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KANSAS FARMER.

Established in 1863.

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The KANSAS FARMER is in receipt of cards announcing the marriage of Prof. Oscar Erf of the animal husbandry department of the Kansas State Agricultural College to Miss Alice Louise Ashton, of Monroeville, Ohio, on Wednesday, June 28, 1905. Heartiest congratulations are extended.

In the KANSAS FARMER of June 22, Eben Smith, of Newburyport, Mass., was quoted as saying that he had graded 421 miles of the Union Pacific Railroad. Mr. Smith writes to say

that he "graded the 421st mile." Mr. Smith also sends a clipping from the Boston Globe, in which it is claimed that a parasite that causes the death of the brown-tail moth has been discovered. The West will appreciate the favor if the friends in the East will ship the parasite in advance of the migration of the pest.

The total value of mineral oil or petroleum produced in the United States in 1904 is officially stated to have been \$101,170,466. This is the price of 177,063,421 barrels of oil. Of this oil Kansas produced 4,250,779 barrels. It is claimed that Kansas' production for this year will amount to some 26,000,000 barrels. The largest production last year was that of California, viz., \$29,649,434 barrels. The value of the oil varied greatly. California oil was valued at 27.9 cents a barrel. Wyoming produced only 11,542 barrels, but it was valued at \$7 a barrel. Kansas, Oklahoma, and Indian Territory oils were valued together at 96.9 cents a barrel. This year's record of prices will show great variation from the prices of last year.

BLOCKS OF TWO.

The regular subscription price of the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to receive the paper at half price. While the subscription price will remain at one dollar per year, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year and one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

Special to Our Old Subscribers Only.

Any of our old subscribers who will send us two NEW SUBSCRIPTIONS at the introductory rate of fifty cents each, will receive any one of the following publications as the old subscriber may choose, viz., "Woman's Magazine," "Western Swine Breeder," "Vick's Family Magazine," "Blooded Stock," "Kimball's Dairy Farmer," or "Wool Markets and Sheep."

THE SHEEP DID IT.

For many years sheep have been more or less neglected as a live-stock crop in Kansas. For some unknown reason, they never attained a very high position in the estimation of the stockmen and farmers of this State. Perhaps this was due in part to a lack of knowledge as to how to profitably handle them, but more likely to the greater fascination for the cattle and swine business which has obtained so long. This ought not so to be. Sheep-raising in Kansas is a profitable business; and while it is not recommended that every farmer should engage extensively in sheep-raising, it is still true that there is a profitable place for a limited number on almost every farm.

That sheep have been profitable in Kansas is abundantly shown by the record made by E. D. King, of Burlington, Coffey County, who came to this State in 1878 with nothing in the way of capital but an active brain and a pair of willing hands. He bought a few sheep and has always owned some since that time. He now owns a splendid farm of 800 acres equipped with two of the largest barns in Coffey County, a comfortable residence, a nice bunch of registered Shorthorn cattle headed by a Harris-bred bull, acres on acres of alfalfa and other crops, a large number of pure-bred Rambouillet sheep and one of the biggest, best-bred and finest herds of Berkshire hogs in Kansas; and "the sheep did it all," says Mr. King.

These Rambouillet sheep are very heavy fleece-producers and have a large carcass of fine quality that commands them to lovers of good mutton. They seem very nearly to approach the dual-purpose type and the 1,500 head which Mr. King usually keeps upon his farm have been money-makers for him. What they have done for Mr. King they can and will do for others. There is room for more sheep and fewer dogs in Kansas.

CROP SIZES AND MONEY RETURNS.

The interest manifested by the cotton-growers of the United States in creating an impression that the crop will be poor in yield and comparatively small in the aggregate is explained by figures given in the latest circular of the Southern Cotton Association. This association queried the active members of the New York Cotton Exchange, the New Orleans Cotton Exchange, and the Liverpool Cotton Association as follows:

"Assuming the cotton trade becomes convinced that the crop of 1905-6 is unlikely to exceed the under-mentioned figures, but will closely approximate them, what in your opinion would be the resulting maximum price for middling cotton in your market?"

The averages of the replies are as follows:

"For a crop of 10,000,000 bales 15.22 cents per pound.

"For a crop of 11,000,000 bales 11.97 cents per pound.

"For a crop of 12,000,000 bales 9.1 cent per pound."

The application of a small amount of arithmetic to these figures will make plain the advantages of the smaller crops in dollars and cents.

The weights of several bales of cotton vary greatly but the average for the United States for the crop of 1903-4 was 502.1 pounds. The commercial bale used as a basis for all estimates of the crop is 500 pounds of cotton. At 15.22 cents a pound the commercial bale is, therefore, worth \$66.10; at 11.96 cents, it is worth \$58.85; and at 9.1 cents, it is worth \$45.50. Applying these figures to the several assumed productions for the present season, it appears that the 10,000,000-bale crop is worth \$761,000,000; 11,000,000-bale crop is worth \$588,500,000; 12,000,000-bale crop is worth \$455,000,000.

There is some warrant in the experiences of recent years for placing the

lower valuation on the larger crop. Thus, according to the returns published by the Department of Agriculture, the 8,652,597 bales of 1890-1 brought \$351,970,341; 9,035,379 bales of 1891-2 brought \$311,982,601.

The larger crop in this case brought \$60,000,000 less money than the smaller crop of the preceding season.

So, too, the 10,401,453-bale crop of 1900-01 brought \$511,098,111; 10,662,995-bale crop of 1901-02 brought \$418,358,366.

The larger crop in this case brought less than the smaller crop of the preceding season by almost \$93,000,000.

Again, the 10,725,422-bale crop of 1902-03 brought \$458,051,005; 10,050,953-bale crop of 1903-04 brought \$599,694,724.

The smaller crop brought \$141,000,000 more than the larger.

Under these showings, ought not the boll-weevil to be welcomed as a friend rather than fought as an enemy. Ought not floods, early frosts, labor difficulties, and every untoward circumstance to be prayed for? Ought not the cotton-planter to go off on a vacation instead of cultivating his cotton? Ought not the Georgia parties who burned a number of bales of cotton be held up as benefactors?

These questions appeal strongly to the cotton-growers. The situation may lead others to ponder whether the world's industrial and economic organization has yet reached perfection. Are good crops to be regarded as calamities?

PROSPEROUS KANSAS.

The State of Kansas was deluged on Sunday. A steady downpour of rain which lasted all day and covered the entire State resulted in a considerable rise in many streams, especially in the Kansas River water-shed, though none are reported as having reached the danger point. A precipitation of nearly 3.5 inches is reported and, at the time this is written the Kansas River stands at 14 feet above low-water mark and is still rising. As the danger line is 22 feet and as the weather has cleared again, no great apprehension is felt unless floods are reported in the tributaries. While some damage is reported in a few localities from wind and hail, the storm seems to have been a quiet but heavy rainstorm that will be of great benefit to the corn and later crops.

Kansas is now dressed in her best clothes and extends the glad hand of welcome to all honest, law-abiding people who would partake of her bounties and live in her lap of luxury. Her wheat crop now being harvested is of the finest. Her grass and forage crops were never better. Her corn crop promises to be the best in years. Her alfalfa is a wonder and her live stock is numerous and healthy. The abundance of moisture in the spring was followed by a season of dry weather interspersed with showers that has given an unusual opportunity to gather in the harvest and to destroy the weeds in the growing corn. The result is a fine crop of wheat, oats and alfalfa all in the dry and in good condition.

A recent trip through the valleys of
(Continued on page 697.)

Horticulture

Cow-Peas in the Orchard.

DR. J. C. WHITTEN, MISSOURI EXPERIMENT STATION.

The cow-pea is the great orchard crop for Missouri, as well as for other sections of the Central West and South. That does not mean that it is always the best crop to grow in the orchard under all circumstances and to fulfill all purposes of an orchard cover-crop, but it fills the bill oftener than does any other species of plant. Being a legume, it augments the available supply of nitrogen in the soil, thus enriching it; it renders the orchard soil more porous and mellow; it renders the soil more drouth-resistant in the long run; it may be sown late enough so as not to stand in the way of clean cultivation during spring and early summer; the cow-pea is fairly efficient in protecting the soil from washing; the cow-pea crop is valuable for hay or to be pastured to hogs. These and other virtues may be ascribed to it as a crop to grow between fruit-trees.

Wherever the orchard soil is so poor and thin that it needs fertilizing, the most important problem is to furnish the needed fertilizer in the cheapest possible way. The three chief fertilizing ingredients necessary are nitrogen, phosphorus and potash. The cow-pea can not increase the amount of phosphorus or potash in the soil, but it can supply the nitrogen, getting it without expense from the air. Where fruit-trees are making poor wood and leaf growth, due to poor soil, it is usually safe to assume that nitrogen is one of the plant-food elements that are lacking. This may be secured by growing cow-peas in the orchard. In many old, worn-out soils which have long been tilled the soil may also lack the other two essential plant-foods. In many of our comparatively new soils there is enough phosphorus and potash so that the nitrogen supplied by the cow-pea will be sufficient to bring the orchard up to good, thrifty condition.

Aside from enriching the soil in nitrogen, the cow-pea improves its general physical condition, rendering it more porous. A hard, lumpy, crusty orchard soil does not respond well to cultivation; it is difficult to get the land in good shape. A single crop of cow-peas will mellow it to a great extent. The more porous and spongy the land, due to the growth of cow-peas, the better it will withstand drouth. The cow-peas add humus to the soil, which enhances its water-holding capacity. The fact that the soil becomes more porous also makes it possible to form a better dust mulch by cultivation which also increases the possibility of checking evaporation of the soil moisture. The rains of winter and early spring mostly flow off over a hard, crusty soil while they sink into a mellow cow-pea soil and are stored for the dry, hot months of summer. During the dry summer of 1901 the soil in two of our orchards under experiment remained fairly moist under the cultivated surface where cow-peas had been grown the previous year, but much drier where no cow-peas had been grown.

Where cow-peas are grown on steep land which has a tendency to wash, the stubble, if allowed to stand unplowed until spring will check the washing to a considerable extent, though not to the extent that some other crops do. Even after plowing under the peas, the soil will not wash so much as it would if the cow-peas were not there. The fact that the soil is mellow and loose allows the water to soak in instead of washing off, thus holding the soil in place.

The variety of cow-pea to select for the orchard depends upon the locality, the length of the season in which they are to grow and the purpose to which they are to be put, aside from their value to the orchard. If clean cultivation is to be given the orchard during the first part of the season, it may be desirable to delay sowing the cow-peas until late June, or even the first

of July in southern localities. In this case, it is best to sow very early varieties so they will have time to mature. Among the best early varieties for this purpose are the Whippoorwill and New Era. These sorts mature in a short time. The Black is also fairly early and will mature if sowed during the last week in June, from Central Missouri, southward.

If the cow-peas are to be pastured to hogs (a profitable disposition to make of them is in orchards that are of bearing age so the hogs will not injure the trees), varieties which produce many seeds are desirable. Fortunately the early varieties mentioned above are good seed-bearers and make a large quantity of hog-feed. Some also of the latter varieties make many seeds. It is well to ascertain what sorts seed best in your particular soil and select these if they are to be used as feed.

If hay is desired, the Clay and Red Ripper are good, for they make lots of vines and a good hay crop. If grown for hay, the peas should be sown earlier as most of those which make a good crop of hay take a longer time in which to mature. The Black, which is fairly early, also makes a fair hay crop. Where it is desired to sow as late as July 1, and at the same time to secure hay, this variety is one of the best.

The peas may be sown with a grain-drill, closing every alternate drill-hole so as not to get them too thick. They may also be sown broadcast and harrowed in, but this requires more seed. From one bushel to one and one-half bushels of seed to the acre is sufficient. The smaller the seeds the less seed required. The Black has large seeds and requires rather more than the other sorts named.

Where clean cultivation is being given, the peas may be harrowed just as they are coming up, so as to leave a good dust mulch on the ground. The peas grow all the better for this harrowing and cover the ground before the soil can again crust over. The harrowing should be done with a spike-tooth harrow. If the soil is very light, or if this digs up the plants, the harrow teeth should slope backward enough so they will not kill the young plants. It is rare, however, that harrowing endangers the young plants. We have harrowed them until it looked as if most of them were harrowed out of the ground and had them grow all the faster for it. The harrowing should not be delayed until the plants are large, or injury will result.

If cut for hay, the work should be done when the pods begin to ripen. At this time some of the plants will still be making blossoms. It is best to mow the plants, however, before their leaves begin to be shed. They should lie in the field until the juice is dried out of their stems. This may take two weeks. Most beginners make the mistake of putting up the hay too soon, in which case it is sure to mold. Raking and handling in the field should be done on dewy mornings, when the plants are tough, so the leaves will not be broken off. We have gotten the best results by allowing the peas to lie for a few days and then raking them in windrows. These windrows may be turned once in a while until the hay is dry.

If pastured to young hogs which are not accustomed to hustling for themselves in the woods, there is little danger of the animals injuring trees which have become well established at bearing age. Sometimes old hogs will injure fruit-trees, particularly if many of them are confined in a small orchard. So long, however, as there is little danger of injury from well-fed hogs, many find them to be beneficial to the orchard. They kill many insects and the windfalls that are infested with codling-moth and fungous diseases.

If cow-peas are grown in the orchard every few years, they should keep the soil in fine condition. If the soil has once become very poor, it may be best to grow several crops of peas in succession, but in orchards where the trees are doing well a crop every three or four years will answer. This enables the grower to rotate crops. For example, in young orchards in which

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corn is grown, cow-peas may be rotated with corn and good results will be obtained.

Cow-peas are also a good crop for vineyards. At the station we grow cow-peas regularly in the vineyard. The grapes are given thorough cultivation until late June, when the cow-peas are sown. Before this practice was begun, it was a problem to hold the soil about the roots of the vines. After cropping with cow-peas for several seasons the land washes but little and the vines grow better and bear better. The cow-peas make sufficient cover so one does not get into the mud when pruning in wet weather in early winter or spring.

Whether grown in the orchard or vineyard the peas should usually be plowed under the following spring as cultivation begins. In this way they protect the soil without losing any essential part of their fertilizing value.

Summer Pruning.

PROF. ALBERT DICKENS, KANSAS EXPERIMENT STATION.

From careful experiments made by the horticultural department of the Kansas Experiment Station during the past four years it seems that the pruning of fruit, shade, and timber-trees during the early summer and late spring is more satisfactory and secures better results than pruning done during the dormant season—winter and early spring.

Wounds made before the middle of July have healed rather more quickly than have those made at a later date, but wounds made as late as August 15 have healed very successfully. The danger of loss of sap is less after the tree is well in leaf than from wounds made during winter and spring. This difference is more noticeable in the maples, elms and mulberry than with other species under observation.

In extensive tests made on an apple orchard some very satisfactory results have been secured with ten-year-old trees which had borne but little and showed but few fruit spurs. Trees pruned in the summer of 1902—the pruning consisting of cutting back new wood and thinning out where a heavy growth shaded the two- and three-year-old wood, and a similar but lighter pruning given in the summer of 1903—were full of bloom in 1905 and are carrying a very fair crop of fruit.

Trees pruned in summer have grown fewer "water-sprouts" than those of similar age and grown in a similar soil, pruned in winter or early spring. Water-sprouts removed during summer are less liable to be followed by another crop of the same growth than where the pruning is done in winter.

The operator is less likely to remove a large amount of wood, for he can

NEW BOOK JUST ISSUED

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Formerly Professor of Horticulture at the Massachusetts Agricultural College.

