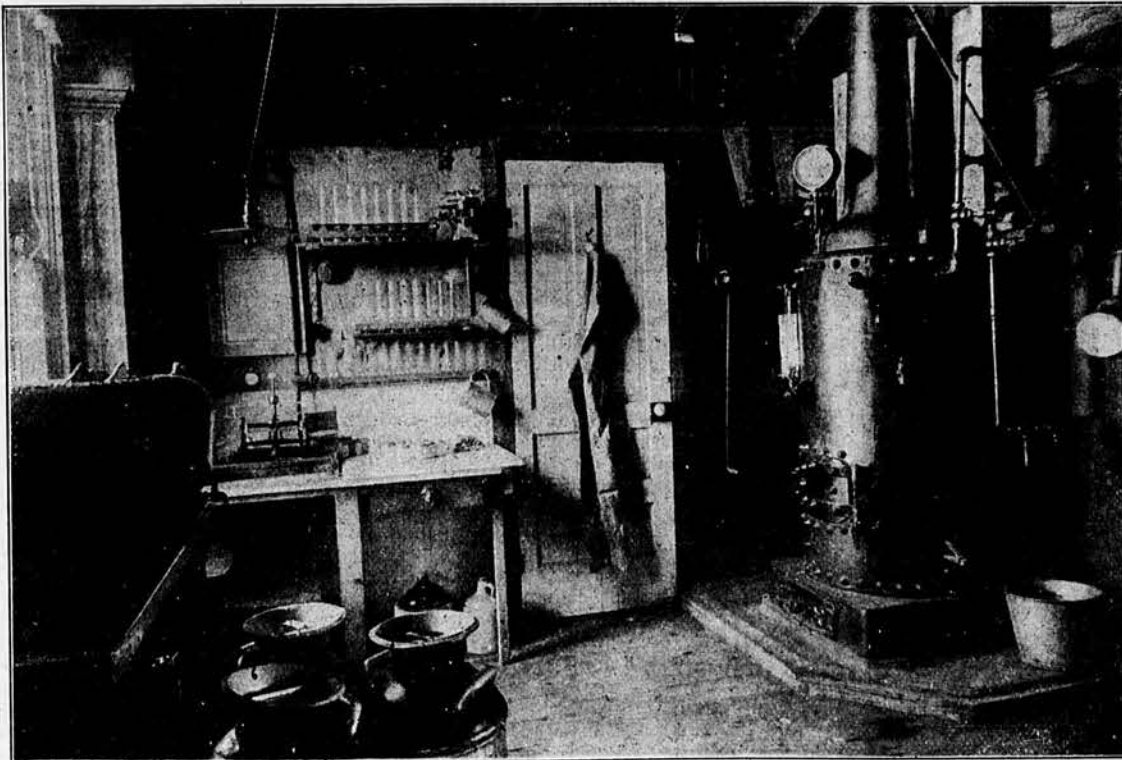
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The accompanying cut is that of the interior of the best class of cream receiving station which is fitted with steam boiler, steam tester, wash sinks,

and other necessary equipments for maintaining a sanitary place. A number of such stations have been erected in Kansas this season and these stations deserve the patronage of their respective communities. The cut is from the first annual report of D. M. Wilson, State Dairy Commissioner.

HOME CIRCLE



Story of Friar Philip and His Son.
Poor Friar Philip lost his wife.
The charm and comfort of his life.
He mourned her—not like modern men,
For ladies were worth having then.
The world was altered in his view.
All things put on a yellow hue;
Even ladies, once his chief delight,
Were now offensive to his sight.
In short, he pined and looked so ill,
The doctor hoped to make a bill.

At last he made a vow to fly,
And hide himself from every eye;
Take up his lodgings in a wood,
To turn a hermit, and grow good.
He had a son, now you must know,
About a twelve-month old or so;
Him, Philip took up in his arms,
To snatch him from all female charms—
Intending he should never know
There were such things as girls below,
But lead an honest hermit's life,
Lest he, likewise, might lose his wife.

The place he chose for his retreat,
Was once a lion's country seat;
Far in a wild, romantic wood,
The hermit's little cottage stood,
Hid, by trees, from human view—
The sun himself could scarce get through;
A little garden, tilled with care,
Supplied them with their daily fare;
Fresh water cresses from the spring—
Turnips or greens or some such thing—
Hermits don't care much what they eat,
And appetite can make it sweet!

'Twas here our little hermit grew—
His father taught him all he knew,
Adapting, like a cheerful sage,
His lessons to the pupil's age.
At five years old, he showed him flowers,
Taught him their various names and powers,
Taught him to blow upon a reed,
To say his prayers and get the creed.
At ten, he lectured him upon herbs,
(Better than learning nouns and verbs),
The names and qualities of trees,
Manners and customs of the bees;
Then talked of oysters full of pearls,
But not one word about the girls.
At fifteen years he turned his eyes
To view the wonders of the skies;
Called all the stars by their right names,
As you would call on John or James;
And showed him all the signs above,
But not a whisper about love.

And now his sixteenth year was nigh,
And yet he had not learned to sigh;
Had sleep and appetite to spare;
He could not tell the name of care;
And all because he did not know
There were such things as girls below.
But now a tempest raged around—
The hermit's little nest was drowned;
Good-bye then, too, poor Philip's crop,
It did not leave a turnip top.
Poor Philip grieved, and his son, too—
They prayed—they knew not what to do;
If they were hermits, they must live,
And wolves have not much aims to give.

Now, in his native town, he knew
He had disciples—rich ones, too,
Who would not let him beg in vain,
But set the hermit up again.
But what to do with his young son—
Pray tell me, what would you have done?
Take him to town, he was afraid!
For what if he should see a maid!
In love, as sure as he had eyes,
Then any quantity of sighs!
Leave him at home? the wolves, the bears—
Poor Philip had a father's fears!

In short, he knew not what to do,
But thought at last he'd take him too;
And so, with truly pious care,
He counts his beads in anxious prayer—
Intended as a sort of charm,
To keep his darling lad from harm;
That is, from pretty ladies' wiles,
Especially their eyes and smiles—
Then brushed his coat of silver gray,
And now you see them on their way.

It was a town, they all agree,
Where there was everything to see,
As paintings, statues, and so on,
All that men love to look upon.
Our little lad, you may suppose,
Had never seen so many shows;
He stands with open mouth and eyes,
Like one just fallen from the skies;
Pointing at everything he sees—
What's this? what's that? O, here, what's
these?

At last he spies a charming thing,
That men call angel when they sing—
Young lady, when they speak in prose;
Sweet thing! as everybody knows.

Transported, ravished, at the sight;
He feels a strange, but sweet delight.
"What's this? what's this? O, heaven!" he
cries.

"That looks so sweetly with its eyes;
O, shall I catch it! is it tame?
What is it, father? what's its name?"
Poor Philip knew not what to say,
But tried to turn his eyes away;
He crossed himself and made a vow,
"Tis as I feared, all's over now;
Then, prithee, have thy wits let loose?
It is a bird men call a goose."
"A goose! O, pretty, pretty thing!
And will it sing, too, will it sing?
O, come, come quickly, let us run,
That's a good father, catch me one!
We'll take it with us to our cell,
Indeed, indeed, I'll treat it well!"
—Unidentified.

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Morals and Manners in School.

MRS. RICHARD HAYNES.

[The following paper is a most interesting and helpful one. It is written by a mother of country-school children who knows what she is talking about. We should like other papers on the subject of the country school and its needs and purposes and problems.—R. C.]

MORALS.

It is difficult to trace the beginning of the moral life in children. The traveler who attempts to follow some great river to its source, generally finds himself confused by the number of lakes, ponds or springs which are pointed out to him, with assurance in the case of each, that this, and no other, is the real source. In truth the river is fed, not from one source alone, but from many, and does not attain its unity and individuality until it has flowed for some distance away. In a like manner the moral life of the child is fed by many springs and does not assume its distinctive character until after several years of human existence have elapsed.

I shall endeavor to cast a glance at the moral training which the normal child should receive before he enters school, and the moral knowledge he may be expected to bring with him at the time of entering school. Fortunately it is not necessary to go very far into the study of the development of conscience for this purpose. A few points will suffice. First—Regularity. This moral lesson can be begun in the cradle. Regularity in feeding is beneficial, both physically and morally. Second—Obedience. A very young child from six to twelve months can be taught to obey, to yield to the parent's will. Third—Conscientiousness. The conscientious actions of the child usually begins at the age of three or four years. He distinguishes between right and wrong. From now and on up we are educating conscience in the child. The question then forcibly presents itself: "How does it come to pass in the experience of children that they learn to regard certain lines of action as good and other as bad?" You will readily answer: "The parents characterize certain lines of action as good and others as bad, and the child accepts his definition." This is undoubtedly true. The parent's word is the main prop of the building of conscience. So the fundamental force in starting the child right in life is the parent, and almost entirely the mother. Sorry to say, and it is true that we have deficient mothers, just as well as deficient fathers. Nevertheless we are forced into the conviction that the real moulder of the child's first years of life is the mother within the home, for no one touches the child's life and soul so closely as she; no one has quite the same power as she, to make or mar the child's character. She gives much, but much is expected of her, and when we see a home circle that appears to be weak, we almost invariably discover that the principal cause of the weakness is the lack of free companionship between the children and the mother.

BE COMPANIONABLE.

We mothers should be more confidential with our boys and girls, more companionable, so the child will bring to us all wrong doings he learns or shares, as well as his joys and sorrows. There are so many times in a child's life where a mother's tender guidance and council are needed, as well as her protection and sympathy. Children are rational creatures and most of them love, or with proper training would love the beautiful and good. When we, as mothers, have taught our children the habit of regularity; of obedience; of love; of responsibility; of cleanliness; of respect and regard for themselves and others in thought, word and act, we have instilled habits that will not only be beneficial to them on entering school, but of great aid to the teacher, who has them under her care hours, days, weeks, and months of each year of their childhood, during which time their life character is being formed.

Then in the schoolroom the teacher is to be their guide and example.

The school should be to the pupil, not only on intellectual drill-ground, but a second home, a place dear at the time, and one to be fondly remembered ever after. A place in which his whole nature, and especially what is best in him may expand and grow. Here the aim should be, above all, to build up free and noble manhood and womanhood, to develop character.

Here under one roof clusters a little circle of wonderful human beings. They are quite different one from the other, each having his distinctive little traits. Some indeed thought to be most peculiar, though if the truth were known, some good cause underlies it all. Some are fond of this, some of that. Yet, here they must live a greater part of their early lives and must try to live them in peace and harmony. Just as colors must blend and contrast to give beauty to the home, so must the little children's lives blend and contrast to give beauty to the school, and in order to obtain the best results in these lives the home and the school should be in very close touch with each other.

A CHILD'S SURROUNDINGS.

In school our own children meet with children from many and widely different homes. Here they get an insight into characters developed in contrasting surroundings. The playgrounds brings into company many children of many minds. This has its benefits as well as its dangers. As a matter of fact children learn good from each other as well as evil. They form attachments which awaken their affections, their spirit of comradeship and loyalty. It is in play that the child learns to be fair; to be honest in giving and taking; to be courageous; to develop the ability to take care of himself. He learns to endure knocks and not whine or cry for trifles. The boys have a good chance to show a bold, heroic spirit in helping the girls and smaller ones through rough places, and in defending them from rougher lads. As play strengthens body and mind it so far gives force of character to resist immorality. Pupils should be made to know that they grow in character as they grow in body; that selfishness and low aim dwarf and degrade; that evil thoughts as well as evil deeds stunt the character. They should be made to feel that they are transparent as glass, so to speak, and that their character is felt by all with whom they come in contact, that every thought entertained, as well as every deed done, contributes to make the character weak or strong, black and repulsive or radiant and beautiful. The teacher must have the co-operation and sympathy of the home to accomplish all these things.

The discipline of the school too, has its weight in moral training. What an admirable place is the school for acquiring these virtues. For example, there is the virtue of obedience, the school demands it, and the acquired habit of rendering it, means obedience to parents, obedience to employers and officers, and its after life it means obedience to civil law and authority. The child requires many good traits from the reading of good books. "Black Beauty" for instance, teaches both manners and morals. Then there is the song. It produces in the pupils a feeling of oneness with others, a feeling of social unity for most all children love to sing. Thus we see the important factor in a child's early moral life is the school. Make it capable of performing its duty by making it good and giving it the support of the homes represented in it.

MANNERS.

Like the morals, manners in the home, crop out in the school, and the manners taught in the school crop out in the home. In the school the manners of many children are molded, and those of each child, influenced to a large degree. Oft times the children are ready and anxious to look to some one and follow them as a pattern and guide. So the spirit of etiquette or good manners is not to be limited to any room or place. True politeness springs from the heart. The true foundation of all etiquette is a spirit of courtesy and kindness. Every one requires training in the propriety of social life, and where the spirit of kindness and courtesy reigns in the individual, it will require only a few thoughtful suggestions, here and there, to guide the outward conduct. In the manners of speech, politeness is indicated by the tone of

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the voice, clear and distinct, not loud and boisterous; by the use of pure, correct language and the avoidance of slang; Politeness requires that the speaker shall turn his face directly to the person addressed and the latter shall look directly to the speaker. Interruptions in conversations are impolite. To address others respectfully is a mark of courtesy which no cultured person will neglect. The aged are apt to be sensitive as to the manner in which they are addressed. Deportment in the school rooms and school grounds is well worth our care and attention. The conduct of boys or girls in these places, is a test of their gentlemanly and lady-like characters. To jar one's arm or chair would require the offender, if he were truly polite, to beg pardon, not just go on and never mind.

Manners at meal time, or table etiquette should not be neglected. All should possess the knowledge of the proper use of the knives, forks, spoons, and dishes, and such a knowledge that would enable them to be companionable to one another at such times. Every repast should be seasoned with good humor, and the conversation at this time should be interesting and enlightening—some historical topic or some cheerful topic brought up for discussion, and remember that the two silver keys to politeness are "I thank you" and "If you please!" A reproduction from Gons' *Morals and Manners*, taken from an old periodical for boys and girls, is an anecdote showing the impression produced and the influence excited by good manners in dress and conduct. It is as follows:

A gentleman advertised for a boy to assist him in his office and nearly fifty applicants presented themselves to him. Out of the whole number, he in a short time, selected one and dismissed the rest. "I should like to know," said a friend, "on what grounds you selected that boy who had not a single recommendation." "You are mistaken," said the gentleman, "he had a great many. He wiped his feet when he came in, and closed the door after him, showing that he was careful and neat. He gave up his seat instantly to that lame old man showing he was kind and thoughtful. He took off his cap when he came in, answered my questions promptly and respectfully, showing he was polite and gentlemanly. He picked up the book which I had purposely laid on the floor and replaced it on the table while all the rest stepped over it, and shoved it aside; and he waited quietly for his turn, instead of pushing and crowding, showing that he was honest and orderly. When I talked with him I noticed that his clothes were carefully brushed, his hair in nice order, and his teeth as white as milk; and when he wrote his name, I noticed that his finger-nails were clean, instead of being tipped with jet, like that handsome little fellow in the things letters of recommendation? do! and I would give more for what I can tell about a boy by using his eyes ten minutes than for all the letters he can bring me." Children do not neglect your manners!

The Wreck.

BY FRANK E. CANNON.
(A true story.)

I met him first in a boarding-house. He was a fine looking fellow, standing six feet two inches in his stockings, straight as a lance, with a broad head and high, brainy forehead. When I was introduced to him I thought

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myself: "Ah, you are the man I would like to be." He was a typical Southern gentleman, courteous and entertaining, a well-read man with whom it was a pleasure to converse. He had served as a consul for the government at an important foreign city.

We soon became quite intimate. Often he would drop in to see me in my little study, and I was always ready to stop my work and listen to him, for I felt my time was not wasted. I admired the man, and his spirited reminiscences of his travels in three continents furnished me with the plot for many a story. Only one thing I could not understand, why he had not done something? Here he was, a man in his prime, physically as well as intellectually, and yet he apparently had nothing to occupy his time.

My acquaintance with him did not permit me to inquire too closely, but I could not prevent myself from marveling that so brilliant a man did not occupy his time with some useful work. Our intimacy increased, and my admiration for him became greater, when suddenly one morning I received a terrible shock, and my idol fell.

I was at work at my typewriter when there came a knock at the door and he entered. I saw at a glance that something was wrong, and a second look told me the trouble. He was under the influence of liquor. The shaky, nervous gesture of his hands, the bloodshot eyes, the twitching of his features—all told the story only too plainly.

I suppose my startled face made him understand just what my feelings were, for it was a terrible shock to me; I had not the slightest suspicion of his falling until then. He seated himself and buried his face in his hands. Presently he looked up, and—good God! what a fearful change was there to what I had seen only a day or so before! All the human, all the noble seemed to have suddenly left it, and in its place was the passionate, the animal, the bestial. I almost recoiled with horror at the terrible transformation. He stretched out his shaking hand toward me.

"Old man," he sighed, "now you know."

That was all, but it told the whole of the tragic story. Yes, now I knew. I sat there looking at him for a full minute, and I'll swear I never felt more like crying since I was a child. Presently I leaned toward him and spoke just one word.

"Why?" I questioned.

He flung himself back in his chair as if I had struck him.

"Don't ask me!" he almost shouted. Then followed a most helpless confession. "God help me, I can't stop it!"

Bit by bit his pitiful story filtered out. He was one of those unfortunate fellows of whom the drink fiend has got hold. For weeks, sometimes for months, he would go along without touching a drop of the poison, and then he would "break out," as he expressed it, and for days he would allow his animal passion to drag him down to the lowest depth of degradation. All reason, all sense left him; only one thing could he do—drink, drink, drink!

"But man!" I cried, almost angrily, "can't you stop?" He shook his head—and oh, the utter helplessness of that gesture! The power, the might of this terrible drink curse was rammed home to me with a force I had never understood before. Here was this man, a giant mentally and physically, with an intelligence and a body far and away above mine, yet a slave, helpless in the fetters of the drink curse. And worse than all, he acknowledged that the fight was hopeless.