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Illustrated. 5x7 inches. 255 pages. Cloth. Price, postpaid, \$1.00.

KANSAS FARMER COMPANY

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KANSAS

readily see the danger of sun-scald where too many or too large branches are removed. The thinning out and cutting back of the younger branches should be all that is required when the orchard has had a reasonable amount of care given to its formation, and this light pruning given in early summer seems to be good treatment for unproductive trees.

Have You Read Sunset Magazine?

No other magazine gives so much accurate, interesting information about California and the Great West as does Sunset. Every issue beautifully illustrated. Published by the Southern Pacific, Department E, San Francisco, and sold by newsdealers. Send 10 cents for sample copy, and remember the Southern Pacific will sell one-way tickets to California at very low rates from September 15 to October 31, 1905.

Andrew Jackson was born in a log hut in North Carolina, and was reared in the pine woods for which his State is famous. James K. Polk spent the earlier years of his life helping to dig a living out of a new farm in North Carolina. He was afterward a clerk in a country store. Millard Fillmore was the son of a New York farmer, and his home was a humble one. He learned the business of a clothier. James Buchanan was born in a small town in the Alleghany Mountains. His father cut the logs and built the home in what was then the wilderness.

Agriculture

The Hired-Help Problem.

R. R. BIRCH.

The hired-help question is one of the important problems that confronts the farmers of the present day. It is a noteworthy fact that there is more general dissatisfaction among the farmers in regard to the hired help that they must employ than there has been in the past. This dissatisfaction can not be confined to the farmers alone, for when they are dissatisfied it naturally follows that their hired men can not be contented.

Before beginning a discussion of the hired-help problem let us first see just what the problem is and to what causes it may be attributed. Today the trend of all business is to consolidate. The large corporation is driving out the smaller competitor, in many cases placing thousands of laborers under the direct supervision of a single man; and it is generally conceded that whatever may be the effect of the trust and monopoly on the price of produce, the larger factory can produce articles at less cost than can the small concern.

We find exactly the opposite condition in operation when we look at the farming industry. Statistics show that the tendency is to divide the land into smaller farms rather than to consolidate several small farms into one large one. Now there must be a reason for this. Why it is that the large farm or ranch has been so often a failure while the large factory has been such a decided success? The reason is perhaps to be found in the fact that skill is the only needed qualification of a tradesman, while both skill and judgment are required of the ordinary agricultural laborer. The judgment of the laborer being lacking in so many cases, the large agricultural enterprises have been failures. It requires only practice to become efficient as a shoemaker, a weaver, or a tailor, because they do the same things over and over again, but circumstances are often arising that require judgment of the ordinary farmer-hand.

In times past the hired help has consisted of boys who were raised on the farm and who were working with a definite object in view, boys who were looking forward to the time when they, too, would own a farm of their own. But now since land is becoming higher in price it is an impossibility for a young man to work as a farm-hand and save enough of his wages to start himself in the farming business.

This condition has driven many of the real farm-boys away from the farm for the purpose of making a start in some other way. The result is that inferior classes of men are often the only available farm-help. It could scarcely be otherwise when almost every other business pays its laborers better wages and requires of them less work than is required of the farm-hand. So much for the character of the hired help.

Another change comes in the character of the farmers themselves. The effect of agricultural colleges, experiment stations, and farmers' institutes has been to open the eyes of the farmers and to create in them a desire for better methods in their work; in short, they are more progressive than they used to be.

Now a stride upward on the part of the farmer, and a stride downward on the part of his hired help has left between the two differences that are difficult to overcome. Both are dissatisfied. The satisfactory settling of these difficulties is the problem that is before the farmers to-day, and is styled the "hired-help question."

It has been suggested that the farmers do not treat their hired help as they should, and the farmers almost invariably answer that the men do not work as they should. There seems, however, to be little ground for the statement that the hired men are not treated as well as they used to be; and since this condition remains the

same, it becomes evident that the treatment of the hired man does not need to be materially changed. There is no doubt that the farmer who treats his hired men best gets the best work from them, but even this is an incidental rather than a fundamental consideration.

It has been suggested as a solution to this problem that the farmer furnish a home and a garden spot for his hired men, and then hire only married men who have families to support. The main difficulty with this system seems to be that there are not enough of this kind of men to supply the demand. This being the case, what is to be done?

There seems to be but one feasible answer to the question, and this answer is based on experience, with other economic problems of the same nature. Competition must decide the question. There must be inducements offered in the way of better wages to stimulate the development of efficient hired men who understand farming. At present there seems to be but little distinction made between the different grades of hired men. If a farmer happens to hire an extra good hand, he considers himself lucky, but in too many instances he fails to recognize the fact that such a man deserves extra compensation.

Men, as a rule, can not be driven, but they can be led. The rapid improvements that the farmers are making in their methods of conducting business can not fail to net them larger gain than has hitherto been realized, and it seems rational to suppose that some of this gain must be used in such a manner as will encourage the hired help to take a greater interest in his work, thus benefiting the farmer as well as the hired man.

Sweet Clover.

A letter from R. Kinnemon, of Sylvia, Reno County, Kansas, makes inquiry concerning a plant which he sends by the same mail, and which he noticed for the first time last spring, growing near the edge of a field in the sand hills. This year he finds the plants to have spread considerably from the seeds of last year. The plant in question, as he says, somewhat resembles alfalfa, and he wishes to know whether it is good for pasture or for hay.

The plant referred to is sweet clover. The scientific name is *Medicago alba*. It is very closely related to alfalfa, but occupies the position of a decidedly poor relation. Both of these plants are members of the great botanical family known as the Leguminosae. Alfalfa, sweet clover, and the true clovers, form, together with a few others, a very closely allied group within the family. Alfalfa belongs to the botanical genus *Medicago*, of which there are fifty species known, out of which only two or three are of practical value as fodder-plants, the most important, of course, being *Medicago sativa*, commonly known as alfalfa in this country, and in Europe as Lucerne. Sweet clover belongs to the botanical genus *Mellilotus*, as was stated, and includes about twenty species, found wild in the temperate and sub-tropical zone of the Old World. One species especially, the white sweet clover, which is the plant Mr. Kinnemon inquires about, has become quite generally distributed over the world. It contains, in its leaves and stems, a bitter substance known as "cumarin," which renders it extremely distasteful to stock, and, so far as I have ever seen or heard, they will never eat it except under compulsion, or as a last resort from starvation. The only value that the white sweet clover possesses lies in its qualities as a bee-plant. It also serves to hold embankments and gullies which are in danger of washing. But unfortunately its advantages in the directions named are in most cases more than offset by its disadvantages as a positive weed. It rapidly takes land, both in pasture and in cultivation, and as it seeds very liberally, its rate of increase is tremendous. Fortunately, it is only a biennial plant, and hence can be kept down by mowing vigorously when in full flower. This will kill the plant

and prevent its seeding. If mowed too early, sweet clover will send out branches very close to the ground—too close to be mowed later—which will bear flowers and seeds, and thus furnish a crop for the succeeding year. By mowing when the plant is in full flower, this can be prevented. There are some places, however, where it may be desirable to allow sweet clover to grow. In a sandhill region where nothing else will thrive, if the sweet clover is found to do well, it might just as well be let alone for the sake of its virtues as a soil-holder and for the improvement which its tubercle-bearing roots may give to the soil. Elsewhere on grass-land or in cultivated ground, it should be rigidly eradicated as a weed.

H. F. ROBERTS,
Botanist, Kansas Experiment Station.

Grasses for Pasture.

I am looking for a mixture of grasses for early spring and late fall pasture for cattle. I have a patch of sixty acres that I wish to seed this fall and would like to know what you think would make the best combination. Would alfalfa, Kentucky blue-grass, English blue-grass, white clover, and Brome-grass do together? If so, how much of each in pounds per acre?

C. W. TAYLOR.

Dickinson County.

I would recommend that you sow a combination of English blue-grass and *Bromus inermis* with a little alfalfa, seeding about ten pounds each of the grasses and four or five pounds of alfalfa per acre. There is of course some danger in pasturing alfalfa, even in combination with the grasses named, but the danger is not nearly so great as when alfalfa is pastured alone. At this station we have used clover with the grasses named instead of alfalfa, but the clover is not very productive and tends to run out, and in Dickinson County the seasons would probably be less favorable to the growing of clover than at this station.

Kentucky blue-grass and white clover make an excellent permanent pasture wherever this grass and clover are well adapted for growing, but in your part of the state I would not expect the Kentucky blue-grass to be productive, and it would not stand drouth so well as the grasses first named.

At this station we find the *Bromus inermis* to be superior to any other grass both as a pasture- and meadow-grass. However, it cannot be considered a permanent pasture-grass since after a few years the *Brome-grass* becomes so thick and sod-bound that it is unproductive. If you sow the alfalfa or clover with the grasses, however, you can depend upon a productive pasture for at least five or six years, and the pasture could be used much longer; but in my judgment it will pay to seed down new land every four or five years, breaking the old sod and planting again to corn and other grain crops. I am continually trying to impress upon the farmers of this State that grass should be used as a rotation crop, and that it is not best to keep one field continually in grass and farm other fields continually with corn and other grain.

A. M. TENEYCK.

Cow-Pea Seed Per Acre.

I intend to sow some cow-peas to be plowed under green for fertilization. Will you kindly inform me what quantity of seed I should use per acre and the best method of planting.

CHARLES HAYDEN.

Jackson County.

For the purpose for which you wish to use cow-peas, I should advise to plant them with an ordinary grain-drill or sow broadcast and cover with the disk harrow or common harrow. Sow about a bushel of the peas per acre. The grain-drill should be set to sow about a bushel and a half of wheat per acre in order to sow the required amount of peas. We have had good success in planting cow-peas with a disk drill in the grain-stubble. It is usually best to disk the ground previous to seeding; this is especially desirable if the land is weedy.

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have this year, it is practicable to sow cow-peas immediately after the binder, using the disk-drill; in fact, we are doing this, having the drill follow the binder directly. This makes a handler and neater piece of work than to sow in the stubble after the grain is shocked.

During the past two seasons we have sown cow-peas in wheat stubble after harvest with good success; the vines had covered the ground and the plants had made a growth of twelve to fifteen inches in height when the crop was plowed under, about the middle of September. On light soils or old land lacking in humus, there is little question but that the use of cow-peas for green manuring in this way is beneficial to the soil. However, the cow-peas will benefit the soil if they are simply used as a catch-crop after the grain or taken off for forage or pastured, or the crop may be left as a winter covering.

A. M. TENEYCK.

Peas in Corn.

Will you please give me what information you can on field-peas, stating what kind is the best to sow.

What do you think of sowing peas in the corn-field when corn is cultivated the last time, and will they make a crop under favorable weather conditions? I wish to pasture them off with sheep.

C. S. CULP.

Mitchell County.

Field-peas have been grown at this station in a small way, but we have not as a rule found the crop so well adapted to this climate as are cow-peas or soy-beans. The field-pea should be sown early in the spring, and I would not recommend to plant this crop so late in the season, (June 24). The White and Yellow Canada field peas are the common varieties. We have also tested a variety known as the Scotch Beauty, which is a good producer.

You can secure seed of the common field peas from almost any Kansas seedsmen. For sowing in corn in this State cow-peas are much better adapted than field-peas. The Whippoorwill is one of the standard varieties, and you can secure seed from any Kansas seed firm. Our plan is to sow the peas in the corn at the last cultivation, or soon after, using the one-horse drill set to sow a bushel and a half of wheat per acre, which will plant the peas at the rate of about a bushel per acre. We have not had very good success in producing a growth of cow-peas in corn during the past two seasons. In a good stand of corn the peas often start poorly and make a feeble growth; in fact they will not make much growth at all until the corn matures or is cut up and shocked. Last fall, however, the peas made considerable growth after the corn was cut, covering the ground fairly well and standing twelve inches high by October 1.

It is quite a common practice, as you have suggested, to sow cow-peas in corn and pasture them off with sheep, and this does not require the cutting of the corn, and with an early-maturing corn doubtless the peas will make a good growth when the corn matures and ceases to draw heavily upon the soil.

I think your plan of sowing the cow-peas and corn a good one. Although you may not get a large amount of feed from the peas, the growing of this crop will benefit the soil and result in larger crops of corn and other grain the succeeding season.

A. M. TENEYCK.

Oat Smut.

Of a car of Texas oats which was sowed in this vicinity fully one-third of it went to smut. The smut headed out first. Other oats are not affected. Is this common to Texas oats, and what is the cause?

J. N. SHANNON.

Woodson County.

Doubtless the reason why smut has attacked the Texas oats more than other varieties is because the seed-oats of this variety were infected with smut before planting. It appears that all of the oats of this variety were

shipped from a single point in one car, perhaps one farmer's crop, and his crop must have been infected with smut last year. When smutted grain is thrashed the germs of smut adhere to the kernels, and when such seed is planted these germs sprout and the smut fungus grows in the oat plant, fruiting in the head of the oat, as you have observed. It would not be advisable to use the oats from this crop as seed another season, unless the seed be treated to destroy the smut spores.

One of the most successful preventives of smut is to treat the seed with formaldehyde. Use about 1 pound of formaldehyde, of 40 per cent strength, to 45 gallons of water. Dip the seed oats into this solution or thoroughly spray them, shoveling them over until they are fully wet, when they should be spread and allowed to become dry on the surface, being occasionally shovelled over. Oats treated in this way one day may be seeded the next. The grains will be swollen a little, and in order to sow the required amount of seed per acre the drill should be set to sow about one-fourth to one-fifth more than the ordinary amount.

For the identification of the plant which you sent I have referred your letter with specimen to the Botanical Department of this college.

A. M. TENEYCK.

The plant sent by you to Professor TenEyck, has been referred to me for identification. It is *Plantago aristata*, large-bracted Plantain. It is an annual, but spreads readily from seed. Clean culture, therefore, ought easily to get rid of it. It is not likely to prove as bad a weed as the English Plantain, but since it is utterly useless, it should be stamped out if possible, if it is only just beginning to gain hold in your field. GEO F. FREEMAN.

Treatment for Poor Timothy.

I have a field of timothy that is so thin this season that it is not worth cutting, except in spots. The ground was so wet last season at the time of cutting that the horses feet, mower wheels, and wheels of wagon cut the ground and left it in very bad shape. I had thought I would let the grass stand till the seed was all shattered out, then cut and remove the hay, disking the ground and following with the harrow. Please advise me whether this plan will result in improving my stand of grass? If so, when will be the proper time to disk and harrow?

D. K. CALKINS.

Lyon County.

With favorable weather conditions your plan of thickening up the stand of timothy would succeed fairly well. By the disking and harrowing, however, you would doubtless kill out a large part of the old plants which remained, and the stand next season would largely be new grass.

It is my judgment that if you have other land which is as well adapted to grass as is this, the more advisable plan will be to seed timothy on a well-prepared seedbed early in September or it may be sown early next spring. If you succeed in getting a good catch of grass from fall-seeding, the timothy will make a fair crop of hay the succeeding year, probably a better crop of hay than you would get from the field in question if you were to reseed it in the manner described in your letter.

The field in question may be broken during the summer or fall and planted to corn next season; the rotation with grasses will benefit the land for growing corn and other crops. Except where it is necessary or very desirable to keep a certain piece of land continually in grass, I do not favor renewing old grass meadows or pastures; rather, I prefer to seed new land to grass, using the old fields for rotation with corn and other grain crops. This practice not only results in larger yields of grass but puts the land in better condition to grow larger crops of corn and small grain, and tends to maintain the fertility of the soil.

If you follow the plan suggested in your letter, I would advise to disk and harrow the land as soon as the seed is largely shattered and fallen to the

ground, probably the last of August or the first of September.

A. M. TENEYCK.

Renewing Weedy Pastures.

The writer is desirous of some information regarding the care of pastures. He is part owner of a pasture of 550 acres, southwest of Blue Rapids, which has become somewhat weedy. This has not given him the concern it probably should have given, as his experience in the past has shown him that when allowed to rest, the bluestem prairie-grass will run out the principal varieties of weeds with which we have been bothered, viz., ragweed and milkweed. For several years he has been unable to give the pasture the attention required, and this season finds that a number of the thick, bunchy thistles that grow into a tufted plant from 2 to 3 feet high, their leaves being dark green on the upper side and grayish white on the under side, have got started. Other pastures in the vicinity are afflicted in like manner, to a greater or less degree. In my pasture the weeds form patches oval in shape, their longest diameter being from 20 to 50 feet. As soon as the owners learned of these conditions, they put men in to hoe them out, hoeing down in and cutting off the root below the ground, which method has seemed to be successful in another pasture in the vicinity. In the last few days, on account of shortness of help and for fear they would commence going to seed, they have simply been cutting them off with a mowing machine and scythe.

The writer would like to know what is the cheapest and simplest reliable remedy for ridding a pasture of these thistles? Will the hoeing, done as described, be successful in killing them? Is it true, as has been stated by some, that if cut off and not allowed to seed for two years in succession, they will die out?

Fully one-half of this pasture is in excellent condition, the prairie-grass is good and free from weeds. One hundred and sixty head of cattle are being pastured on it; would you consider this number too large? I would not give you the idea that the other half is badly weedy; it is somewhat so, but there is a great quantity of grass on it.

There are a few patches of sumac in the pasture. How can I effectually clean these out?

Are there any bulletins of the station relating to the care of pastures, or reliable books published on that subject? It would be a favor if you would advise me.

C. D. SMITH.

Marshall County.

In Bulletin No. 48, published by this station in December, 1894, Professor C. C. Georges gives results of an experiment in renewing a prairie pasture. In this experiment it was found that by simply disking the sod well in the spring and removing the cattle from the pasture for a season the native grasses renewed their growth, and the "following year the prairie afforded as much pasture as it probably ever did."

Although no late reports have been made on this subject we have occasionally practiced disking old pastures with good results. If the pasture is badly run out, it is necessary to let it rest for a season. I have also found that a surface dressing of barn-yard manure, either before or after disking or at any time during the year, causes a more rapid renewal of the grasses and a more vigorous growth the succeeding season. If prairie pasture is not pastured too closely, the native grasses will usually run out all the common weeds which infest pastures. It is a good plan also to mow a pasture once during the season, especially when weeds become troublesome.

The thistles which you describe are doubtless the field or pasture thistles botanically known as *Cnicus undulatus*. The common thistle is a biennial; that is, it starts one year and seeds the next, when it dies, new plants always starting from the seed. The pasture thistle is apparently a perennial; new plants are formed from the seed and also from root tu-



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bers; this accounts for the spreading of the thistle in the "oval patches" which you describe. The common thistle is easily killed by cutting the plant off below the crown, but the pasture thistle can not be readily destroyed in this way since the young plants will start again, and in order to completely kill them out the hoeing must be continued. It is doubtful whether you will succeed in destroying these thistles by simply mowing them, although keeping the plants from seeding will largely prevent the weeds from spreading. Probably your method of cutting the thistle off with the hoe, below the crown, is as practicable as any.

In a favorable season, 550 acres of good prairie pasture in your section of the State should easily support 160 head of cattle, but probably the pasture has been injured during seasons when there was a small growth of grass, due to drouth or other unfavorable weather conditions.

The sumac may be destroyed by cutting or grubbing it and keeping af-

ter it in the same way that has been described for the thistles. It is true of all plants, even noxious weeds, that if they are cut frequently the growth is greatly enfeebled, the plant being finally destroyed; and this will prove especially true in a prairie pasture in which the native grasses are inclined to occupy the soil fully and run out all weak plants.

A good book on the subject is "Grasses," by Prof. Thomas Shaw, published by the Webb Publishing Co., St. Paul, Minn. We have no bulletin relating directly to this subject.

A. M. TENEYCK.

The Stock Interest

THOROUGHbred STOCK SALES

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

September 1, 1905—Poland-Chinas at Bennington, Kans., C. N. White.
Sept. 12, 1905—Shorthorns at Kansas City, T. J. Wornall, Liberty, Mo.
October 8, 1905—Poland-Chinas, E. E. Axline, Oak Grove, Mo.
Oct. 12, 1905—American Galloway Breeders' Association sale, Kansas City, Mo.
October 18, 1905—Fancy Poland-Chinas at Osborne, Kansas, by F. A. Dawley, Waldo, Kans.
Oct. 24, 1905—Jno. W. Jones & Son, Delphos, Duroc-Jerseys.
Nov. 14, 1905—S. H. Lenhart, Hope, Kansas Poland-Chinas.
Nov. 15, 1905—S. H. Lenhart, Dispersion Sale of Shorthorns.
Nov. 16-18, 1905—Registered stock at Arkansas City, Kansas by the Improved Stock Breeders' Association of the Wheat Belt. Chas. M. Johnson, Sec'y, Caldwell, Kans.
Dec. 8, 1905—American Galloway Breeders' Association sale, Chicago, Ill.
Dec. 12 and 13, 1905—Imported and American Herefords, Armour-Funkhouser sale at Kansas City, Mo. J. H. Goodwin, Manager.
February 15-17, 1906—Third Annual Sale of the Improved Stock Breeders' Association of the Wheat Belt at Caldwell, Kans., Chas. M. Johnson, Sec'y.
February 21-23, 1906—Percherons, Shorthorns, Herefords and Poland-Chinas at Wichita, Kans. J. C. Robinson, Manager, Towanda, Kans.

Feeding Silage to Beef Cattle.

HUMPHREY JONES, WASHINGTON COURT-HOUSE, OHIO, BEFORE THE OHIO LIVESTOCK ASSOCIATION, FEBRUARY 7, 1905.

Cattle-feeders everywhere realize the importance of the cheaper production of beef. The profits usually are small and oftentimes there is a loss. Assuming that the law of supply and demand controls the price of the finished product, there appears to be but two ways to increase the profits of the feeder—to get the feeders cheaper and to reduce the cost of finishing the steers.

The use of silage for steer-feeding is a new thing, and like all new things it is apt to have its too enthusiastic advocates, who will make extravagant and excessive claims for it. The subject should be discussed and considered impartially and not after the fashion of the special pleader or the advocate of some pet theory. To be of much value, the testimony of those having had experience on the subject, should be full and complete—the whole truth—because a partial statement of facts in regard to any matter may be as misleading as an absolute misstatement.

Our experience with silage for cattle-feeding purposes began in 1901, at which time we erected and filled three silos 26 feet by 42 feet, having a capacity of about 550 to 600 tons each. This was followed the next year by the erection of a cement silo 36 feet by 52 feet which, according to the rules usually applied to ascertain the capacity of silos of ordinary size, should hold about 1,500 tons; but we have found that it actually holds about 50 per cent more than all three of our other silos put together, which, figured according to the same rules, have the capacities given above, so that our cement silo must hold something over 2,000 tons. The contents of these silos have each year been fed to beef cattle. Our silage has been made of ripe corn, grown so as to make the largest possible yield of grain, and nearly ripe soy-beans mixed in the silo in the proportion of about $\frac{3}{4}$ the former to $\frac{1}{4}$ the latter. In connection with the silage we have fed clover, alfalfa and oat hay. Early in our experience we added ear-corn but soon abandoned that and substituted cottonseed-meal therefor, with much better and more satisfactory results. We have found that cattle will eat, of the kind of silage which we have been making, about 5 pounds per day per hundred

weight up to 1,000 pounds weight, 50 pounds per head per day being about the maximum amount which a steer of any age will eat; that when one-half pound per hundred weight of cottonseed-meal is sprinkled over the silage the cattle will eat slightly above one-third pound per hundred weight per day of clover, alfalfa, or oat hay, making for a 1,000-pound steer a ration of fifty pounds silage, five pounds cottonseed-meal, and four pounds of hay, and for smaller steers proportionate amounts less. In our later feeding operations we have settled upon this kind of a ration for fattening cattle.

Cattle which are being carried as stockers we feed little or no cottonseed-meal, and they eat a larger proportion of clover hay, probably 50 per cent more. Fifty pounds of corn and soy-bean silage, five pounds cottonseed-meal and four pounds clover or alfalfa hay for a 1,000-pound steer makes a ration containing about 2.8 pounds protein, 13 pounds carbohydrates and 1.2 pounds fat, with a nutritive ratio of about 1:5.5. The standard ration is protein 2.5 pounds, carbohydrates 15 pounds, and fat 0.5 pound, nutritive ratio about 1:6, so that it will be seen that the ration closely approximates what is thought to be the actual requirements of the steer. Whatever the correct theory may be we know from actual experience that the above ration makes the cattle do better and makes more money for the feed consumed than our former practice of feeding the cattle all the shock-corn they would eat with occasional allowance of clover hay, or ear-corn and clover hay. The steers, with this ration, get about fifteen pounds of grain per head per day, or about one and one-half pounds per hundred weight for a 1,000-pound steer. Professor Henry states that about twelve pounds per day of grain is all a steer of any size can profitably utilize, and he cites the fact that the best English and Scotch feeders use even less than that amount of grain. We have found by pretty careful tests that corn grown as we grow it for silage that will yield fifty bushels of ears will make about eight tons of silage as taken from the silo, there of course being a greater weight as it goes into the silo. If the corn were cut green according to the practice of many dairymen, it would make probably ten to twelve tons per acre; but we always let our corn get ripe enough to put in shock and much of it becomes dead ripe before going into the silos. Fifty bushels of ears equals 3,500 pounds of ears for each 16,000 pounds of silage, which makes the ears equal about 22 per cent of the total weight of silage. The soy-beans, we think, have about the same proportion of grain to total weight, so that we count our silage 20 per cent grain. In fifty pounds of silage a steer would therefore get ten pounds of grain, and five pounds cottonseed-meal added, would make fifteen pounds of grain, or one and one-half pounds per hundred weight for a 1,000-pound steer. An important feature, too, is the fact that the grain is thoroughly mixed with the roughage so that it is all well digested, thus making a smaller grain ration sufficient.

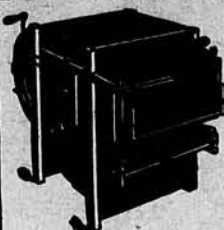
Whether silage, in the case of any particular feeder, should be adopted for steer-feeding, depends upon the net balance of advantages and disadvantages in his special situation and circumstances. Not all men, by any means, who handle cattle should build silos.

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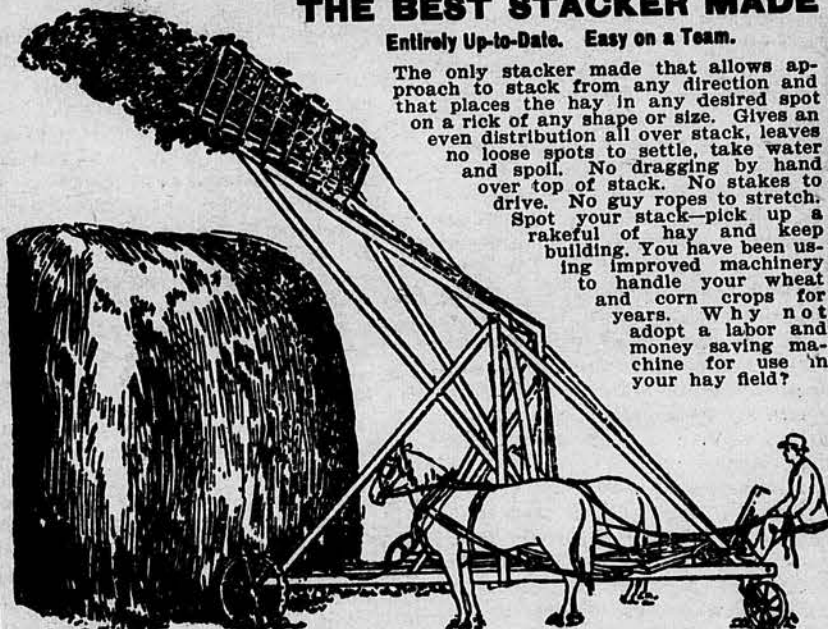
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The F. Wyatt Mfg. Co., Box 100, Salina, Kansas

incident to siloing exceeds the loss of food-value due to that process (and there is some) so that there is a net gain. This gain is not much (about 10 to 12 per cent) according to the experiments made at several of the stations. This is not enough in and of itself to justify ensiloing the corn; but it must be remembered that these experiments have all been conducted upon the basis of the dry corn plant being cared for so as to lose as little as possible of its feeding-value and palatability, and that it has been prepared and fed in the best possible condition for the cattle to get the largest benefit therefrom. This renders these experiments of little practical value to the average cattle-feeder, because he has not such means of caring for the dry corn-plant as are usually employed in making these experiments. With three-fourths of the feeders in the principal cattle-feeding sections of Ohio, shock corn only is fed and the corn stands out in the field all winter and is hauled to the feed-lot as needed. Many shocks twist down and partially or wholly rot, all are soaked with the rains and beaten by the

winds, get hard and woody, and are thus more or less damaged. It is a matter of common knowledge among feeders that after the first of March the fodder in shock-corn is of little value. Under favorable conditions, fattening cattle will eat only the best portions of the fodder, and the great bulk of it is wasted and thrown out to keep them up out of the mud. With all these things taken into consideration, the gain in feeding value to the average cattle-feeder who uses shock corn, by reason of siloing the corn is, in our judgment, not less than 50 per cent. We carry upon the same land more than 50 per cent more cattle than we did before we had the silos, and whatever the correct theory of the matter may be, this solid hard fact is sufficient to satisfy us that very much more can be gotten out of the corn-plant fed in the form of silage than when fed dry in any manner which is practicable with us.

2. Gains can be made cheaper with the corn-plant in the form of silage than when fed dry as shock corn. The average price of corn in the crib on the farms of Ohio during a series of

PILES

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say ten years, is probably not far from forty cents per bushel. This makes an acre of corn, making fifty bushels per acre, worth \$20. If the same corn yields eight tons per acre of silage, the value of the silage is \$2.50 per ton, and if no more expense has been put on the acre of corn when put in the silo than when cut, husked and cribbed or fed out in the usual way, the results from feeding each will be a true index of the relative cost of gains. Our experience has been that the cost of siloing the corn is not as much as cutting, husking and feeding or marketing the corn in the usual way. The cash outlay with us in filling the silos runs about forty to fifty cents per ton. The cost of filling, however, is a matter which will vary according to conditions and circumstances. Were we putting up a less amount of silage so that we would not have to hire teams off the farm, the cost would be considerably less, and a small force of men generally can be operated more economically than a larger one. With cottonseed-meal at \$25 per ton (it usually costs us \$24 to \$24.50) and clover hay at \$5 per ton, the cost of a day's feed for a 1,000-pound fattening steer (or any larger weight, for this is the maximum amount any steer will eat) would be:

50 pounds silage at \$2.50 per ton.....	\$0.04
5 pounds cottonseed-meal at \$25.....	.06
4 pounds clover hay at \$5.....	.01
Total.....	\$0.11

This ration we have found will make a gain fully equal to or greater than a half bushel per day of shock corn, or a less amount of corn and all the clover hay the steer will eat, and at a very much less cost. It is true, more gain on hogs following cattle that are fed shock corn will be made, but not nearly enough to make up the difference in the value of the two rations. It must be remembered, too, that considerable benefit to hogs following cattle that are fed silage and cottonseed-meal will accrue. Hogs grow and do well with no feed but the droppings, although a less number can be carried than with corn-fed cattle. Our gains on cattle thus fed on silage during the feeding-periods ranging from four to seven months, have been from 1.75 to 2.5 pounds per day, and we find that they finish much more evenly, the hair and general appearance are much better than corn-fed cattle, and especially than cattle which are fed only shock corn. Fewer cattle get off feed or scour. In fact, such a thing has almost been unknown to us among the silage-fed cattle.