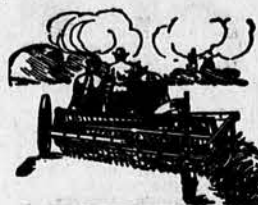
"I can never break away," he whispered hoarsely, with a convulsive shake of his head, as I suggested it to him. "Man," he burst out again, "man, you can't understand. It's got me, I tell you—got me!"

"But what started you this time?" I questioned.

"It was the smell of your beer the other night at dinner!" he hissed savagely, and at the words I almost leaped from my seat.

"The smell of my beer!" I echoed. "Yes, the smell of your beer!" came back the hoarse, accusing answer.

I sank back in my chair. I—I—yes, I did drink a glass of dark beer every night with my dinner. My doctor had told me it was a good thing for me. I have never been an abstainer, and, to be perfectly frank, I had enjoyed that glass of beer; I had thought, too,



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that it benefited me, and now—this—this wretch had been started off on one of his periodical speers by the very odor of my dinner beer.

"It wasn't your fault," he mumbled. "You have a right to drink your beer if you want to; it's fools like me, who can't get a whiff of it without breaking loose, who have no license to! Fools like me who must go on drinking, drinking until they die! I'm going; I'm stopping you from working, and I must, I must—I must get another drink—"

"Stop!" I cried, as I sprang to my feet, and stood between him and the door. "If I'll cut my beer out at dinner will you stop your drinking?"

He smiled—a sickly, weak smile.

"You don't—you can't understand," he replied. "Do you think I can pull up short and throw it over like a man throws away the butt of his cigar? I tell you this thing's got me, man!—got me hard and fast! Go on, enjoy your beer; you're a safe man; you have a right to drink, but I can't stop, never, never, never! I'm a blot on the earth!"

"But you shall stop!" I cried, as I caught his arm. "You shan't get any more drink today; you shall stay in this room with me, sit down there and read!" and I pointed to a comfortable reclining-chair.

"Let me go!" he growled, almost roughly. "I've got to have it, I tell you! It's calling for it now."

He pushed me aside, threw off my detaining grasp, and stalked from the room.

I met him on his return that evening—a staggering, evil-smelling drunkard, slinking up to his room, sneaking in with drunken cunning, endeavoring to avoid people he knew. And I went down to my dinner—but there was no bottle of dark beer on the table, nor has there been any since. And strange to say, I don't detect any serious physical trouble; my health is as good as usual.—The National Advocate.

Take a piece of strong tin, and pound small nail holes all over it, then

tack firmly to the sides of two pieces of strong wood. Tack a loop of leather at the top, by which to hang it, and you will have a useful soap shredder. The soap not being in large chunks dissolves more quickly.

Hints for the Housekeeper.

To clean tins have hot water, sapo-lin, soft piece of flannel or cloth. Wet the cloth, squeeze it out quite dry, make it into a little pad, rub sapolin on it. First clean inside of tin, then the outside, rubbing one way. Do not rinse until all are cleaned. Rinse in hot soapy water, boiling if possible. Wipe dry at once.

Roofing

Before deciding on any roofing, for any purpose, send for this free book which will give you the inside facts about all roofings—shingle, tin, tar, iron—and prepared, or "ready" roofings.

This book is fair, frank, comprehensive. It tells all about the cost of each kind of roofing. It tells the advantages and the disadvantages of each. It is a veritable gold mine of roofing information.

The reason we send it free is because it tells too, about Ruberoid roofing.

Since Ruberoid roofing was invented nearly twenty years ago, there have sprung up more than 300 substitutes.

These substitutes, before they are laid and exposed to the weather, look like Ruberoid. But don't let that deceive you.

Ruberoid roofing is sun proof, rain proof, snow proof, cold proof, weather proof. It resists acids, gases and fumes.

RUBEROID

(REGISTERED IN U. S. PATENT OFFICE)

It is so nearly fireproof that if you drop live coals on a Ruberoid roof it will not burn. The secret of these wonderful properties of Ruberoid roofing lies in the Ruberoid gum—our exclusive product.

No other maker can use this Ruberoid gum—that is why no other roofing can possibly be so good as Ruberoid.

Ruberoid is supplied in its natural color, also in shades—Red, Green, Brown—suitable for the finest homes. And the colors do not wear off or fade, because they are part of the roofing—impregnated by our exclusive process.

Get This Free Book

If you are going to roof, though, learn about all roofs. To get our free book, simply write to Department 302 The Standard Paint Company, 100 William Street, New York.

FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
J. W. Johnson.....Beloit, Kan.

PURE BRED STOCK SALES.

Poland Chinas.
May 12—C. S. Nevius, Chiles, Kan.
May 22—H. H. Harshaw, Butler, Mo.
Oct. 21—Herman Groninger & Sons, Bendena, Kan.
Oct. 27—Geo. W. Smith, Pawnee City, Neb.

Percherons.
May 6—Dr. J. T. Axtell, Newton, Kan., manager. Sale of Percherons and Standard Breds at Wichita, Kan.
November 11—Percheron Breeders' Sale at Manhattan, Kan. Will H. Rhodes, Manager.

Shorthorns.
May 14—Dispersion sale of Scotch Herd. J. L. Stratton & Son, Ottawa, Kan.
June 1—Col. W. A. Harris, Lawrence, Kan., H. R. & W. T. Clay, Plattsburg, Mo., at Kansas City, Mo.
June 11—T. K. Tomson & Sons, Dover, Kan., Agricultural College, Manhattan, Kan., and T. J. Wornall, Liberty, Mo., at Agricultural College, Manhattan, Kan.

Jersey Cattle.
Sept. 30—Mrs. Wm. Britte, Pierce City, Mo.

Durocs.
Feb. 23, 1910—F. G. McDowell, Corning, Kan.

Will H. Rhodes, Manhattan, Kan., who claims a date for his big Percheron sale next fall, has just added 4 beautiful Percheron mares to his stud. Will Rhodes knows how to breed the best. He has an ideal location and if he don't "make a noise" like success we shall miss our guess.

"One of my best Poland China sows had just farrowed a big litter when a stray dog attacked her. He got hold of her jaw and held on until we killed him. He was part bull dog and would probably have killed the sow if we had not acted quickly." This is the statement made by a breeder the other day and it can be duplicated in many localities in Kansas. Protection from the cur dog is badly needed here.

Dietrich & Spaulding of Ottawa, Kan., announce some special bargains in summer and fall boars. These boars are good individually and the pedigrees will be ready when they are sold. They have good color, good coats and some of them are really fancy. It is necessary for the operators of this breeding farm that these boars be sold at once and hence the attractive prices that are made on them. The dams of these boars are granddaughters of Corcorator, Meddler and Chief Perfection 2d. They are in good condition and ought to be attractive to buyers who want the Dietrich & Spaulding kind. We suggest that it would be wise to write at once as they are sure to move rapidly at the prices named.

Mr. Geo. Porteous of the Sutton Farms, Lawrence, Kan., sure does know the cattle business. He has a very fine farm north of Lawrence and takes great pride in his black Daddies. He is now fitting a string for the fair circuits that will be hard to beat. He will show in all the classes and in the herd with perhaps the get and produce classes also. Champion 1st is now at the head of the herd and Mr. Porteous thinks he is fully as good an animal as was his famous sire Prince Ito. There is no question of the quality of Champion Ito and he is the coming bull of the breed in the West. We shall be able to present our readers with a good portrait of this bull before long in order that they may see just what a typical Aberdeen Angus bull looks like in his everyday clothes.

Marshall County Lands.
This week we start the advertisement of Trooper & Blackney, real estate dealers of Frankfort, Kan. This firm has a large list of lands and other properties for sale. Both gentlemen are old residents of this part of Kansas and are thoroughly acquainted with its resources. They are thoroughly reliable and hustlers. Correspond with them and mention Kansas Farmer.

The Brown County Shorthorn Sale.
The Brown County, Kansas, Shorthorn Breeders' Association sale which was held at Hiawatha on April 24 was a poor one because of a lack of proper advertising. One bull sold for \$195 which was the top price of the sale, and another brought \$175. The others in the offering sold so low that the general average for the 16 bulls was only \$94.36. The top cow brought \$160 but the general average on the 37 head sold was \$63.70. The general average for the 53 head was \$73, which was low for the quality of stock offered.

Percheron Mares at Auction.
Mr. E. F. Murray, Hutchinson, Kan., advertises an auction sale of pure-bred Percheron mares in this issue of Kansas Farmer. The sale will be held at the Kansas State Fair grounds on May 19 and will include mares from 2 to 11 years old. Only 2 of the number are older than 7 years and all are bred or will have colts at foot on sale day. They are good and several of them will weigh around the 2,000 pound mark. They were bred to a 2,200 pound stallion and will afford a good opportunity to add to the motive power of the farm in a way that will be doubly productive.

A Notable Percheron Sale.
McLaughlin Bros., of Kansas City, Columbus and St. Paul, have just sold the imported Percheron stallion, Lambin 42594 (68833) to James J. Hill, the railroad magnate. Lambin was sired by Atlas (464479) by Jules (37987) out of Bijou (17091) by Brilliant (755); dam Rigolette (61196) by Asseneus (40346). He was a great prize winner in France before the McLaughlins brought him over and, since his arrival in this country, he has won the championship at the Ohio state fair and first prize for get of sire at the International in the largest class of Percherons at the show. Mr. Hill has the reputation of being a very careful buyer and the markets of France are open to him. His purchase of Lambin therefore means that he saw more value in this horse for his money than in any other of either France or the United States.