3. Silage is especially well adapted to carrying stock cattle through the winter. All that is necessary for stock-cattle, where good sheds are provided, is silage and clover, alfalfa or oat hay, and you may expect gains of fifty pounds per month on cattle of fair quality. A striking example occurred in our neighborhood during the winter of 1903-4. A and B bought together a car-load of Texas calves about November 1, 1903, and divided them by picking, turn about. A put his on a ration of corn silage and clover hay, giving all they would eat of each. B fed his all the fodder and clover hay which they would eat and in addition fed shelled corn, the amount not being accurately measured, but supposed to be three to four pounds per head per day. Each bunch of calves had open sheds and good bedding. May following A's calves had gained 300 pounds and then weighed 650 pounds, while B's had gained only 150 pounds and weighed 500 pounds. We are now feeding 1,000 Texas-bred Hereford calves on all the corn and soy-bean silage, clover, alfalfa, and oat hay which they will eat, and two pounds per head per day of cottonseed-meal, and they are in fine condition and gaining rapidly. We have never seen so thrifty a lot of youngsters.

4. The silo enables one to store a large amount of feed in a small space, at the point where needed. We put last fall about 225 acres of heavy crops of corn and soy-beans in one silo. One man can do the work of feeding four times as many cattle out of a silo as he could if he had to haul the shock corn from the field.

5. The manure from the cattle is

more easily handled and can be hauled out during the winter as made, at which time it has much more value than when left in the lot to ferment, bleach out and wash away until the following summer.

6. When the corn is put in the silo the fields are cleared so that fall seeding of small grains can be much more advantageously done.

7. Silage can be kept over for summer feeding to help out short or dry pastures. After August 1 and often after July 1, cattle will eat large amounts of silage even though running on what appears to be pretty good grass. Silage and cottonseed-meal fed on the grass make gains rapidly.

DISADVANTAGES.

But it must not be supposed that there are no disadvantages attending the feeding of silage to beef cattle.

1. It is expensive to build silos to hold any considerable portion of the corn-crop on the farm of the ordinary cattle-feeder, although I can see no way in which storage room for an equal amount of feed can be provided so cheaply but the average cattle-feeder does not want storage room—the fields are his storehouse. In my judgment the cheapest as well as the best silo is made of concrete. A silo holding 500 tons or upwards, if material is reasonably available, can be built at a cost not exceeding fifty cents per ton capacity, and it will be practically indestructible.

2. Silage being a succulent cooling food it is necessary to have good barns and sheds in order to successfully use it for beef-making purposes. These are expensive. Cattle full-fed on shock corn, if they have a good bed and are out of the mud, appear to do about as well with a barbed wire fence for a wind breaker as in a warm shed or barn. In fact, our trouble when we were using that kind of feed was to get the cattle to go in the barns and sheds at all. They appeared to prefer the open air except in the very severest weather. The corn nine days out of ten was furnishing them more heat than they desired, and they wanted to waste some of it in the open air. It will not do at all to leave silage-fed cattle, and especially young cattle, exposed to the weather. The feed will be largely thrown away if this is done. We also found, during our first three winter's experience in feeding silage, that it is impossible to keep the cattle in proper condition as to bedding with earth floors in the barns and sheds. It is absolutely necessary, when considerable numbers are being fed together, to have solid floors of some kind, and we have consequently concreted all our cattle-sheds and barns, and this effectively remedies the trouble. There is no waste in feeding silage, nothing to throw out for bedding and to keep the cattle out of the mud, as with feeding shock corn. These concrete floors therefore require bedding and for this we use wheat straw in liberal quantities and clean the sheds out two or three times each week. It is expensive to provide the concrete floors, but they should last almost indefinitely and the amount of manure annually saved by them is a considerable item; but again, this is an item upon which the average cattle-feeder does not place much value, and it would have little effect in influencing his judgment or action.

3. The greatest difficulty of all which we have experienced is the question of labor at silo-filling time. When we are ready to commence filling the silos nearly everybody else is commencing to cut corn and it is frequently hard to get enough hands. The regular force of hands on the farm must all be drafted into service and every other kind of work stopped. We run two large cutters and it takes a force of about twenty-five men and teams to keep them going. This kind of a force on the farm can be managed all right for a day or two in wheat-threshing time, but when you have three or four weeks steady pull at silo-filling, it takes a deal of patience and perseverance to keep such a force of men moving. The novelty of the thing wears off and there is nothing in it but heavy work. However, we

have each year managed to get through the job all right, and there is a sense of relief and satisfaction in knowing that the work of handling the corn-crop is through with instead of being dragged out through all the fall, winter and spring months, as would be the case if the corn were to be cut, husked and fed out in the usual way.

I have given the principal advantages and disadvantages which our experience in feeding silage to beef-cattle has developed. I think these, and possibly some others, may arise in almost any cattle-feeder's experience in the corn-belt proper. From a consideration of them it is clear that not every man who handles beef cattle should build a silo.

Some already have more feed apparently than they care to handle—they need more cattle rather than more feed. Others may not desire or may be unable to incur the expense necessary to prepare to properly feed silage. Still others may not wish to assume the additional care and worry incident to a 50-per-cent increase in their holdings of live stock; but to the active, energetic, intelligent, capable owner of fertile corn and clover or corn and alfalfa farms anywhere in the corn-belt, who is managing and controlling his lands himself and desires to devote them to stock-raising and stock-feeding purposes, and is ambitious to attain the greatest success in these lines irrespective of the amount of work and attention to business involved, and who at the same time has a pride in building his lands up to and maintaining them in the highest possible state of fertility, the silo, in my judgment, presents opportunities and possibilities not afforded by any other methods known to the business.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

That which is good feed will make good manure.

The more litter in the manure the shorter the process of decomposition. Cultivation in a dry time is most injurious to weeds and beneficial to crops.

It is necessary for the farmer to thoroughly understand all of the routine duties of the farm.

In raising seed, make it an item to select that which has ripened first.

A diversity of crops distributes work, receipts, and expenses, more evenly throughout the year.

Animals are fed for profit, and it is desirable to increase that profit to largest limit.

Nothing is so good as an earth floor for animals that have tender feet.

Sheep are very efficient aids in making clean pastures by keeping down many kinds of weeds.

While bran may be a part of the ration of all classes of live stock, it should be fed in connection with ground grain or cut feed.

In nearly all cases, it is better to apply the manure thick than to attempt to make it go as far as possible by spreading it on in thin layers.

When the liquids of the manure are lost, the most valuable constituents of fertility pass away with them.

Buckwheat is a good crop to grow in the orchard as it shelters the ground, keeps it cool and moist and permits the roots of the trees to feed near the surface.

With nearly all products the good does not raise the price of the bad nearly so much as the bad depresses the price of the good.

The better the quality of the manure the less the cost of handling it. Bulk does not give quality, and this is especially the case with manure.

Clover should never be turned under until it has attained its best growth as well below as above the ground, if the most is made out of it.

When oats are grown especially for feed the most economical plan of management is to cut the same as hay and feed in the straw without thrashing.

Pea vines grown upon land and left to protect the surface until preparation is made for the next crop, furnish a cheap source of nitrogen in a desirable condition.

Thoroughly pulverise the soil, mak-

Horse Owner's Use Caustic Balsam

A Safe, Speedy, and Positive Cure
The safest, best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FILING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular.
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Send for a whole year's trial subscription to the best hog paper in the world. Free sample.
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This years breeders in Rose Comb R. I. Reds for sale. Prices reasonable. Breeding stock of Orpingtons all sold. J. W. Swartz, Americus, Kans.

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NEWTON'S Heave, Cough, Dis-temper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can, of dealers, or Exp. prepaid. The Newton Remedy Co., Toledo, Ohio.

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EAR MARK.**
The best and cheapest ear-mark made. It possesses more points of merit than any other make. Send for circular. H. G. Stoll, Seaford, Neb.

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Sure relief for Pink Eye, foreign irritating substances, clears the eyes of Horses and Cattle when quite milky. Sent prepaid for the price, \$1.

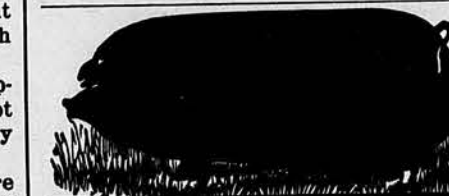
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as an infallible remedy for Spavin, Ring-bones, Splints, Curbs and other forms of lameness has made a million friends. That is why this man says it is the

BEST ON EARTH.
Sumpter, Oregon, March 16, '04.
Dr. B. J. Kendall Co., Gentlemen:—Enclosed find a two cent stamp for your "Treatise on the Horse and his Diseases." I have used 150 bottles of your Kendall's Spavin Cure in two years and I find it the best liniment on earth. I follow the horse doctoring business here for years.
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Names and addresses of **1000 MEN**
Who use Good Tobacco or Cigars. A postal will do. Write it now.
NI-KO CO., Wichita, Kansas

ing the surface smooth, light, and pliable, is the right way to prepare for seeding to wheat in the fall.

As a rule, with any crop grown to be plowed under as green manure, the best results are secured if a full growth is attained before plowing under.

The offspring from a sow that has grown up on the farm from a line of ancestors under the same treatment will probably do better in the hands of that farmer than the pigs from a sow raised under different regime.

PROSPEROUS KANSAS.

(Continued from page 691.)

the Neosho and Marais des Cygnes Rivers which suffered so seriously from flood waters during the last three years, reveals an almost ideal condition as to crops both harvested and prospective. The wheat and oats are generally very clean and of good quality with a most satisfactory yield, while the corn and grass crops are simply great.

All this serves to emphasize, what we have so often before stated, that all that Kansas ever needed at any time in her history was the development of a new agriculture to fit her conditions. Now that this has been fairly begun her citizens prosper, her banks overflow with money and her stand among her sister States as a great agricultural and live-stock producer is assured.

Miscellany

The Packers Indicted.

After an investigation which has lasted something over three months and during which more than 100 witnesses were examined, the federal grand jury this afternoon handed in its report.

Seventeen men, prominent in the packing industries of the country, were indicted for violation of the Sherman anti-trust law and four officials of the Schwarzschild & Sulzberger Company were indicted for alleged illegal rebating to the railroads.

Besides these individual indictments, bills were voted against five corporations. Armour & Co., Swift & Co., Nelson Morris & Co., the Cudahy Packing Company, and the Fairbanks Canning Company.

The men indicted for alleged conspiracy in restraint of trade which constitutes violation of the Sherman act are:

J. Ogden Armour, president of Armour & Co.

Charles Armour, of Armour & Co.

Arthur Meeker, general manager for Armour & Co.

T. J. Conners, director, Armour & Co.

P. A. Valentine, treasurer Armour & Co.

Samuel McRoberts, assistant treasurer of Armour & Co.

Louis F. Swift, president of Swift & Co.

Charles Swift, of Swift & Co.

Lawrence A. Carton, treasurer of Swift & Co.

Arthur F. Evans, attorney for Swift & Co.

R. C. McManus, attorney for Swift & Co.

A. H. Veeder, general counsel for Swift & Co.

Edward Cudahy, of Cudahy & Co.

D. E. Hatwell, secretary of Swift & Co.

Edward F. Swift, vice president of Swift Co.

Edward Morris, secretary of Nelson Morris & Co.

Ira W. Morris, of Nelson Morris & Co.

The four employees of Schwarzschild & Sulzberger, who were indicted for alleged rebating with the railroads, are all connected with the traffic department of the corporation.

Their names are Samuel Weil, B. S. Cusey, C. E. Todd, V. D. Skipworth.

The indictments voted for alleged violation of the anti-trust law were identical in each instance. The in-

dictments contained each eight counts which were spread over sixty-three typewritten pages.

Late Cultivation of Corn.

I have 50 acres of corn a little over two feet high. I disked the ground before we listed it, and I have been over it four times, three times with the cultivator and once with the harrow. The ground is clean from weeds and there is a good dust mulch. In going over the field the last time I noticed some corn roots on the shovels.

It is very dry, we have not had a good rain at Wilsey since we planted corn. It looks well but wilts a little some days in the middle of the day; the corn is on upland.

What I want to know is if you think it will pay to plow it again if it does not rain so as to form a crust on the ground. Please answer at once so that I will get it in time.

In parts of the field the corn is much larger than in other parts and will soon be too large to plow.

P. S. GARRETSON.

Morris County.

It is my judgment that it will pay to cultivate the field of corn again, if you are able to do so before it becomes too large to use the two-horse cultivator. Of course, if the ground should be settled by rain and the weeds start again, the cultivation will be more beneficial than if rain does not fall and the soil remains dry and loose. I think, however, that rain has fallen in your county by this date (June 30), and probably the difficulty will be to get the cultivator through your corn again before it is too large. At this station we often practice cultivating with one horse after the corn is too large to cultivate with the two-horse cultivator, provided the rain has settled and packed the soil.

The advice usually given us is to keep the cultivators going in a dry time. In my judgment, however, when the soil is mellow and free from weeds very little will be gained and perhaps some injury may be done the corn and moisture actually lost from the soil by continued cultivation during a period in which no rain falls. If mellow soil is moved with the cultivator, the drier soil at the surface is turned under and moister soil is brought up from below, with the result that some moisture escapes into the air, also some injury may be done to the roots of the corn if the cultivation is too deep. However, few farmers are apt to cultivate corn too much, and it is usually not necessary to give advice opposing too frequent cultivation.

A. M. TENBYCK.

Missouri Agriculture.

The 37th annual report of the Missouri State Board of Agriculture is a handsomely printed and illustrated volume of 400 pages. An addition to the report of the annual meeting of the board the book contains special departments devoted to the Missouri Corn-Growers' Association, the Missouri Live-Stock Breeders' Association, Missouri at the Louisiana Purchase Exposition, the Missouri State Dairy Association, and the statistical tables. It is a very valuable work, and shows the great work in agriculture and live stock now being done by our sister State.


Geo. B. Ellis, Columbia, Mo., is Secretary of the board and the author of this great work.

Barbed Wire Fences.

The man who uses ordinary soap for shaving will soon find out how a horse feels when he gets mixed up with a barbed wire fence. You can buy a new horse but you can not buy a new face, no matter how irritated or blotchy it gets or how badly it itches. Avoid laundry or toilet soap for shaving and you would a barbed wire fence. Williams' Shaving Soap is made especially for shaving and in another column of this paper is an offer of a free trial sample. "For the sake of your face try it."

A Good Roofing.

AMATITE is a self-rellant roofing. You don't have to go out and coat it every few months or patch it up to stop leaks. After it is laid, you can go off and forget about it and it will stay at its post and do its duty year after year. A booklet about it and a sample may be had for the asking from the Barrett Manufacturing Company, New York, Chicago, Philadelphia, Cleveland, Cincinnati, St. Louis, Allegheny, Kansas City, New Orleans, Minneapolis.