The Stratton Shorthorn Dispersion.
It is not often that the lover of Shorthorn cattle has an opportunity to buy such a bull as Blythe Conqueror 224431, who

will be sold in the dispersion of the J. L. Stratton & Sons' herd at Ottawa, Kan., on May 14. This great bull was bred by Senator T. J. Wornall and was sired by Imp. Conqueror 149048 out of Imp. Blythesome 15th by Sea King 125762. This dam was one of the best producing cows ever owned by Senator Wornall while a full brother of Blythe Conqueror sold to Texas for \$1,000. Beside this herd bull there are 31 other animals in the catalog. Gallant Knight 124468, Scotland's Charm 127264, Barmpton 18245, King Lan-aster 218527, Viscount of Anoka 125081, British Hero 156811, Giltspur Knight 171591, Pride Victor 164050 and Blythe Conqueror are the bulls represented on the female side. This is certainly a great line of sires and when these cows are mated with Blythe Conqueror, as all have been except his own daughters, something good must be expected. There is plenty of good Scotch blood in this sale and the pedigrees are represented by good animals. Please mention Kansas Farmer when you ask Mr. Stratton for his sale catalog.

The Glenwood Poland China Sale.
Mr. C. S. Nevius, owner of the Glenwood herd of Poland Chinas at Chiles, Kan., will hold another sale of the big kind on May 12. Don't forget the date, Wednesday, May 12, at Chiles, Kan. Mr. Nevius, in speaking of his offering for this sale, states that they are not only the best lot he has ever offered but that there is not a single animal in the catalog that could not be sent out on approval anywhere. When he has any poor ones, which don't happen very often since he began breeding the Expansion kind, he sends them to Kansas City. Among the good things in this sale are Blaine's Best, a yearling sow bred to Dr. signer and fit to go in any company; Chief's Maid 3d has farrowed more good breeding sows than any other sow they ever owned. She is bred to Designer and is right up to her farrowing. Lady Thompson is queen of them all for producing high class herd boars. Bred to Designer. Nos. 7 to 11 of the catalog are by Major Look and out of Lady Mc 4 and Lady Mc 5, and are bred to Columbia Expansion. By the way, Columbia Expansion will make you smile when you see his pigs. They will tell the same story and that story is corker. Nos. 34, 35, 39, 40 are good Designer boars weighing from 200 to 325 lbs. All this stuff is in prime breeding condition. And remember, it is the big kind. Mention Kansas Farmer and ask for a catalog.

Menehan's Poland Chinas.
A recent visit to the farm of Mr. J. F. Menehan of Burchard, Neb., reveals the fact that Mr. Menehan is one of the gentlemen that is breeding the kind of Poland Chinas that the trade is demanding. His are among the best bred of all the big type herds. The herd has been established a great many years and has been kept up with the utmost care although Mr. Menehan has not been a heavy advertiser. He has about 50 head of very fine pigs all sired by a good son of Orphan. They are out of large type smooth sows that are descended from the best sows and sires of the big kind. Among them Black Princess by Prince Whats Wanted, he by A. B.'s Wanted. Two are by a good son of Chief Sampson 27071. Another is by Prince Whats Wanted, her dam was Jennie Foraker 2d by Chief Youtell, by Chief I Know. One of the best sows on the farm is a daughter of the very large sire, Logan B., her dam by Look out, he by old Bright Look. Logan B. was at one time at the head of Mr. Menehan's herd, as also was the good breeding boar, Prince Whats Wanted. Other sows in the herd are by such sires as Hutch Jr. Beatrice Logan is also owned by Mr. Menehan. He is offering in his advertisement which appears elsewhere a very choice yearling fall boar out of this sow and sired by Hutch Jr., he by Big Hutch. This yearling boar should suit some one that is in need of a good young boar. He is a good one. Write for full description and mention Kansas Farmer.

The Glenwood Poland China Sale.
C. S. Nevius of Chiles, Kan., who has long had a reputation for quality of his Poland Chinas, has made more reputation for the big kind since he placed Designer 39199 at the head of his herd. Designer is one of the best sons of old Expansion 26293 who made Poland China history in the corn belt west of the Mississippi River. The other herd boars in the Glenwood herd are also of the big type, and a choice lot of their get will be offered in the public sale which Mr. Nevius will hold at his place on May 12. There will be six tried sows bred to Designer and a number of choice gilts by Columbia Expansion, Major Look, Keystone, Flashy Metal, or McDarst in the offering. His advertisement on another page tells about the offering but does not tell all. The gilts will weigh from 200 to 325 lbs. and according as they are April or August farrowed. Some of the boars will average a little heavier and all will have the size, stretch, and quality that has made Glenwood famous. While not all sired by Designer or bred to him yet the whole offering will stand up for his kind. The litters average large and Mr. Nevius is sure that he has never put a better lot of stuff in the sale ring although they may not be in near the highest show ring condition. Mr. Nevius knows how to fix his hogs and these will be offered in the best shape. There is no place in Kansas that the writer has in mind where so much Expansion stuff could be secured from one herd. Don't forget that the date is May 12, and the place is Chiles, Kan. Ask Mr. Nevius for a catalog and mention Kansas Farmer.

Cook Farms.

The Cook Farms at Lexington, Ky., report a splendid sale of both jacks and saddle horses during the month of April. Among the many visitors to the farms in the last ten days and purchasers were Mr. Thomas F. Ryan, the New York millionaire, who bought a five year old Kentucky Mammoth jack for his Oak Ridge Farm in Virginia; Mr. J. S. Meek of Avon, W. V., a yearling jack, Mr. Supple of Philadelphia a three year old fifteen and a half hand jack; Mr. E. O. Godwin of Jefferson City, Tenn., the four year old imported Jack Silver Fern. Mr. Godwin is one of the largest mule dealers in Tennessee and he and his neighbors wanted one of the best jacks to be found in the country; Mr. J. W. Ramer of Bethel Springs, Tenn., a yearling jack of the Dr. Hartman family; Mr. A. D. Reynolds a four year old Catalonian jack and a three year old saddle stallion. Mr. Reynolds is a retired tobacco manufacturer and owns 2,300 acres of land near Bristol, Tenn., where he will breed saddle horses and mules; Mr. John P. Mars, of Batesville, Miss., the three year old stallion Red Highland; Mr. R. E. Johnson, of Sweetman, Miss., the three year old saddle stallion Cleaquo; Mr. John Holmes, of Tylerville, Miss., a five year old fifteen hand jack; Mr. E. L. McCrummen of Paris, Texas, three two year old jacks and the saddle stallion Prince; Mr. R. L. Williams, of Plumerville, Ark., and Mr. F. O. Butler of Hinsdale, Ill., a herd of

THE FAMOUS LEWIS UPRIGHT SWINGING STACKER
Saves Time, Labor, Trouble, Expense

POINTS THAT COUNT:

1. Dumps hay at any elevation.
2. Swings either way, dumps hay anywhere on the stack.
3. Operates with less help than any other stacker.
4. Lightest draft, easier on horses than other kinds.
5. Loads on wagons as well as stacks—a successful combined stacker.
6. Operates on hilly as well as level ground.
7. 8 acks in windy weather.
8. Fewer parts, simpler in construction, less wear, breakage and repair cost than other kinds.
9. Ropes work through pulleys, not around drums, which means less friction, longer lived ropes.
10. Easily loaded on wagon and moved from field to field; no trouble in storing in shed or barn.

Thousands of Lewis Stackers in use by satisfied purchasers. Costs no more than the inferior, clumsy, trouble-making kind. Write today for prices.

SWANSON MANUFACTURING CO.
103 Thomas Av. SHENANDOAH, IOWA

Warner barbs hold 'em

Never Any Rooting Out With Warner Hog Fence

We make it with a heavy barbed wire cable woven right in the margin, and a hog can't root out or crawl over. He can't root dirt on the lower wires which you know usually starts the rusting in a fence. For this reason Warner Fencing lasts longer.

We make it in two kinds, with both margins barbed and with barbed bottom and plain top so that hogs and pigs can't root it, yet it won't injure any other stock you have in the field.

Our catalog showing all sizes we will mail you free together with a handsome souvenir of the great fence maker, Abraham Lincoln. Drop us a postal for it.

The Warner Fence Co.,

no rooting under Ottawa Kansas no climbing over

Make Your Grounds Neat and Trim

The cost will be small and the increase in the value of your property great. At the same time you can make your home and the show places of the community if you enclose your lawns and gardens with:

Cyclone Ornamental Fence

Cyclone Fences are made in many beautiful patterns. They are strong and durable—they last a lifetime. They add to the appearance. They need no attention and never fail to please and satisfy.

Cyclone Double Top Ornamental Fence Fabrics are made of the best steel wires, heavily and thoroughly galvanized. The corrugated pickets add to the strength and long life of the fencing, and at the same time are much more beautiful than plain pickets. The two heavy cables at the top and the doubled pickets

Strength Where Strength is Needed

The Cyclone Farm Gate is light, strong and the high carbon structural tubing used in its construction makes it absolutely rigid and enables us to guarantee that it will never sag. It costs less than one wooden gate and will outlast a dozen. Our large output enables us to sell this gate for less money than the prices asked for inferior iron gates.

Send for our Free Pattern Book of Cyclone Fences, Gates, Tree Guards, Trellises, etc.

CYCLONE FENCE COMPANY, Dept. 131, WAUKEGAN, ILLINOIS

Tamworth hogs each. This firm is having a clearance sale during the month of May and J. P. Cook says that he can please any one wanting a good jack or a saddler who will visit their farms.

Pawnee City, Neb., Polands.

One of the leading Poland China breeders of Southern Nebraska is Mr. George W. Smith of Pawnee City. Mr. Smith is nicely located nine miles west of that town and seven miles northeast of Summerfield, Kan. The herd was established about five years ago, the stock coming from the leading breeders of the two states. There is in the herd at this time something like 75 very choice pigs all sired by Mr. Smith's herd boar, Mammoth Hadley, one of the good sons of the \$500 Big Hadley. His dam was Lady Hutch, one of the largest sows ever owned in Nebraska. Her sire was the once well known Bright Look winner of first in class at Nebraska state fair a few years ago. The sows in the herd are of strictly big type breeding. Among them Improved Lady by Improver, he by Johnson's Chief; Proud Dinah by Pfander's Giant Pride. Her dam was by Major Blain. Big Pearl is one of the kind that all breeders like. She is a daughter of that great brood sow sire, Prince Youtell. She farrowed 13 pigs this spring. Miss Quality by the state fair winner, First Quality. Her dam was March Queen by the great old sire, Over Chief. Jennie's Choice is perhaps the best individual on the farm. Her ancestors were such great hogs as Logan Chief, Blaine's Tecumseh, King Do Do, Susie M's Best, Sampson's Sister, and Chief Tec. 3d. Highland Mal is another extra fine sow tracing to Chief Tec. 3d on sire's side and her dam Highland Chief, the granddaughter of old was Highland Girl, the sire of Highland Chief Jr. Another good one is Violet, granddaughter of Johnson's Chief. The spring pigs, of which there is a fine lot, are very even and smooth. It is a pleasure to inspect a herd of this kind. See Mr. Smith's advertisement elsewhere in this issue and correspond with him. Always mention Kansas Farmer.

Nebraska Durocs.

Elsewhere in this issue will be found the advertisement of Mr. O. A. Tiller, one of the wide awake young Duroc Jersey breeders of Pawnee City, Neb. Mr. Tiller has a fine herd representing a large number of the most prominent and fashionable families. His herd, known as Standard Model 84425 and Crimson Monarch 84429. Both young sires but old enough to have proven themselves good breeders as any one will

The only fence perpetually last. The only fence that can't sag, bulge or bow from the top wires. Made of high carbon, crimped, spring steel wire. Never needs repairs.

SHIMER SPRING STEEL FARM FENCE

Requires only half the usual number of posts. Agents wanted in every community to take orders for Shimer fence. Permanent employment. Liberal profits. Write for prospectus. **SHIMER SPRING STEEL FENCE AND WIRE CO.** Box 20, Anderson, Ind.

THE COFFEYVILLE SHIMER FENCE & MFG. CO.
Coffeyville, Kansas

15 Cents a Rod

For a 24-inch Hog Fence; 16c for 30-inch; 19c for 31-inch; 21c for 34-inch; 27c for 41-inch; 31c for 44-inch; 37c for 48-inch; 41c for 50-inch; 47c for 54-inch; 51c for 58-inch; 57c for 60-inch; 61c for 64-inch; 67c for 68-inch; 71c for 72-inch; 77c for 76-inch; 81c for 80-inch; 87c for 84-inch; 91c for 88-inch; 97c for 92-inch; 101c for 96-inch; 107c for 100-inch; 111c for 104-inch; 117c for 108-inch; 121c for 112-inch; 127c for 116-inch; 131c for 120-inch; 137c for 124-inch; 141c for 128-inch; 147c for 132-inch; 151c for 136-inch; 157c for 140-inch; 161c for 144-inch; 167c for 148-inch; 171c for 152-inch; 177c for 156-inch; 181c for 160-inch; 187c for 164-inch; 191c for 168-inch; 197c for 172-inch; 201c for 176-inch; 207c for 180-inch; 211c for 184-inch; 217c for 188-inch; 221c for 192-inch; 227c for 196-inch; 231c for 200-inch; 237c for 204-inch; 241c for 208-inch; 247c for 212-inch; 251c for 216-inch; 257c for 220-inch; 261c for 224-inch; 267c for 228-inch; 271c for 232-inch; 277c for 236-inch; 281c for 240-inch; 287c for 244-inch; 291c for 248-inch; 297c for 252-inch; 301c for 256-inch; 307c for 260-inch; 311c for 264-inch; 317c for 268-inch; 321c for 272-inch; 327c for 276-inch; 331c for 280-inch; 337c for 284-inch; 341c for 288-inch; 347c for 292-inch; 351c for 296-inch; 357c for 300-inch; 361c for 304-inch; 367c for 308-inch; 371c for 312-inch; 377c for 316-inch; 381c for 320-inch; 387c for 324-inch; 391c for 328-inch; 397c for 332-inch; 401c for 336-inch; 407c for 340-inch; 411c for 344-inch; 417c for 348-inch; 421c for 352-inch; 427c for 356-inch; 431c for 360-inch; 437c for 364-inch; 441c for 368-inch; 447c for 372-inch; 451c for 376-inch; 457c for 380-inch; 461c for 384-inch; 467c for 388-inch; 471c for 392-inch; 477c for 396-inch; 481c for 400-inch; 487c for 404-inch; 491c for 408-inch; 497c for 412-inch; 501c for 416-inch; 507c for 420-inch; 511c for 424-inch; 517c for 428-inch; 521c for 432-inch; 527c for 436-inch; 531c for 440-inch; 537c for 444-inch; 541c for 448-inch; 547c for 452-inch; 551c for 456-inch; 557c for 460-inch; 561c for 464-inch; 567c for 468-inch; 571c for 472-inch; 577c for 476-inch; 581c for 480-inch; 587c for 484-inch; 591c for 488-inch; 597c for 492-inch; 601c for 496-inch; 607c for 500-inch; 611c for 504-inch; 617c for 508-inch; 621c for 512-inch; 627c for 516-inch; 631c for 520-inch; 637c for 524-inch; 641c for 528-inch; 647c for 532-inch; 651c for 536-inch; 657c for 540-inch; 661c for 544-inch; 667c for 548-inch; 671c for 552-inch; 677c for 556-inch; 681c for 560-inch; 687c for 564-inch; 691c for 568-inch; 697c for 572-inch; 701c for 576-inch; 707c for 580-inch; 711c for 584-inch; 717c for 588-inch; 721c for 592-inch; 727c for 596-inch; 731c for 600-inch; 737c for 604-inch; 741c for 608-inch; 747c for 612-inch; 751c for 616-inch; 757c for 620-inch; 761c for 624-inch; 767c for 628-inch; 771c for 632-inch; 777c for 636-inch; 781c for 640-inch; 787c for 644-inch; 791c for 648-inch; 797c for 652-inch; 801c for 656-inch; 807c for 660-inch; 811c for 664-inch; 817c for 668-inch; 821c for 672-inch; 827c for 676-inch; 831c for 680-inch; 837c for 684-inch; 841c for 688-inch; 847c for 692-inch; 851c for 696-inch; 857c for 700-inch; 861c for 704-inch; 867c for 708-inch; 871c for 712-inch; 877c for 716-inch; 881c for 720-inch; 887c for 724-inch; 891c for 728-inch; 897c for 732-inch; 901c for 736-inch; 907c for 740-inch; 911c for 744-inch; 917c for 748-inch; 921c for 752-inch; 927c for 756-inch; 931c for 760-inch; 937c for 764-inch; 941c for 768-inch; 947c for 772-inch; 951c for 776-inch; 957c for 780-inch; 961c for 784-inch; 967c for 788-inch; 971c for 792-inch; 977c for 796-inch; 981c for 800-inch; 987c for 804-inch; 991c for 808-inch; 997c for 812-inch; 1001c for 816-inch; 1007c for 820-inch; 1011c for 824-inch; 1017c for 828-inch; 1021c for 832-inch; 1027c for 836-inch; 1031c for 840-inch; 1037c for 844-inch; 1041c for 848-inch; 1047c for 852-inch; 1051c for 856-inch; 1057c for 860-inch; 1061c for 864-inch; 1067c for 868-inch; 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1321c for 1072-inch; 1327c for 1076-inch; 1331c for 1080-inch; 1337c for 1084-inch; 1341c for 1088-inch; 1347c for 1092-inch; 1351c for 1096-inch; 1357c for 1100-inch; 1361c for 1104-inch; 1367c for 1108-inch; 1371c for 1112-inch; 1377c for 1116-inch; 1381c for 1120-inch; 1387c for 1124-inch; 1391c for 1128-inch; 1397c for 1132-inch; 1401c for 1136-inch; 1407c for 1140-inch; 1411c for 1144-inch; 1417c for 1148-inch; 1421c for 1152-inch; 1427c for 1156-inch; 1431c for 1160-inch; 1437c for 1164-inch; 1441c for 1168-inch; 1447c for 1172-inch; 1451c for 1176-inch; 1457c for 1180-inch; 1461c for 1184-inch; 1467c for 1188-inch; 1471c for 1192-inch; 1477c for 1196-inch; 1481c for 1200-inch; 1487c for 1204-inch; 1491c for 1208-inch; 1497c for 1212-inch; 1501c for 1216-inch; 1507c for 1220-inch; 1511c for 1224-inch; 1517c for 1228-inch; 1521c for 1232-inch; 1527c for 1236-inch; 1531c for 1240-inch; 1537c for 1244-inch; 1541c for 1248-inch; 1547c for 1252-inch; 1551c for 1256-inch; 1557c for 1260-inch; 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2281c for 1840-inch; 2287c for 1844-inch; 2291c for 1848-inch; 2297c for 1852-inch; 2301c for 1856-inch; 2307c for 1860-inch; 2311c for 1864-inch; 2317c for 1868-inch;