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Mr. E. A. James, of Ewart, Iowa, writes as follows:
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 Gentlemen: I have been feeding Iowa Stock Feed for four years to the amount of about 2,000 pounds yearly. I have tried my cattle with and without Stock Food and am confident I get a larger profit out of the Stock Food I feed than out of any other part of the ration.
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 Perry Henderson, of Litchberry, Ill., writes as follows.
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 I had 80 head of shoats and they were in bad shape. Since feeding the Worm Powder I have been feeding Iowa Stock Feed and I never had shoats do any better than mine are doing now.
 I had some of my neighbors use some of the Iowa Worm Powder and they got the best of results from it. I got a man to use it who was using another worm remedy. He now thinks the Iowa Worm Powder the only worm remedy, and says he will not use the other any more. I wish you could have seen the worms that passed from his hogs. It was a sight. I advised him to feed Iowa Stock Feed to keep his hogs gaining better.

Write us, care of Dept. E, and get our Special Offer.

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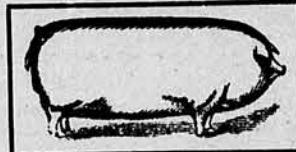
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our country, and mankind."

All communications for this department should be addressed to Mrs. Kittie J. McCracken, Station B, Topeka, Kans.

The Kansas Farmer is the official paper of the Kansas State Grange.

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Manhattan Grange.

We are pleased to give to our Grange readers the following from the lecturer of Manhattan Grange. We feel sure it will awake a commendable spirit of jealousy in those timid granges who let their grange meetings pass without the good times, the interesting and instructive times herein described. That this heaven may work in all the "silent places" of the order in our State is our earnest desire.

Manhattan Grange held an interesting session, June 21. Our annual program, prepared at the beginning of the year, follows that prepared by the National Lecturer, with the exception of some changes in the supplementary topics. The June topic, of the "Relation of the Grange to Farmers' Institutes and Field Educational Work," was profitably discussed by Brothers Metter, Barnes and Munger. Brother Metter Barnes read from the Grange Bulletin the National Lecturer's views. During the general discussion which followed, Brother Warner stated that the farmers' institute idea originated at the Kansas Agricultural College. Professor Walters of the Kansas Agricultural College, being present, gave a review of the work as it was conducted in its early years. Probably no one in the State is better fitted to tell this story. In his characteristically engaging manner, he instructed and highly entertained his audience. Many of the points are of more than local interest.

As early as 1868, during the regime of President Denison, there were held farmers' institutes. As there was no financial provision for the work for many years, there were occasional lapses of interest as other crying needs of the young institution crowded out this new and strange venture. Professors Walters and Shelton were often sent out (I believe this was after Geo. T. Fairchild became president) to hold three-days' institutes while a senior or some already overworked instructor was put in charge of their classes. The strictest economy was practiced, since the college could only barely afford to meet traveling expenses. No luxuries were indulged in by these conscientious "home missionaries." When, on the return trip, the dinner hour found them within a few hours of home they made a sandwich do till they could reach their own homes. The Professor did not say that their larders were not always well stocked, so we infer that by good management, their wives made their modest salaries provide handsomely. In almost all cases, their labors in distant fields were met with the heartiest good will, and the college was encouraged by the evidence of good accomplished. Wherever there was a grange there was cooperation and an especially warm welcome. One exception was very amusingly related. The name of the Western town which showed an unfriendly spirit was considerably withheld; for, as the speaker said, "They'd be ashamed of it

now." In a talk, Professor Shelton had touched upon the fact that, since they were beginning to farm in a climate unlike any other cultivated region, their work must be at first largely experimental. At this point he was interrupted by a series of speeches, more or less abusive, and to the effect that they had the grandest country to be found on earth and that they expected nothing else than such disparagement of their chosen field of labor from college professors with only book learning. They added the advice that such visitors would do well to "git out o' town the nearest way;" and proceeded to make arrangements toward seeing this advice carried out. Only the kindly offices of a well-disposed landlord provided for a peaceable withdrawal and a comfortable night's rest, and that only after enduring a typical charivari. Professor Walters took satisfaction in assuring us that Professor Shelton did not give up the floor till he had enlightened the disorderly mob as to their standing among the peoples of the earth in ignorance and self conceit.

It was some years after this that the Legislature, upon repeated solicitation, made its first appropriation for farmers' institute work. It amounted to less than three hundred dollars, but the speaker said, "We felt rich." Now \$15,000 a year is appropriated for this work, with corresponding increase in results.

In closing, a warm appreciation was given to the untiring and effective work of Professor Cottrell when he was in Kansas. This was heartily received, for in our grange Professor and Mrs. Cottrell have a host of friends who still miss the inspiration of their earnest work and cordial social intercourse.

The secondary topic was "Social Life in the Country Neighborhood." Sisters Munger and McDonald read papers full of good ideas, notable among which were these: Social ambitions and the haste to get rich tend to suppress true good fellowship without which life is a barren waste. Also, in the country which charms by its freedom, space, and serenity, only that which is real and true can be appropriate. This consideration would cut out all attempts to ape city formalities.

Time for discussion was brief but some of the old settlers referred feelingly to the social spirit of the good old days of ox teams and ten-mile-apart neighborhoods.

CAROLINE M. ABBOTT, Lecturer.

Grange Notes.

Whenever a community gets the right idea about the Grange and its mission, then the feeling of neighborliness will become more genuine. The Grange is a fraternal organization, emphasizing the importance of brotherly kindness, the sweetness of sisterly affection. So the Grange makes men better because it makes them kinder and more useful. It wafts the fine fragrance of true womanhood to greater distances. It makes the country a better place to live in because it puts country people into more harmonious relations with each other and gives them a truer appreciation of the blessedness of living amid beautiful and natural surroundings and among neighborly neighbors. —Grange Bulletin.

"All things come to him who waits," says the proverb. In this age we say, "All things come to him who rustles for them." We are not waiting for reports; we are expecting our granges to fall into line. Let us know of your strenuous life or your gradual demise, that the congratulations or sympathy of your brothers and sisters may be exercised in your behalf as needed.

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THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

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Third Quarter, Lesson II. Isaiah 38:1-8.
July 9, 1905.

Hezekiah's Prayer.

That good sovereign, Hezekiah, the twelfth king of Judah, was in the very midst of his far-reaching reforms—reversing the evil policy of his father, both in foreign and domestic affairs. He had either witnessed the destruction of Sennacherib, or else the Assyrian invasion was just then impending. He was as yet without an heir to his throne, and being in the heyday of young manhood thought of providing for a successor seems not to have crossed his mind. At such a time the sudden announcement of his immediate demise took of the nature of a personal and National disaster. He was the last man to be spared. How could reforms proceed without him? How could the desolating tide of invasion be stayed if he did not stand in the fore?

Under the circumstances the message of Isaiah to Hezekiah seems curt, if not cruel, "Set thine house in order, for thou shalt die and not live." But the personal relations of love and confidence which obtained between the two men make it improbable that there was anything harsh in the manner in which the message was delivered, or resentful in the way it was received.

The suffering king turned his face to the wall of his chamber. He did not wish to see or be seen. He converted the intervening space into an oratory, in which he was alone with God. There he gained a greater victory than he ever gained in counsel chamber or on battle-field. He struck the personal element from the equation. With the self-oblivion of a lofty nature he rose above the question of profit or loss to self. He was the father of his people, and how should they do if left fatherless? He could call God to witness the integrity and self-denying record of his reign, and plead the probability that his record would be maintained to the close, to the glory of God and the welfare of the people.

The test had been made. In the hottest crucible the unalloyed gold of the king's character had been proven. The grief-stricken prophet had not yet quite crossed the palace courtyard after delivering the dread message, when he was halted and bidden to recall it. Space will be given the king to consummate his reforms and defend his empire against invasion.

Concession is made to a sign-loving spirit. From the bed-chamber window the king and the prophet look down upon the terrace, where the "step-clock" of Ahaz stands. They see a marvel. The shadow returns ten steps on the dial, which it had covered.

The ransom king breaks out in a hymn of praise, improvised after the manner of the East, which is one of the jewels of the old Scripture. "He thought he must needs go hence in the noontide of his days. His abode was plucked from above him like a shepherd's tent. He had rolled up his life as a weaver cuts the cloth from the loom. But he found himself withheld from the bottomless pit. Death does not praise God. The living, the living, He praises Him."

The Teacher's Lantern.

The Bible delights to picture its heroes not in forensic arena nor in field of battle, but in act and attitude of prayer—Abel at his altar; Noah on dripping rocks of Ararat; Moses on the heights, with Aaron and Hur holding up his weary arms; Daniel at his window, open toward Jerusalem; Peter on the house-top; Paul in Straight Street, and many others.

We have two pictures of Hezekiah at prayer; both vivid and significant. In one instance it is prayer for the Nation; in the other for himself. In the latter instance, indirectly at least, it was a prayer for the Nation also, and so, largely disinterested. Probably this was chiefly the ground on which it was heard.

Hezekiah had an instinct for prayer.

He could pray at a moment's notice. The bird is not always flying; but it is ready to fly at an instant. We need not pray literally without ceasing; but we can be ready to spread the pinions of the soul and speed to the mercy-seat any instant.

"Set your house in order" is as good an advice for the living as for the dying. To be ready to live is to be ready to die.

It has been admirably said that prayer is not overcoming God's reluctance, but taking hold of His willingness.

Isaiah used and honored the materia medica of his day, when he placed the poultice of figs upon the king's wound. Means are never to be discarded.

There is a good and an evil sign-seeking. Jesus discriminated between them. His evil generation asked, but really did not want any sign. Unalterably set in their prejudice, the greatest wonder would have left them unconvinced. No sign was given such.

Hezekiah, like Gideon, felt the need of some visible token, and it was not withheld. A more appropriate sign could not be conceived of. The recession of the shadow meant added time.

The paragraph introduces the reader to one of the ever-living heroes of the world. Like the onyx stones on the high priests' shoulders, piety and patriotism were Isaiah's ornaments. He was a royal spirit, whether he was literally of kingly descent or not. His writing is as ever-living as himself.

All honest, earnest seekers of God are in heart united, whether they know it or not. Though distinct as the billows, they are one as the sea; though distinct as the colors of the rainbow, they are one as the pure, white light which those colors compose. The mount of truth has many paths. Those who are ascending by different ways will be led onward and upward by the Holy Ghost, till eventually they find themselves standing side by side before the throne of the Eternal.—Alfred W. Momerle.

On the Los Molinos Ranch.

Nothing is more surprising to an Eastern visitor to California than to find that places in the Golden State as far north in latitude as Central Illinois or Ohio have a climate from which winter is eliminated. In the Sacramento Valley in the northern part of the State a light morning frost in one of the three winter months is about the extent of "cold weather" and it is invariably a surprise to the newcomer to see three or four varieties of palm trees, orange, lemon, and grape fruit trees growing vigorously among the pear, almond, peach, and orchards of other fruits of the temperate zone. The Sacramento Valley is in fact one of those few places in the world where the products of both temperate and semi-tropical zones meet and intermingle. Of course the result is a wonderful and bewildering variety of fruits, vegetables, and grains. The writer was on the Los Molinos Ranch near Red Bluff, April 20 of this year and at that time a field of six thousand acres of wheat, though just coming into head, was as high as the horses' backs and promised a fifty-bushel yield, yet this was probably the twenty-fifth consecutive crop from the same land. It is a strange but true fact that oranges ripen three to five weeks sooner in the Sacramento Valley than they do in Southern California six hundred miles to the south.

The writer traveled for fifteen miles through waving fields of grain but in an unsettled country, because all this great domain had for many years belonged to one person. Now this grand country will be divided up and offered for sale and settlement.

Its acres will now pass from a wheat kingdom to a fruit, alfalfa, and vegetable empire, for where wheat makes possibly a profit of \$10 or \$15 an acre the other products will make from \$100 to \$500 per acre. These beautiful lands will now quickly become occupied and developed. They are level, smooth, rich and enormously productive, they are not in a new, raw country but right in civilization close to the fine town and county seat, Red Bluff, with fine steamboats running for fifteen miles along the Los Molinos lands and with railroads already built through it.

These lands are being offered for sale in ten, twenty and forty acre tracts at a very low price and upon most favorable terms. Similar lands in other localities have quickly risen as they were settled to values of from \$300 to \$1,000 per acre. The same will take place upon the Los Molinos lands.

The Los Molinos Land Co., of Red Bluff, Tehama County, California, have issued a pamphlet giving a description in detail of their lands and all those interested should send for one of them. They are furnished to inquirers free.

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Kennewick positively shipped the first ripe strawberries in the Northwest. These were gladly taken in the cities of the Coast and at Spokane and Butte. The price started at \$12.50 per crate and up to the last week the average price was \$5.02 per crate. Do you realize what it meant to command the markets for two weeks? Do you not see the great advantage in having an irrigated ranch at Kennewick? Here you can earn \$2,000 per year on a five-acre tract. Stop working for other people and purchase a small piece of rich land under the Northern Pacific Irrigation Company's Canal. For information write

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are not found in the SNAKE RIVER VALLEY, but here is found the most beautiful tract of agricultural land in the United States, and you do your raising, and have no failures of crops, that's irrigation. No Cyclones or Blizzards. This country needs live, wide-awake men, who wish a new home in the rapidly developing west, and offers cheap land, good church and school facilities, and a chance to make money to those who are willing to work. St. Anthony, the County seat of Fremont County, Idaho, is a bright and growing town in the very heart of a rich and growing richer country, and if you wish reliable information in regard to prices, soil, climate and our prospects, write any of the following firms: First National Bank; C. C. Moore Real Estate Co.; Wm. D. Yager Livery Co.; Murphy & Bartlett, Cafe; Commercial National Bank; C. H. Moon, Farmer; Chas. H. Heritage, Riverside Hotel; Miller Bros., Grain Elevator; Skelet & Shell, General Merchandise; Chas. S. Watson, Druggist; Gray & Ross, Townsites; W. W. Youmans, Harness Store.

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SEVEN WONDERS

of the American Continent: Yellowstone National Park; The Great Shoshone Falls; The Columbia River; Mount Hood; The Big Trees of California; The Yosemite; Luc's "Cut-Off" across Great Salt Lake

Can all Be Seen on a Trip Over the

UNION PACIFIC

AND CONNECTIONS

TO THE

LEWIS & CLARK EXPOSITION

Portland, Oregon, June 1 to Oct. 15, 1905.

The Livest Problem On the Slate of Youth

Shall the High-School Graduate Go Forward to College.

Governor Hoch's Ringing Answer

The Cumulative Argument for Higher Education by Rev. Dr. D. M. Fisk, Professor of Sociology in Washburn College, Topeka, Kansas.

State of Kansas—Executive Dept.
E. W. Hoch, Governor.
Topeka, June 20, 1905.

Perhaps several thousand young people have graduated this spring from the High Schools of Kansas. To them I send this message: Go on and master a college course, no matter how great the sacrifice necessary to do it. In all realms of human endeavor culture is to be King, in the coming years. And, next to character, the most valuable thing is, and is to be, a college education.

E. W. HOCH.

[The eight short articles which appear below have seemed to the KANSAS FARMER to be such an admirable summary of the great argument for a fuller culture for youth that we are glad to reprint them from the pages of the current issue of the Campus and Field. With the exception of the two concluding items, the argument is perfectly general, and becomes a noble plea in behalf of every college or university as truly as for the school that originally put it forth, and as such is worthy of the most careful reading and reflection. The part especially referring to Washburn College is printed, and marked as advertising matter. The cuts that accompany these articles are also from the Washburn Campus and Field, but will be welcomed by all as splendid evidences of the educational advance of our great Middle West.—EDITOR.]

This Summer Vacation a Crisis.

DO YOU—the fifteen hundred high-school graduates of Kansas in 1905, to whom these words are especially addressed—do you realize that the next swiftly-passing three months are among the most critical days of your lives? For in these thoughtful or careless days you will decide the momentous question whether your recent graduation is to shut the school-door forever to you or whether it is to open the larger door of some worthy college into which you may step without a break in time, and from which you will step into a largeness of life service which, but for those added college years, you can never have.

If your inexperience hides from you the sobering fact that you are likely to look back in later years to the decision of these swift-winged weeks with more gratitude or bitter regret than to any other like period of time, that fact is not hidden from your older and most solicitous friends. It almost might be said that they are holding their breaths in suspense awaiting your decision, which is fate. They (if not you) are asking concerning you: "Will he see his chance, and take it? or will he allow himself to be cheated out of his right to get his full intellectual growth by the lure of immediate money-returns?" Indeed, this is the live question: "Will the youth of Kansas, open-eyed to the consequences, elect to take a low place in the world when God has called them to a high one?"

If the gravity of this decision seems overdrawn to you it does not seem so to those of us who are daily compelled to listen to the late, but unavailing lament of hundreds, in all walks of life, who once stood just where you now stand, and also (alas!) chose wrong! This is

their bitter regret: "Only thirty-six little months, out of a life-time would have given me a college course: I thought I couldn't afford the time and effort: it was the costliest blunder I ever made: O, if I could only go back and decide it over!" But just there is where fate shuts up on us: it is "now or never." And with you, high-school graduates, it is practically just now or never, for all college men know that the high-school graduate who interrupts his educational work to "stop out a few years" to dip into business, "to get a little experience," as an actual fact rarely ever resumes the disciplinary process. The taste for earning has supplanted the hunger for a fuller culture, and on the scantier plane of acquisition,

they are daily robbing them), if they had ever thought out this vital matter as clearly as has the State Superintendent of Public Instruction of Pennsylvania, Dr. N. C. Shaeffer, who contributes this convincing argument for completer education. We find the value of a boy's time at school by subtracting the earnings of a life of uneducated labor from the income of a man of education. If an uneducated man earn \$1.50 a day for 300 days in every year for 40 years he does well. That equals \$18,000. A thousand dollars a year would be a low estimate of the average earning-power of college-bred men. That means \$40,000 for 40 years of such labor, or \$22,000 advantage in earning-power from the time spent in school. The average school life of Massachusetts children is seven years. Add a full college course to that average, i. e., estimate the school-life at 11 years, with 200 days in each school-year, i. e., 2,200 school days. But these 2,200 school days have given the average youth enough more efficiency to earn in 40 years \$22,000 more income. How much lacks this of making every school day worth \$10? A father who keeps an immature boy out of school to earn \$1 a day when he ought to be in school robs that boy \$9 each day in earning power for life.

None will deny that it is a praiseworthy ambition on the part of youth to become self-supporting, but if thirty-six months spent in a college will double, quadruple or still more multiply the returns from that investment of time it is not evasive parasitism but commendable foresight to accept family assistance a little longer.

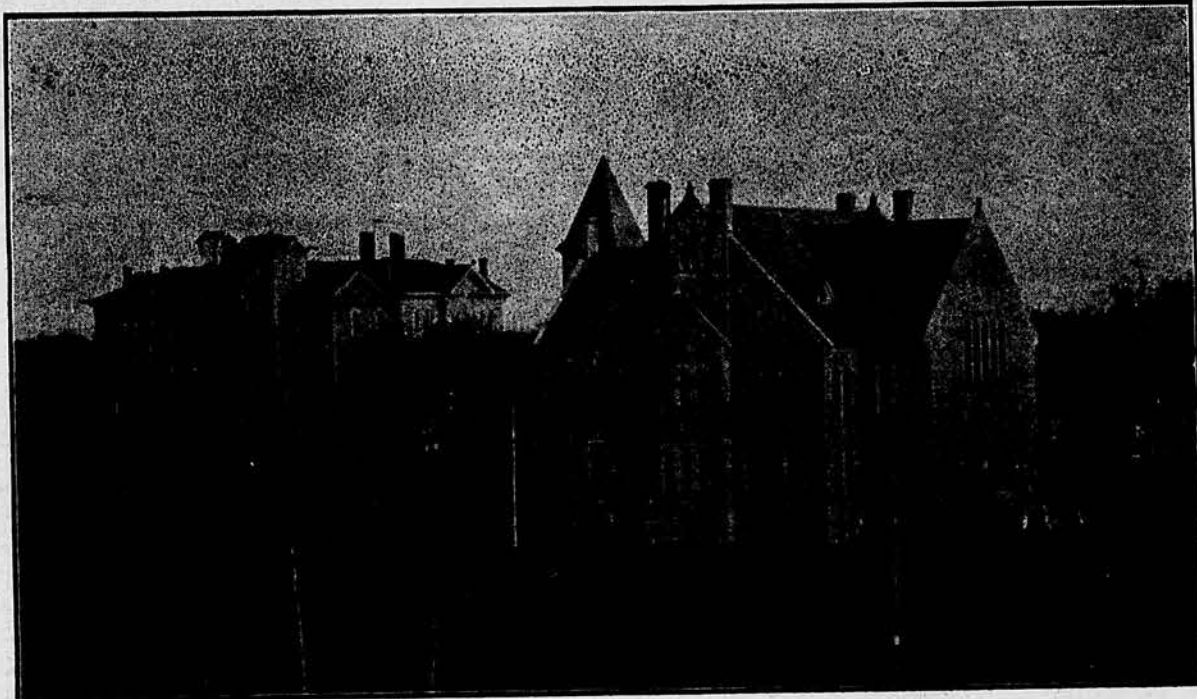
4,507), are the children of business men; 19.36 per cent (or 2,095) are children of ministers, physicians of other professional men; 6.84 per cent (or 740) are from the farm; but a full 16.67 per cent (or 1,802) are from homes where the fathers are wage earners! In one Boston college over one-third of all its students come from wage-earning homes.

President Woodrow Wilson, of Princeton College, has just said that he finds every year a larger demand on the part of employers in large industrial and commercial lines for more highly educated men—men who are disciplined enough to do not merely a routine work but to become organizers, with a wide grasp of relations, interactions, and of facts and forces that must be correlated to achieve success. How efficient would be the feeble grasp of untrained ignorance amidst such a labyrinth of complicated forces and conditions?

Not a Guess, But a Demonstration.

Does higher education pay young men or women when they themselves are the "capital," and their wages the "interest?" What influence has liberal learning, or a technical education on earning-power or increase of capital?

Let the carefully worked-out statistics of the president of the American Society of Mechanical Engineers, Mr. James M. Dodge, be our answer to these questions. Recall this, however, that what he submits as evidence is not assumption but the summary of an immense number of actual cases. This brilliant demonstration, as reenforced to the eye by the accompanying graphic diagram ought to settle the further ca-



View of the College Avenue approach to the Campus taken from the corner of Euclid and College Avenues, looking southeast; MacVicar Chapel, Rice Hall, and a part of the College Library.

all life's narrower drama must be played. It is now or never with ninety per cent of all who read these words.

If the young people of this State who are likely to decide this question adversely could only anticipate twenty years of experience there would be no question as to how the matter would be settled. A thousand freshmen would be added this September to the best colleges of Kansas. It is only because young people don't know what tools they need for the stern battle of life that there are but 2,000 true college students in Kansas and not 5,000.

Young people of Kansas, are you interested enough in your own future to take a moment to study this situation in the light of other people's experience and carefully prepared statistics? The following pages are a sincere attempt to set clearly before you the evidence that you cannot afford (even on a dollars-and-cents basis) to stop your school life where you now are. We approach the problem from several sides: note the cumulative weight of evidence.

Ignorance is Too Costly, You Can't Afford It.

How few people realize the actual cash value of a school day in added earning-power! Thousands of parents would hesitate to rob their children (as

The Wage-earner and College Education.

Once, the luxury of a college education was supposed to be limited to the sons of professional men, to the rich, and to the more energetic boys from off the farms. The world moves, and the wage-earners have begun to learn that the way up for their sons is not merely by an apprenticeship but thro a liberal education. Here is some fresh evidence on this point that it will pay the citizens of Kansas to thoughtfully weigh. Hon. Chas. F. Pidgin, Chief of the Labor Bureau of Massachusetts, has just tabulated in the March Labor Bulletin of that state the replies of 10,819 students now in Massachusetts colleges as to the occupation of their fathers. From these it is manifest that the business men of today have found out the fact that a philistine grind in the counting-room is not the only nor the best training to fit their sons for a subsequent business life. So it comes about that over 41 per cent of the undergraduates of all Massachusetts colleges come from the homes of business men. Even the wage-earners of Massachusetts have greatly outrun the farmers, and are fast catching up with the professional classes. Here are the suggestive figures. Of 10,819 students, 41.66 per cent (or

reer of a vast number who study this problem:

Let us start with the average boy of 16, and assume that he is worth to himself in earning power \$3,000: this is his potential capital—himself viewed only as an economic proposition. At this point we will also assume that he is as yet neither skilled in any craft, nor shop-trained, nor has he had the benefit of any trade-school, or ever been in any school of technology, or a college. Hence, four possibilities lie before him. 1. To remain an unskilled laborer. 2 To get a shop-training. 3. To go to a trade school. 4. To acquire a liberal education. Start four boys, then, on the four lines and let us see what influence training of an unequal sort actually has as measured by money-returns. (See diagram.)

I. The unskilled laborer. On the average, he is earning \$4 a week at the end of his 16th year, \$5 a week a year later, and this advance continues with regularity to his 22d year, when he is worth as "capital," in himself, \$10,000, and he has a wage-earning capacity of \$11.20 a week. But here he reaches the economic horizon of unskilled labor, which will not significantly change however many years he adds.

II. The shop-trained worker. Even his narrower, rule-of-thumb training

pays good interest from the start. In six years he has passed the unskilled laborer: by the time he is 24, however, he has reached his maximum; his potential capital is \$15,000, and his wage \$15.20 a week. This is the horizon of the shop-worker.

III. The trade-school young man. The early broadening of his work immediately brings better wages. Note on the diagram that before he is 18 he has forever distanced the unskilled worker. Be-

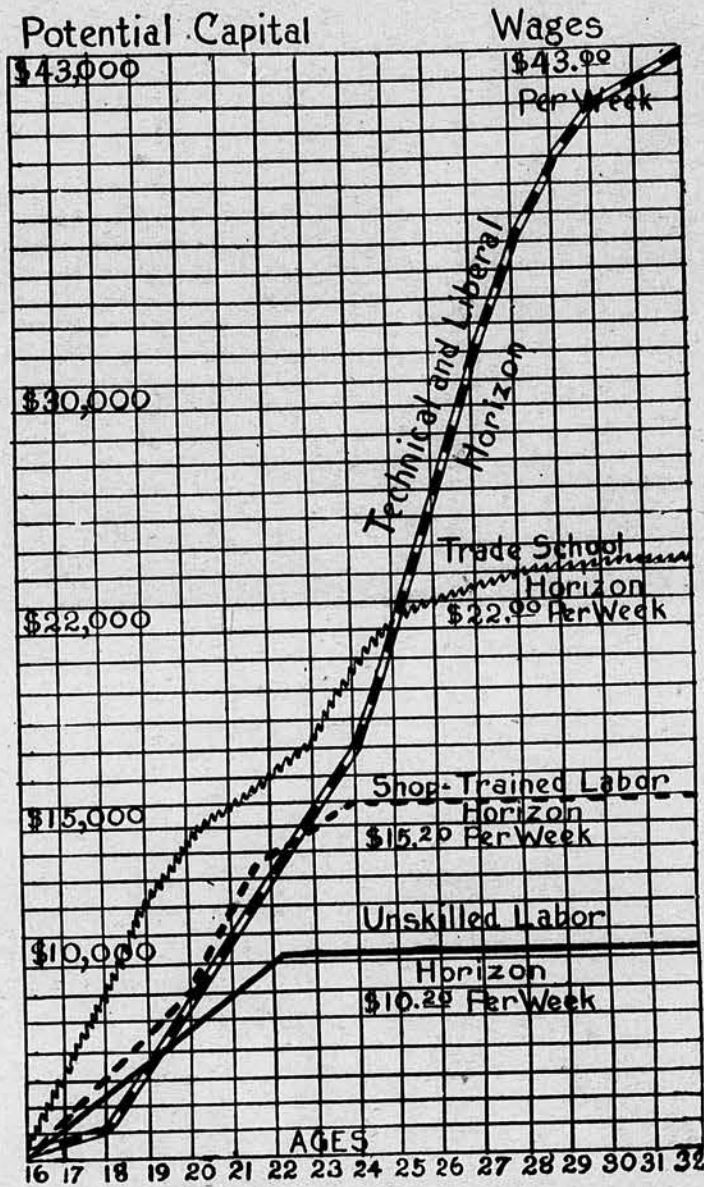
job is likely to last, will you consider the lesson in this news item of recent date?

"The Pennsylvania Railroad company recently ordered the discharge of all employees hired after they were thirty-five. The Steel Company issued a similar order, altho in some cases the age-limit was raised to forty. Within a fortnight after the issuing of the Pennsylvania system's order more than one thousand employees were discharged under it.

is said: "The professions are full, and every year the colleges of the country are pouring out new applicants for places. Soon there will be no room for the college graduate, but only a bitter struggle for place with other aspiring men." Well-informed men know that this is the very reverse of fact. There never was a hungrier demand for fully-trained men in every province of life than today. The supply has never begun to equal the demand, and this want is increasing. And no wonder. All the colleges and universities of the U. S. cannot muster today 126,000 undergraduates to meet the wants of a nation of 80,000,000 people, and the call of the great outer world. How many people realize this, that there is but one college student of any grade to every 731 of population? Not one-half of these will

high school year; to 147,000 in the second year; 101,000 in the third; and to 73,000 (for the whole U. S.) in the high-school graduating year. Is this evidence of "over-educating" even on a secondary school plane? (only 566,000 pupils in all the public high-schools of the U. S., and 210,000 in the academies).

But how about any further college drop? If we shall apportion the 125,800 total college undergraduates of the land between the four classes we should have something like this: 57,000 freshmen, 34,000 sophomores, 20,000 juniors, and only 11,000 seniors to take their college degrees. Is higher education overdone? Sixteen million youth to educate a quarter of the gold in the world to do it with, a third of the banking power of the globe, but only 11,000 college graduates a year. Not one per cent of the



The Four Horizons of Increasing Education.

fore he is 21 he has also left the shop-worker behind him. When he is 24 he has an earning power of \$22 a week. He reaches his highest valuation at 31 years, and here he finds *The trade-school economic horizon*.

IV. The technically and liberally educated boy. For several years this young man lags behind all three of the other classes. When he is 19 the unskilled laborer is ahead of him. Not till he is 25 does he catch up with the shop-trained boy. Not till he is 25 does he rise above the economic horizon of the trade-school man. But what then? All three of his competitors have already reached their earning limit. Their horizons are fixed, but from that 25th year, and its potential capitalization of \$22,000, the college-trained man shoots up in seven years more to an earning-power of \$43 a week, and he has not as yet reached his full economic horizon! A liberal education has added a potential capitalization of \$21,000 over all competitors (from \$22,000 to \$43,000). Education took him at the age of 16 at \$3,000, it leaves him at 32 years at \$43,000. Is there any value in a college training? Were the four or six years wasted on a college really a waste, or a good investment? Remember this: "The highest wages are paid to the man through whose ability the largest number of other men may be most profitably employed. He does his work with his brain."