In range cattle Colorado, Panhandles and Oklahoma made up a comparatively small proportion of the supply and the best grades were sold at an early hour at strong to 10c higher prices. One lot of Colorado steers, 1,299 lbs., sold at \$6.60. Some 961 lb. steers at \$5.80. Other Colorado steers sold at \$6.40@6.55. The trade in cows and heifers on the Western order was active and prices ranged strong to 15c higher in some cases. An early clearance was made. Colorado cows sold at \$3.65 and heifers at \$3.40. Stockers and feeders on the range order were scarce and the market was active with some sales 10@15c higher and firm.

**SAVE
20%**

Wm. Galloway, Pres.
Wm. Galloway Co.
885 Galloway Station
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DEMPSTER MILL MFG. CO.,
Factory, Beatrice, Neb.
Branches
Omaha Sioux Falls Kansas City

This knife is specially adapted to the farmer's use. Made by the Corliss Cutlery Co., Germany, of extra quality steel stag horn handle. This splendid knife will be sent you FREE, postpaid, for securing only two new subscriptions to the KANSAS FARMER from now to January 1, 1910, at 50 cents each, or we will send you our paper one year for \$1.00 and the knife as a premium. We guarantee the knife as represented and will refund your money if not satisfied. Of the hundreds who have received these knives, not one has offered a complaint. Cut out this ad and enclose with remittance and knife will be sent by return mail. Address

KANSAS FARMER,

Topeka, Kansas

LAWRENCE BUSINESS COLLEGE, Lawrence, Kan. 40th year. Our big catalog explains everything. Sent free. Address 1400 Mass. St.

A Kansas Health Resort.
The accompanying cut is from a ph

made use of by generations of housewives when they lowered vessels containing butter, milk, meats and other perishable food into the open wells. It is just this simple fact which has been utilized in the W. M. Iceless Refrigerator, made by the Galesburg Cornice Works, Galesburg, Ill. The illustration shows how the refrigerator is lowered up and down in an iron shaft to just above high water mark in the well. It works as well in a hole specially dug. It is so simple that it can't get out of order, and it is said a child can work it. The manufacturers will send this remarkable invention on a free trial any one who writes for it. Address, Galesburg Cornice Works, 119 Cornice St., Galesburg, Ill.

Homestead 160 acres of land with rich pure water and fine climate, on Moffat Ry. (Denver, Northwestern & Pacific Ry.) in Routt County, Colo. We have no land to sell-it's absolutely free from the Government and now open for settlement. After all you to return home for 6 months after fill in. We help you locate. Oats 80 bushels an acre, wheat 45, barley 70. Act now and get a good farm. Write for free book, map and full information that tells how to get this land free. **W. P. JONES, General Tr. Manager, 710 Majestic Bldg., Denver, Co.**

Corn.

The following tribute to corn was written by ex-Governor Richard J. Oglesby of Illinois:

"Aye, the corn, the royal corn, with—"

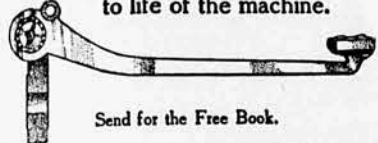
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Ball-Bearings—wear-defying, frictionless. Every typebar of the

L. C. SMITH & BROS. TYPEWRITER

has the Gardner ball-bearing joint. Adds years of profitable efficiency to life of the machine.



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L. C. SMITH & BROS. TYPEWRITER CO.
812 Delaware St. Kansas City, Mo.
Topeka Branch, 107 W. 6th St.

The best Advertising the Goodhue Windmill can have in any locality is a heavy wind storm

BECAUSE, although easy to erect, it is hard for the wind to down—it has a governor that works perfectly in all kinds of weather—the wheel has double arms of heavy channel steel giving more than double strength—it has a practically noiseless brake—it is erected on a tower guaranteed against CYCLONES AND TORNADOES—and because in every way

Goodhue Windmills are Good Mills

So sure are we of our ground, that, for a nominal fee, we will insure the complete outfit, mill and tower, for five years, against anything and everything. Write today for free wind mill book. **APPLETON MFG. CO.**
19 Fargo Street, Batavia, Ill., U. S. A.

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

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

CURRIE WIND MILL CO.,
Seventh St., Topeka, Kansas

GALVANIZED STEEL \$12.75 WINDMILL

Sold direct from factory to user at wholesale price. Strongest guarantee. Send for catalogue. Prices will surprise you.

THE OTTAWA MFG. CO.
702 King St. Ottawa, Kansas

WESTERN CANADA

320 Acres Instead of 160 Acres

160 ACRES FREE IN WESTERN CANADA

As further inducement to settlement of the wheat-growing lands of Western Canada, the Canadian Government has increased the area that may be taken by a homesteader to 320 acres—160 free and 160 to be purchased at only \$8.00 per acre. These lands are in the grain-raising area, where mixed farming is also carried on with unequalled success.

A railway will shortly be built to Hudson Bay, bringing the world's markets a thousand miles nearer those wheat fields where schools and churches are convenient, climate excellent, railways close to all settlements and local markets good.

"It would take time to assimilate the revelations that a visit to the great empire lying to the North of us unfolded at every turn."

Correspondence of an Illinois Editor, who visited Western Canada in August, 1908.

Lands may also be purchased from Railway and Land Companies at low prices and on easy terms. For pamphlets, maps and information as to low Railway Rates, apply to Sup't of Immigration, Ottawa, Ont., or to the authorized Canadian Government Agent.

J. S. CRAWFORD
125 West 9th St., Kansas City, Mo.

WANTED

500 young men to learn Telegraphy and Stationery—counting and earn from \$1.30 to \$125 per month. We have railroad wires giving actual experiences, making it a practical school. Indorsed by A. T. & S. F. Ry. Write for illustrated catalog.

St. Paul Railway and Telegraph School, Desk B, Topeka, Kansas.

in whose yellow hearts there is of health and strength for all nations. The corn triumphant! That with the aid of man has made victorious procession across the tufted plain, and laid foundation for the social excellence that is, and is to be. This glorious plant, transmitted by the alchemy of God, sustains the warrior in battle, the poet in song, and strengthens everywhere the thousand arms that work the purposes of life. Oh that I had a voice of song, or skill to translate into tones, the harmonies and symphonies and oratories that roll across my soul, when standing, sometimes by day and sometimes by night, upon the borders of the verdant sea, I note a world of promise; and then, before one half the year is gone, I view its full fruition, and see its heaped gold await the need of man.

"Majestic, fruitful, wondrous plant! Thou greatest among the manifestations of the wisdom and the love of God, that may be seen in all the fields, or upon the hillsides, or in the valleys. Glorious corn, that more than all the sisters of the field, wear tropic garments!"

An Illinois Farmer's Experience With Alfalfa.

Frank H. Fowler writes to Hoard's Dairyman and says:

Disking alfalfa with the disks set nearly, if not quite, straight will do all good and no harm to alfalfa.

Fowler Farm now has about 120 acres alfalfa and as a result of the schooling and personal advice of Prof. C. G. Hopkins of the Illinois University of Agriculture. His disking advice came about three years ago and not until we suffered, as we now are in some fields, with blue grass.

We get onto the field as soon as frost is out of ground and disk both ways. Disking retains moisture, destroys grass and weeds, loosens top soil that becomes singularly compacted and thickens the stand of alfalfa.

Will plow up about 20 acres where grass has come in and plant to potatoes. Am going to take the other grassy patch and not only disk in spring but after each cutting, and drag, with teeth straight, besides.

A piece of alfalfa properly cared for will actually be without grass or weeds of any kind. I have two such fields from which I save seed. I started second year to disk them.

To speak of the good of alfalfa these days is almost like repeating "a chestnut" story. I would not agree to not grow alfalfa on my land now for \$100 per acre and still keep the land, and the land will grow anything.

I have not cured under caps yet but will this year.

Some Results of Breeding Corn.

1. Bulletin No. 132, Illinois Experiment Station, reports the results of experiments in breeding corn to modify certain physical characters in the plant; namely, (1) Height of ear on stalk, and (2) Declination of ear from stalk. Following is the summary of results:

2. By breeding a variety in opposite directions two strains of corn have been produced in one of which ears are now borne about three feet higher on the stalk than in the other strain.