"Scrapping" the Human Machine.

Time was when shallow men talked of ministers and professional men "crossing the dead-line at fifty." It has remained for a greedy, industrial and trade world to actually carry out the program to "scrap" the laboring man even in his earlier manhood. Young men, all too eager to rush into an immediately paying job but not forecasting how long that

The weeding out of older men is one of the settled policies of many of the great industrial institutions."

Wouldn't it pay a boy better to so fit himself in his youth for more nearly independent work so that to a larger extent he may be his own master, not merely in the virility of youth but as well in the maturity of his manhood?

Is Higher Education Overdone?

The opinion is far too prevalent that we are in danger of over-educating. It

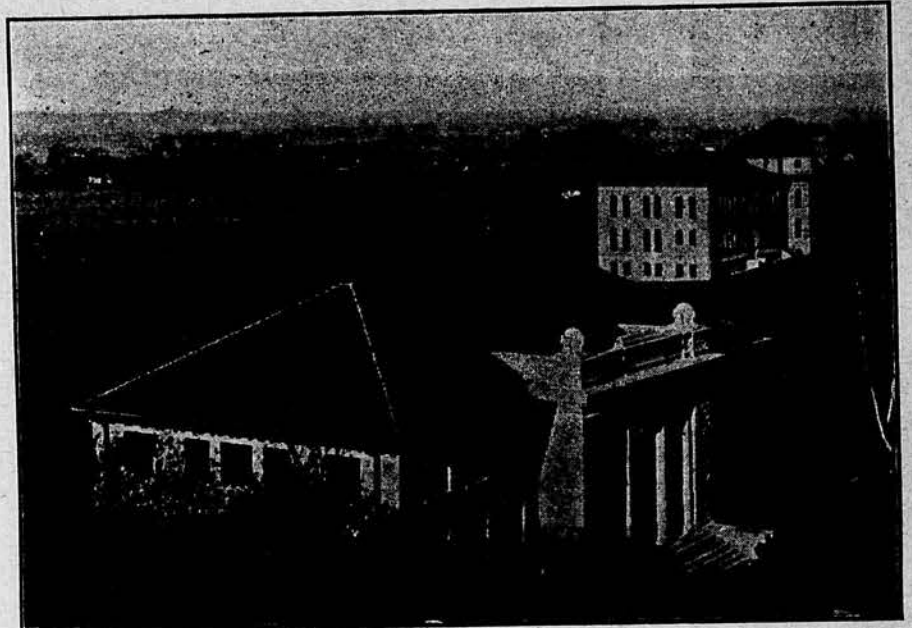
ever have the persistency to graduate from any full four years course. Is that overdoing higher education? Kansas has but about three and a half college students of any degree of advancement to every thousand of its population, and Kansas does not hold one in three of its freshmen till full graduation.

If this loss of enrolled students seem a special reproach to colleges, the same reproach belongs to our whole educational system. America ought to stand ashamed before this most recent official exhibit: Of the 16,300,000 young people enrolled in all the grades of U. S. schools and colleges, we start with 5,149,000 in the first primary grade. This enrollment drops to 2,900,000 in the second grade; 2,400,000 in the fourth grade; 2,100,000 in the fifth grade; 1,200,000 in the sixth grade; 405,000 in the seventh grade, and 323,000 in the eighth grade. It drops to 243,000 in the first

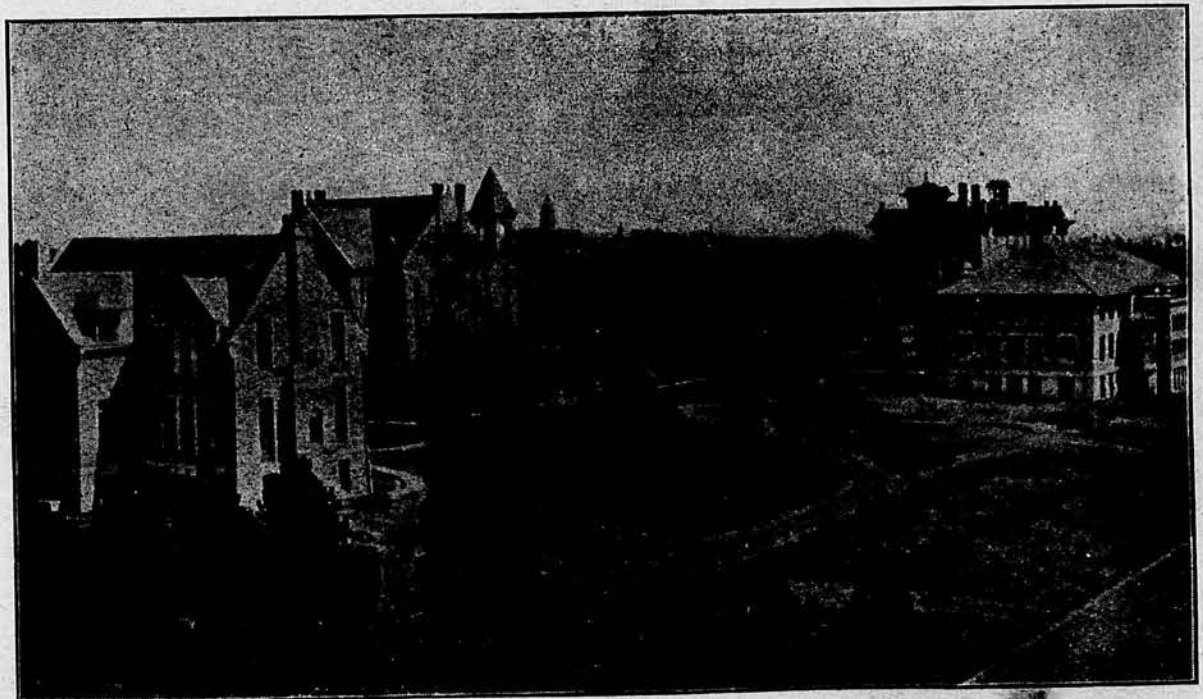
U. S. population even in high schools: only fourteen hundredths of one per cent in any college! Young man, in the light (rather say darkness) of these depressing facts does it seem increasingly probable that you will stand idle in the market-place on your college graduation day because "no man has hired you?"

College Education and Success.

There never was a time in the world's history when a liberal, practical education was of more worth, or more in demand than today. From this time on, that demand will increase in intensity, for life is growing so complicated that an ignorant man can no longer be its master. He must by necessity be content to do the elementary work of manufacture, trade, transportation, the management of involved economic affairs, teaching and government. He must follow where experts lead. The economic, so-



The Carnegie Library and the Astronomical Observatory looking from Rice Hall roof, southwest. The two most recently erected buildings on the Washburn Campus—the tenth and eleventh.



Boswell (Administration Building), MacVicar Chapel, Rice Hall, and the new Carnegie Library: A view from the balcony of the Astronomical Observatory, looking nearly northeast. Between MacVicar and Rice appear the dome of the Kansas State House, the spire of the First Baptist Church, the roof of the general offices of the Santa Fe, and a hint of the city.

cial and administrative problems of today are too vast, too rich in terms to be solved by the undisciplined or the slenderly informed. Education is no longer a dispensable luxury for the few who can afford it, but an exacting necessity in the severer struggle for existence.

Does it pay to go to college? If that means only: Can a college-bred man earn more money than an uneducated one, and earn it with greater certainty and ease, probably the answer would still be, "Yes." But education sought merely as a money-grasping device would still be a philistinism rather than a man-making culture. As such it would not pay real manhood. But there is other "pay" than gold—personal ennoblement, larger ability to render social service, fitness for community or world-leadership.

Is there any discoverable relation between liberal learning and life-success in this nobler sense? Happily, that question can be answered in the most convincing way, and from the fullest data.

During the last eight years, Dr. John W. Leonard, has made a study of the notable living men and women of America with a completeness never before attempted. He has edited the four biennial editions of the biographical dictionary of living American eminence, which includes over 12,000 names of the men and women who have risen to distinction in any walk in life—authors, dramatists, actors, judges, lawyers, legislators, doctors, ministers, teachers, editors, financiers, capitalists, labor-leaders, statesmen, diplomatists, etc., and of these he has ascertained the general or professional amount of education of 11,384. His summary of these relations between education and the wider positions of service follows, and forms our most complete and unanswerable argument for the value of education, notably a collegiate education.

	Per cent.
Total number of eminent people	11,384 100
Full college graduates	6,379 56.03
Collegians, but not graduates	1,663 14.61
Total who have shared the college life	8,042 70.64
Academy education only	1,399 12.29
Normal school only	171 1.50
High school only	396 3.48
Common school only	1,111 9.76
Self-taught	24 0.21

But this, however, is not the whole of the demonstration. Out of what populations do these several educational groups arise? Chancellor Wm. W. Smith, in behalf of the U. S. Bureau of Education, has answered this question.

According to the last census there are in the United States 14,794,403 males over 30 years old. The United States Bureau of Education estimates that these are divided educationally as follows:

Class 1. Without education	1,757,023
Class 2. With only common school education	12,054,335
Class 3. With regular high school training added	657,432
Class 4. With college or higher education added	325,613

Thus it appears that no man of eminence arose out of the 1,757,000 who were illiterate.

Out of the 12,000,000 common school trained there arose only about one for every 9,000.

From the 657,000 high school trained, one out of every 400 came to eminence—twenty-two times the chance of the common school.

But from the 325,000 college-bred men there came to the front as file-leaders, one out of every 42, i. e., ten times the chance of the high school boy, and 200 times the chance of the boy whose education stopped with the common school. Commissioner Harris, of the U. S. Bureau of Education, corroborates the accuracy of these figures. Can a candid man make anything else of this tremendous summary than the clear, irrefutable proof that it is too late to remain ignorant?

If College, Where?

[*ADVERTISEMENT.]

If you have settled it that you are to go to college, there still remains a second, but very important question: Where?

Eighty-seven per cent of the Kansas boys and girls in recent years have been educated in their own state. There is no reason for your changing this gratifying fact. You might go further and do worse. Even if it is desirable to take a part of your college life in one of the great eastern universities there is very questionable reason for beginning that work before the Junior year. You ought to be very sure that you have mental maturity enough, and college experience sufficient to wisely select the courses you want or else it is a mistake to leap at one bound from the comparatively simple curriculum of a high-school to the bewilderingly confusing electives of a great university. All this is wealth. When you are ripe enough to be the master of such complexity attack it, but don't make it the first step. This is the unqualified advice of Professor Albion Small, head professor of sociology in Chicago University. He says: "I congratulate you (speaking to the undergraduates of Washburn College) that you are in a college rather than in any university, even my own, for this training is better for you now." When you are ripe and ready, go to Columbia, Harvard, Berlin or Oxford, but be sure you are ready.

But what Kansas College shall be chosen? You must answer that, but it may be permitted to suggest some general principles born of many years of observation which may be helpful in your decision.

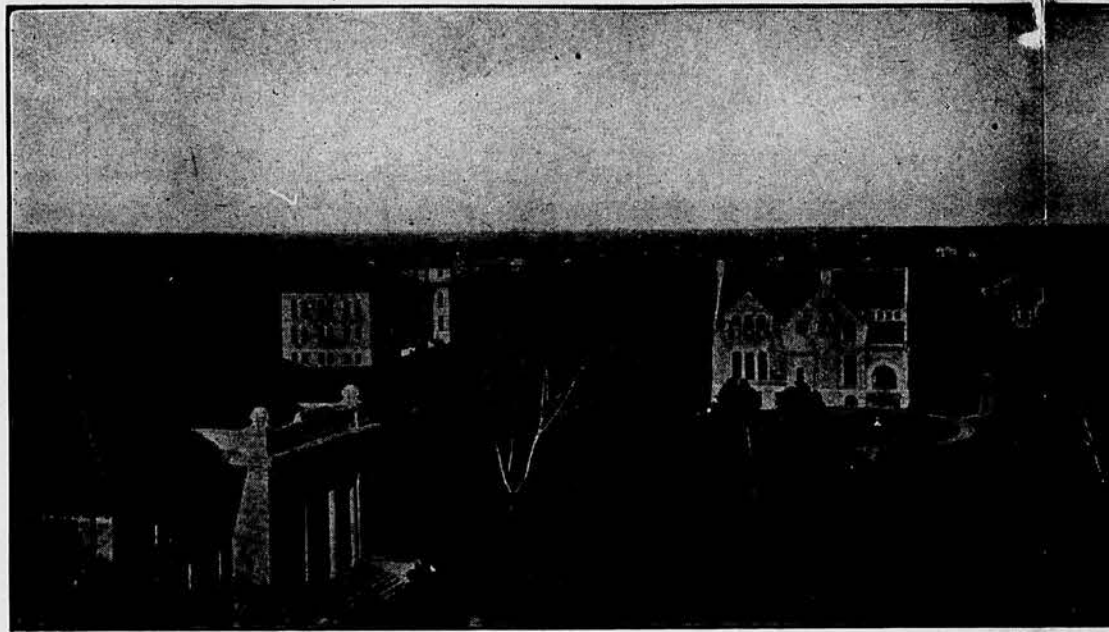
I. You are neither rich enough nor poor enough to afford to go to an inferior, unendowed college, where all, or most of the support of the school is defrayed by the undergraduate tuition. Taking our country at large, only 38.7 per cent of the cost of a college education is borne by the students, by tuition. In every endowed school it is *that endowment that is paying your heaviest bills*, and not you and your classmates. We know of no valid argument why any student should pass by the welcoming doors of an endowed Christian school to take his college course in a school

*This article is an advertisement of Washburn College. In addition to its feature as an advertisement it is a highly entertaining and instructive paper and will be read with interest by thousands of young people who are considering the importance of a liberal education.

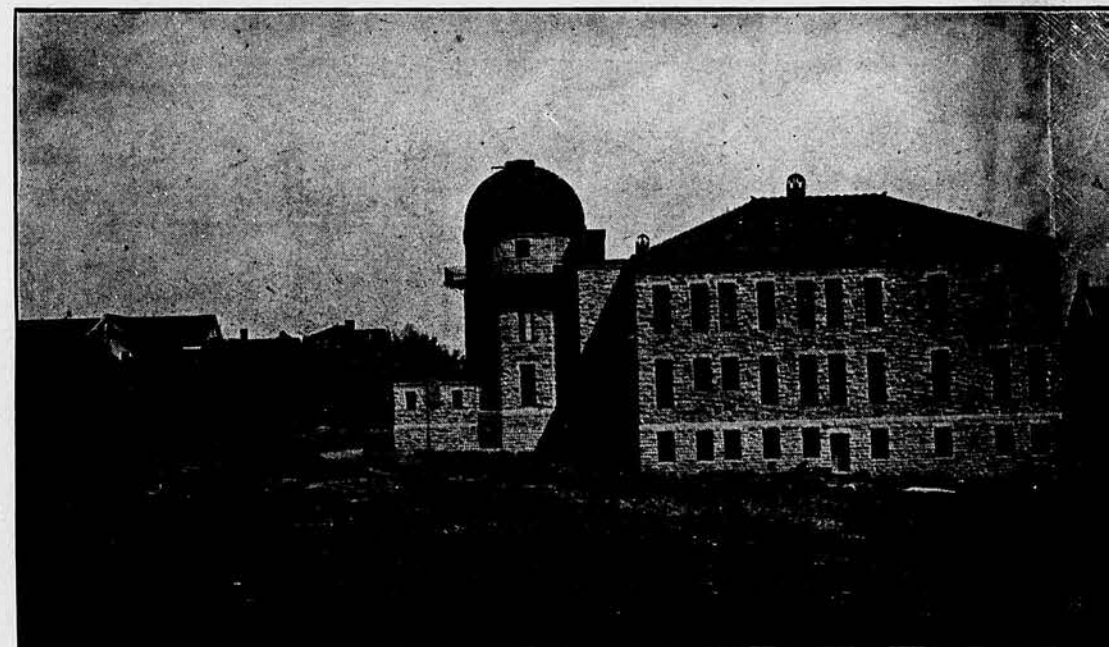
poor in buildings, inadequately equipped, crippled in the numbers and possibly in the quality of its faculty. It is much to be doubted if "denominational loyalty" is best shown by patronizing an inferior school. Why not skim the cream of some noble, godly college and then go back to your church all the stronger to help?