3. Selecting simply with reference to height of ear has induced some pronounced secondary effects upon the plant. The plants of the high-ear strain have longer stalks, longer internodes, a greater total number of internodes and a greater number of internodes below the ear than have those of the low-ear strain.

4. There is a noticeable difference in the length of growing period in the two strains, early maturity being associated with the smaller type of plant of the low-ear strain.

5. Comparative tests of yield thus far indicate no great difference between the two strains in production of grain but the high-ear strain produces the more fodder.

6. Experiments in selection for erect and declining ears indicate that the declining habit is a character which can be influenced by breeding.

7. No significant effect from this selection has yet been produced on the yield.

8. The length of shank appears to be the principal factor in determining the declining habit.

9. The practical advantages in the declining ear are found in the better protection from rain and the greater convenience in handling at harvest.



CONGO

THE ONLY ROOFING GUARANTEED BY A

SURETY BOND

IT PROTECTS YOU ABSOLUTELY

A Guarantee Without a Loophole

When we used to say that Congo 3-ply would last ten years people laughed and replied that "Everybody claimed that."

When we offered to guarantee such service they said "Guarantees mean nothing—the buyer can never enforce them."

So we went to the National Surety Co. and paid them a large cash premium to issue a Surety Bond with every roll of Congo Roofing.

The bonds give our customers a real, substantial guarantee as good as a government bond.

If the customer's own lawyer drew the guarantee he could not devise an

instrument that would give any better protection.

It is because Congo is so tough, perfect and durable that the National Surety Company is willing to stand back of it. They know that we use the best materials and the best methods and that we watch and inspect every roll. Then we wrap it for domestic use just as carefully as if it were destined for Madagascar or Thibet, and you get perfect, undamaged rolls every inch of which you can use.

The man that buys Congo gets the most value for his money and takes no chances.

We will send you a copy of that guarantee on request—also a sample of Congo Roofing free.

UNITED ROOFING & MFG. CO.,

Successor to Buchanan Foster Co.

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CHICAGO SAN FRANCISCO

ROOFING GALVANIZED CORRUGATED

Cheaper than shingles, will last 30 to 40 years, lightning proof, fire proof, hail proof. Any one can put it on, over old shingles, or on skeleton frame. Just the thing for barns and all kinds of farm buildings. No painting. Write for prices and catalog.

STEEL ROOFING AND STAMPING WORKS, Des Moines, Ia.

A SLAUGHTER SALE OF JACKS

I am now making a 30 days' sale on jacks at two-thirds of their actual value. I have the largest portion of my recent importation of big French and Catalan Spanish jacks; also a large number of big Mammoth home bred jacks. I am now putting this stock in a SLAUGHTER SALE. Will sell at prices ranging from \$400 up. I am offering the greatest values in jacks that have ever been offered in the United States and hope this will move the stock rapidly. I will also place a nice string of Percheron and Belgian stallions in the same list. These stallions weigh from 1,850 to 2,400 each, sound and young. I am positive that any importer has never before offered such values for the money. I am just in receipt of a large importation of Percheron mares, ranging in age from three years old this spring to six years old. Nearly all will have colts in the next seven months. These are all blacks and grays, all big, thick and heavy-boned, the best of Percheron mares that could be secured in France. I wish to sell these mares at once and will make prices at from \$600 to \$1,000 each.

W. L. DeCLOW,

Cedar Rapids Jack Farm.

--- Cedar Rapids, Iowa

PERCHERON MARES

AT PUBLIC AUCTION

Hutchinson, Kan., Wed., May 19

AT KANSAS STATE FAIR GROUNDS

At one o'clock p. m., on the above date I will sell fifteen registered Percheron mares from two to eleven years old. Only two are above seven years. A number of them weigh a ton, some of them have colts by their side from a 2200-lb. stallion. Others are in foal by the same stallion. Terms of sale cash. Write for catalog. Mention this paper. Address

E. F. MURRAY, --- Hutchinson, Kansas

Auctioneers—Kent & Yodder, Hutchinson, Kan.
Col. D. L. Brown, Bloomington, Ill.

RICH MEN'S CHILDREN

By Geraldine Bonner

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(Continued from last week)

"With one condition—that you leave the country. Just look what that's going to mean!" He rose from the narrow, unholstered seat, took a light chair that stood near by and, setting it close to her, sat sideways on it, one hand extended toward her. "Fifty thousand dollars is a good bit of money over here, but over there it's a fortune. You'd be a rich woman with that amount in your own right. You could take an apartment in Paris or a slice of some prince-feller's palace down in Rome. On the income of that capital, safely invested, you could live in a style that only a millionaire can manage over here—have your own carriage, dress like a queen, go to the opera. They like Americans, especially when they've got money. First thing you know you'd be right in it, knowing everybody, and going everywhere. You're nobody here, worse than nobody. Over there you'd be one of the people everybody was talking about and wanted to know. You're not only a pretty woman, you're a smart woman; you could get on top in no time, marry into the nobility if you wanted."

Berny, her eyes on the blotter, said nothing. "And what's the alternative ever here?" the tempter continued. "Staying on as an outsider, being in a position where, though you're lawfully married and are living decently with your husband, you're ostracized as completely as if you weren't married at all; where you've hardly got enough to pay your way, cramped up in a corner like this, never going anywhere or seeing anybody. Does that kind of life appeal to you? Not if I know anything."

Berny lifted her head and looked at him. The color was now burning in her cheeks and her eyes seemed to hold all the vitality of her rigid face.

"You tell Mrs. Ryan," she said slowly, "that I'll lie dead in my coffin before I'll take her money and leave my husband."

They looked at each other for a silent moment, two strong and determined antagonists. Then the old man said mildly and pleasantly:

"Now don't be too hasty; don't jump at a decision in the heat of the moment. Just at the first glimpse this way, you may feel surprised—may take it as sort of out of the way and interfering. But when you've thought it over, it will look different. Take time. You don't have to make up your mind now, or tomorrow, or the day after. Turn it over, look at the other side, sleep on it for a few nights. Think a bit of the things I've said. You don't want to be hasty about it. It's not the kind of offer you get every day."

"No it is not!" said Berny fiercely. "It's too dirty for most people. It's too dirty for any one but Mrs. Ryan, and you can tell her I said so."

She rose to her feet, still clenching the blotter in her hand. He rose too, interested, annoyed and disappointed, for he knew with a cynical certainty just about what she was going to say.

"Yes," she cried, stiff and quivering like a leaf. "Go and tell her! Tell her just what I said. I'll see her in hell before I'll take a cent of her money, or budge an inch out of this house. She's a fine one to give herself such airs, and think herself too good to know me and then offer to buy me off like a kept woman. Tell her I'm her son's wife, and I'll stay till she's good and dead, and Dominick's got his share of his father's estate. Tell her I'm here to stay, right here, here in this flat, just around the corner from where she lives, and that I'm Mrs. Ryan as well as she is, and that I'm going to stay so. This is my home, here in San Francisco, where she's tried to ruin me and freeze me out, and here I stick."

She glared at him as he stood, one hand on the back of his chair, his eyes thoughtfully fixed on her.

"I wouldn't be too hasty if I were you," he said pacifically. "Things done in a hurry are rarely satisfactory. It's a bad way to do business. You're apt to let good chances slip by."

"Don't be afraid," she said with grim significance. "I'm not going to let mine slip by. I've married Dominick Ryan and I'm going to stay by him."

He turned to the table and picked up his hat, which was a soft, black felt wide-awake. As he denied it into shape, he said:

"You're sort of heated up and excited now, and a person's brain don't work well in that state. You don't want to come to any important conclusions when you're not cool and able to think. Sleep over this thing for one night, anyway. You can call me up on the telephone tomorrow, or probably it would be better to send a line by a messenger."

"You're very much interested in this affair, aren't you?" she said with sudden malicious meaning.

For the first time in the interview he was slightly taken aback. Her face held a reserve of knowledge with which she seemed to be silently taunting him.

"Naturally," he said with an air of simple frankness, "as an old family friend would be."

"And that's the only reason?"

"What other could there be?"

"Oh, I don't know"—she turned and dropped the blotter on the desk with a nonchalant movement—"I was just wondering."

He eyed her for a moment without speaking, and in this one moment of scrutiny allowed a look of dislike and menace to creep into his face. Then he said genially:

"Well, I guess this brings our interview to an end. It's not been just what you'd call a pleasant one, but I for one can say it's left no hard feelings. I hope you'll admit as much."

She shrugged her shoulders and turned to the desk.

"I'm not a good one at lies," she said. "I leave that to the Ryan's and their old family friends."

He laughed good-humoredly and answered:

"That's all right. You never can hurt me by plain speaking. That's the only kind I know. I guess we're neither of us great at guile. Remember that I'll expect a visit or a letter from you."

"You'll have to wait a long time for either," she said without moving.

"Well, I'm a patient man, and everything seems to him who waits."

She looked over her shoulder with a slight smile.

"Not everything," she said.

"So long," he answered, giving his hat a farewell wave at her. "I've enjoyed meeting you and hope we'll soon meet again in a more friendly way. Hasta Manana, Senora!"

She wheeled so that she faced him and gave a short nod, then watched him as he walked to the door. Here he turned, bowed deeply and respectfully, and passed out into the hall, the bamboo strands of the portiere clashing together behind him. A moment later she heard the bang of the street door.

She stood motionless in the middle of the room, her face deeply flushed, her eyes fixed on the swaying curtain. For the first few moments a blind excitement held her, and then from the welter of this, her thoughts separated themselves and took definite directions. Rage, triumph, bewilderment, alarm, surged to the surface of her mind. Shaken by one after another she stood rigid in the intensity of her preoccupation, not noticing the shaking of her knees or the thumping of her heart.

Her two predominant sensations were rage and triumph. The insult of the bribe burned in her—this flinging money at her as if it might be flung at a cast-off mistress. It deepened her detestation of the Ryans, and at the same time gave her a sense of intimacy with them. It made them more on a par with her, drew them down from the lofty heights whence they had scornfully ignored her, to a place beside her, a place where they, as well as she, did underhand, disreputable things they did not want known.

And it showed her her power. Standing in the middle of the room with her eyes still staring at the now motionless portiere strands, she saw, stretching away to a limitless gilded distance, her negotiations with her husband's family. If their desire to rupture the marriage took them thus far, where might it not take them? She stared into a future where she saw herself extracting money in vast amounts from them. It was fortune—twice, three times the first paltry sum—waiting for her when she chose to stretch her hand and take it. She could be rich, as the old man said; she could go abroad, see the world, have all the joys that riches give when she chose to let Mrs. Ryan humbly pay her such a sum as she would accept.

With a quick catch of her breath, she turned and moved to the window, stirred to her depth with the exultation of unexpected power. And standing there, the thought of the old man suddenly swept across her, and with it, transfixing her in an attitude of frozen, inward contemplation, the memory of his daughter. New vistas, extending away through the abruptly illuminated dimness of her previous ignorance, suddenly opened before her, and she saw—her startled vision exploring them. At the end of them, waiting for Dominick in the attitude of welcome, was the pink and white girl she had seen in the park.

The discovery was made so quick, came upon her flushed complacency with such a shock of unexpectedness, that even her sharp, suspicious mind could not for the moment take it in. Then Miss Cannon's face, as she had seen it in that moment of recognition in her memory, and she saw straight to the heart of the plot. It was not the Ryans alone who wanted to buy her off. It was the Cannons as well. They not only wanted Dominick to get rid of her; they wanted him to get rid of her so that he could marry Rose Cannon. The other girl was behind it all, accounted for the part of the Bonanza King, accounted for the probability of the French coachman who had all her life had everything and now wanted Berny Iverson's husband.

Poor Dominick, whom Berny had held contemptuously as a disappointing and aggravating appearance of hers, suddenly rose in her estimation into a valuable possession whose worth she had not before realized. It was enough that another woman wanted him, was, through underhand channels, trying to get him. All in a minute, Berny had changed from the neilike proprietor of a pos session of an article of rare worth, which she was prepared jealously to guard, with a sort of proud challenge she felt that she stood valiantly facing the marauders, protecting her treasure against their predatory advances. And her hatred against Mrs. Ryan began to extend toward Bill Cannon, and beyond him toward the fair-faced girl, who grew red to her forehead when she accidentally encountered Dominick Ryan.

CHAPTER XV.
The Moonlight Night.

A few nights after this, there was a full moon. Dominick, walking home from the bank, saw it at the end of the street's vista, a large, yellowish-pink disk floating up into the twilight. The air about it was suffused with a misty radiance, and its wide glowing face, having a thin look like a transparency of paper with a light behind it, seemed, though not yet clear of the housetops, already to dominate the sky. The evening was warm, like the early summer in other climates. Dominick, walking slowly and watching the great yellow sphere deepening in color as it swam majestically upward, thought of evenings like this in the past when he had been full of the joy of life and had gone forth in the spirit of love and adventure.

The sight of his home dispelled these memories and brought upon him the sense of his daily environment and its distastefulness. The determination to accept his fate which had been with him on his return from Antelope had of late been shaken by stirrings of rebellion. Uplifted by the thought of his love for a woman hopelessly removed from him, but who would always be a lodestar to worship reverently and to guide him up difficult paths, he had been able to face his domestic tragedy with the high resolution of the martyr. But this exalted condition was hard to maintain in the friction of daily life with Berny. Before, she had merely been an agreeable companion of whom he had to make the best. Now, she was that, intensified by a comparison which threw out her every fault and petty vulgarity into glaring prominence. And more than that—she was the angel with the flaming sword, the self-incurred, invited, domesticated angel—the angel come to stay—who barred the way to Paradise.

She seemed to him to have changed within the last week. When he had first come home from Antelope she had been Berny in one of her less familiar but recognizable moods—Berny trying to be agreeable, wearing her best clothes every day, ordering the things for dinner he liked, talking loudly and incessantly. Then, quite suddenly, he became aware of a change in her. She grew silent, absent-minded, morose. He had tried to make their lives easier by always being polite and carefully considerate of her and she had responded to it. For the last few days she had made no effort to assist him in this laudable design. Instead, she had been unresponsive, preoccupied, uninvitingly snappish in her replies. Several times he had been forced into the novel position of "making conversation" throughout dinner, exerting his wit and subjects to talk about what he

might lift the gloom and elicit some response from the mute, scowling woman opposite.

Tonight, the period of ill humor seemed over. Berny was not only once more her animated self, she was almost feverishly garrulous. Dinner had not progressed past the fish when she began to question him on his recent experiences at Antelope. The subject had come up several times since his return, but for the last few days he had had a respite from it, and hoped its interest had worn away. She had many queries to make about Bill Cannon, and from the father it was but a natural transition to the daughter, so much the more attractive of the pair.

Dominick was soon inwardly writhing under an exceedingly ingenious and searching catechism.

Had he been less preoccupied by his own acute discomfort, he might have noticed that Berny herself gave evidence of disturbance. As she prodded him under her questions, her face was suffused with unusual color, and the eagerness of her curiosity shone through the careless smile with which she sought to veil it. Certain queries she accompanied with a piercing glimpse of investigation, watching with hungry sharpness the countenance of the persecuted man. Fearful of angering her, or still worse, of arousing her suspicions, Dominick bore the examination with all the fortitude he had, but he rose from the table with every nerve tingling, rasped and galled to the limit of endurance.

He did not come into the den immediately but ramed about, into the parlor down the passage, and into his own room. He spread the scent of his clear and its accompanying films of smoke all through the flat, a thing that Berny would never have ordinarily allowed. Tonight she was too occupied in listening to his prowling steps to bother about minor rules and regulations. She saw in his restlessness a disturbance evoked by her questionings.

"Aren't you coming into the den?" she called, as she heard him pacing steadily along the passageway.

"No," he called back. "The moonlight's shining in at every window. It makes me restless. I don't feel like sitting still."

She sat on the divan, a paper spread before her face, but her eyes were slanted sideways, unblinking in the absorption of her attention. Suddenly she heard a rattling sound which she knew to be from the canes and unwholesome in the hat-rack. She cast away the paper and, drawing herself to the edge of the divan, peered down the passage. Dominick was standing at the hat-rack, his hat on the back of his head, his hand feeling among the canes.

"You've got your hat on," she called in a high key of surprise. "You're not going out?"

"Yes, I am," he answered, drawing out the cane she wanted. "It's a fine night, and I'm going for a walk."

"For a walk?"—there was hesitancy in her tone, and for a brief moment, the thought she was going to suggest coming with him. "Where are you going to?"

"Oh, I don't know. Just prowling about. I want some exercise."

"Are you going to your mother's?" she ventured, not without some timidity.

"No," he said. "I'm not going anywhere in particular. Good night."

She sat forward listening to his descending feet and the bang of the hall door. A glance at the window showed her it was, as he said, a fine night. Dominick was just going out for a walk and not to see anybody. He was always doing queer things like that. But—Berny sat staring in front of her, biting her nails and thinking. Uneasiness had been planted in her by Dominick's flight to Antelope. More potent uneasiness had followed that first attack. Now the bitter corrosive of jealousy began to grow and expand in her. She was haunted on the divan, she thought of Dominick walking through the moonlight to Rose Cannon, and another new and grimmer name held hold upon her.

Outside, Dominick walked slowly, keeping to the smaller and less frequented streets. It was a wonderful night, as still as though the moon had exerted some mesmerizing influence upon the earth. Everything was held motionless and without sound in a trance-like quietude. In the gardens not a blossom stirred. Where leaves extended from undusted darknesses of foliage, they stood out, stem and fiber, with a certain distinctness, their shadows painted on the asphalt walks in inkly silhouette. There was no lamplight to warm the clear, still palor of the street's vista. It stretched between the fronts of houses, a river of light, white and mysterious, like a path in a dream.

It was a night for lovers, for trusts, and for whispered vows. Dominick walked slowly, feeling himself an outsider in its passionate enchantment. The scents that the gardens gave out, and through which he passed as through zones of sweetness, were part of it. So were the sounds that rose from the blot of vagueness of white figures on a porch, from impenetrable depths of shadow—laughter, low voices, little cries. In the distance people were singing snatches of a song that rose and fell, breaking out suddenly and as suddenly dropping into silence.

(to be continued)

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