2. You can ill afford to let geography be the controlling factor in your choice

hamlet or village where the school will unavoidably take on the narrowness and small outlook of its petty surroundings. The conceded advantage that a small village has as the seat of an academy or preparatory school is reversed for a college. Adolescence needs quiet, but the college man ought to have come to a point when he needs to begin to adjust his life to the real complexity of an enlarging world. No inconsiderable part



View from the roof of Rice Hall, looking west: The west quadrangle of the College, Carnegie Library, House, MacVicar



View from the rear Campus, looking north: Whitin, Hartford, Holbrook (Women's Dormitory)

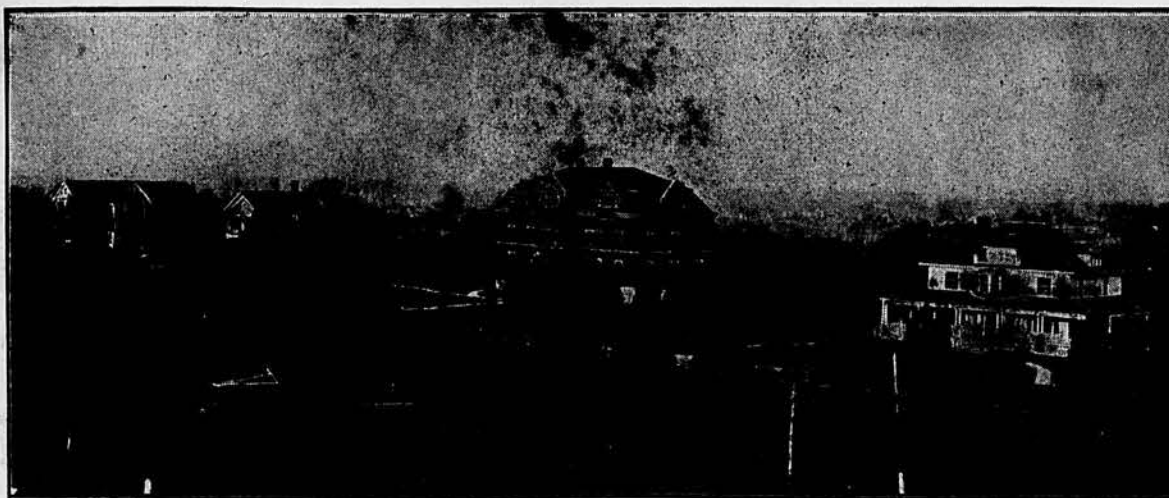
of a college. A poor school though near-at-hand is dear at any price. The swift, formative, four years of your college life come to you but once, and they are the most potent and revolutionary period of all your life. In that brief series of shaping years you can't afford to sacrifice quality of instruction and possible wealth of ideal enrichment to save even a hundred-mile railway fare twice or four times a year. Mileage is far cheaper than poor schooling.

3. Don't even think of going to a provincial college located in some isolated

of the advantage of a college education consists in this "making connections" with the eager contentions, wider life of man. You are too late A. D., and too far from mediaeval cloisters to choose a hermitage for your scholastic cradle.

4. On the other hand, if you are for the first time leaving a rural or village life, don't make too wide a break with your past environment. Don't plunge at first into the roar and distractions of a vast metropolis, where ten thousand novel sights will rob you of time for study. All this may properly come later, but you will be better prepared for it. The very conditions that are a valid argument for pursuing post-graduate work in a great city, as Chicago or New York, are contra-indicated for the undergraduate college student, especially if he be country-bred.

5. Neither bricks nor books alone make a college, but as well, men, atmosphere, spirit. Fine buildings and generous equipment are of vast value, but don't make them first. Choose rather, able, consecrated teachers, and a school where you can become a part of a generous fellowship of select, earnest undergraduates. It is a life-deprivation to be robbed of the unconscious social energizing of a fairly numerous student comradeship. Professors do not do all the teaching in a college, nor is it all confined to the class-rooms. Eager, talented classmates are as truly a spur to achievement as college prizes. You will never get away from your college life: it will always follow you, and that too



The President's House and the three Women's Dormitories, Whitin, Hartford and Holbrook—the Domestic end of the college on the west quadrangle. View taken from the corner of Euclid and College avenues, looking southwest.

whether as a help or a hindrance; therefore, pick out a college that you firmly believe will give you the rich, personal touch on men of power and heart, ample tools to work with in laboratories and class-room, a college spirit that you can gradually allow to permeate your deepest self, and a college aim with which you can exultantly identify yourself. Such schools breed men, not pedants, or philistines.

tact between young men and women in their daily tasks" under conditions of highest moral healthfulness will eventually completely vindicate the sober, common-sense verdict of the many in regard to the superior training for either son or daughter of a school of both sexes.

8. Don't minimize the intellectual and moral advantages of a confessedly "Christian college." Sectarian narrowness may well be avoided. There is,

ulative. A school that makes little of the ethical and religious will dry-rot any shaping manhood. Be glad to put yourself into the warm atmosphere of a cordial, liberal, unapologetic righteousness that makes for manliness, self-devotion and world-weal. In your deepest conscience you know this is your chief need. It is for all youth. Honor it. The decisive choice of "Which school?" has meant potential success or moral shipwreck to thousands. Don't make a mistake.

9. Last, don't go to any college with merely an ambitious, self-seeking spirit—to see only how much you can get out of a college, and not rather to see how much also you can put into the great (and always mutual) culture-process—of idealized personality, of genuine service to your fellow-students, of co-operation with the whole spirit and task of the college, to see (in short) how fully and worthily you can build yourself into the ever-enlarging dignity of a great educational foundation whose work colors all after time. Don't skip your divine opportunity to enroll yourself as one of the (possibly unnamed and untitled) teachers who shall beneficently reshape the world.

Why Washburn?

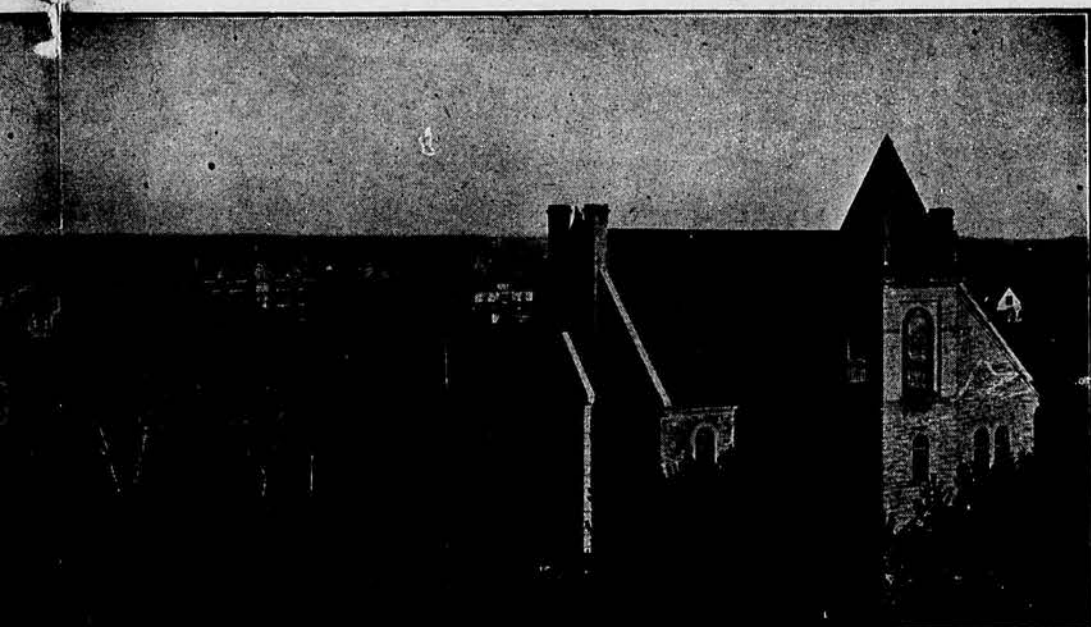
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1. From the unique location, this is the only college in Kansas that can reap every day the numberless cultural advantages of a capital city. If you have never lived in a State Capital, or only casually visited one you are likely to have a very inadequate idea of the immense superiority of such a city as a place for a college residence. A brief paragraph cannot summarize these incidental, unpaid-for but perpetual helps. Let attention, however, be called to a few, for the kind of a college town you do your work in will necessarily condition all your results.

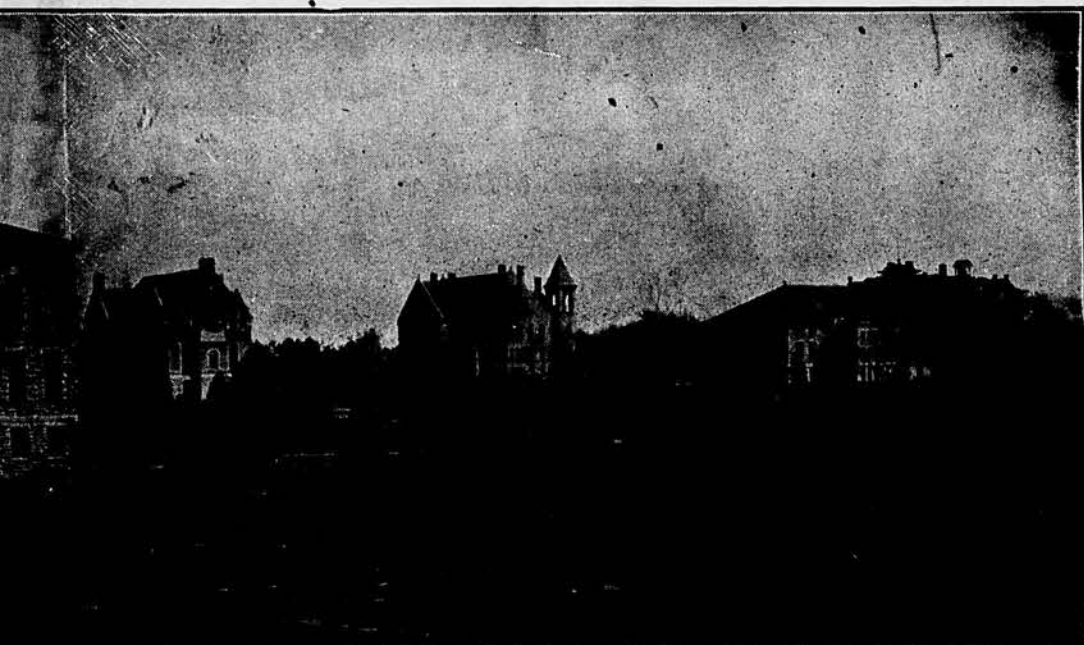
Topeka as a Capital City needs no eulogy: it is already the pride of all intelligent Kansas, and for the best of reasons. It is a city of power, of industry, of wealth and of beauty. With its six converging railway lines, its fifty-two daily passenger trains, its thirty-seven miles of street-railway, its thirty-eight miles of paved streets. Topeka is the most accessible city to reach, the easiest to get about in, but (it must be confessed) the hardest town to be willing to leave in the state. With its fifty miles of sewers, its eight parks, its unnumbered miles of shaded streets, Topeka is the cleanest, healthiest city in Kansas. But all this has vital significance for a student selecting his college. There is immense cultural value in being a part of a city of 40,000, worth \$34,000,000, and doing a yearly business of \$24,000,000. Here are adequate resources to enrich every incoming student with uncounted opportunities for mechanical,

financial and social investigation, for there is something doing in a town where there are 308 manufacturing plants, 7,000 wage-earners, 11,000 horsepower daily in use and \$16,000,000 of annual manufacturing output.

But if the spirit of this busy-fingered city were philistine, whatever its industrial power, it would still be a poor place to plant a college or to send aspiring youth. Happily, such is the very reverse of the fact. Topeka is essentially a city of ideals, of confessed educational ambitions, of high moral convictions. With its fifty-five hundred children in public school, 897 of them in high-school, and 320 more of the flower of the city's young people in Washburn College, with its high-school graduating 132 this year, with its libraries aggregating over 120,000 volumes, its great Auditorium gathering under one roof 4,000 to feast on the very cream of eloquence, art, music and the stir of political life, with its \$12,000 organ, it ought to be manifest



Carnegie Library, the Observatory, Boswell (Administration Building), Hartford, Holbrook, President's, MacVicar Chapel.

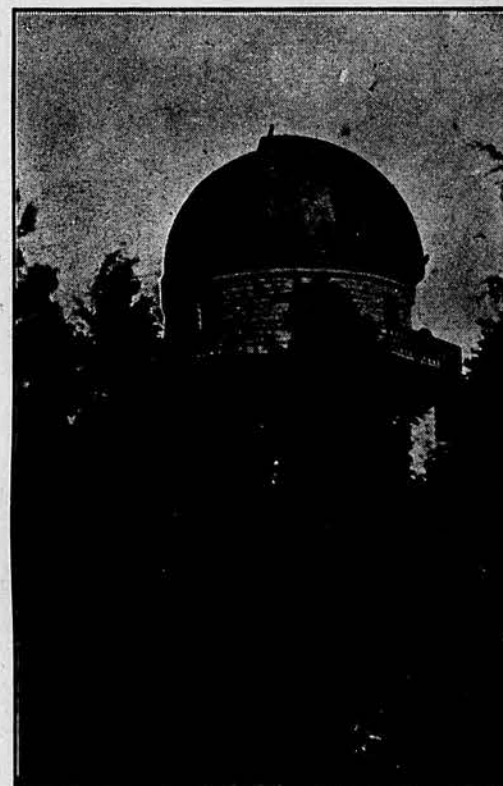


men's Dormitories), the Observatory, Boswell, MacVicar Chapel, Carnegie Library, and Rice Hall.

6. If you are a daughter, give your dear mother this excellent advice and see that she, and her daughter take it, viz., not to send you (as a young girl without experience) into any school that makes no full provision by the hands of some solicitous, Christian faculty of women to put at your constant call any advice and helpfulness that you may need. Feminine maturity, under dire economic compulsion, may have to face alone the problem of self-defence, plunging into a strange city with no close confidant, or loving counsel, but don't unnecessarily invite such a hazard. It will be a long day before thoughtful mothers will prefer schools lacking a faculty of Christian women, officially responsible for the manners and morals of inexperienced daughters, to foundations that frankly exist for the purpose of completing the whole personality and not merely sharpening the intellect.

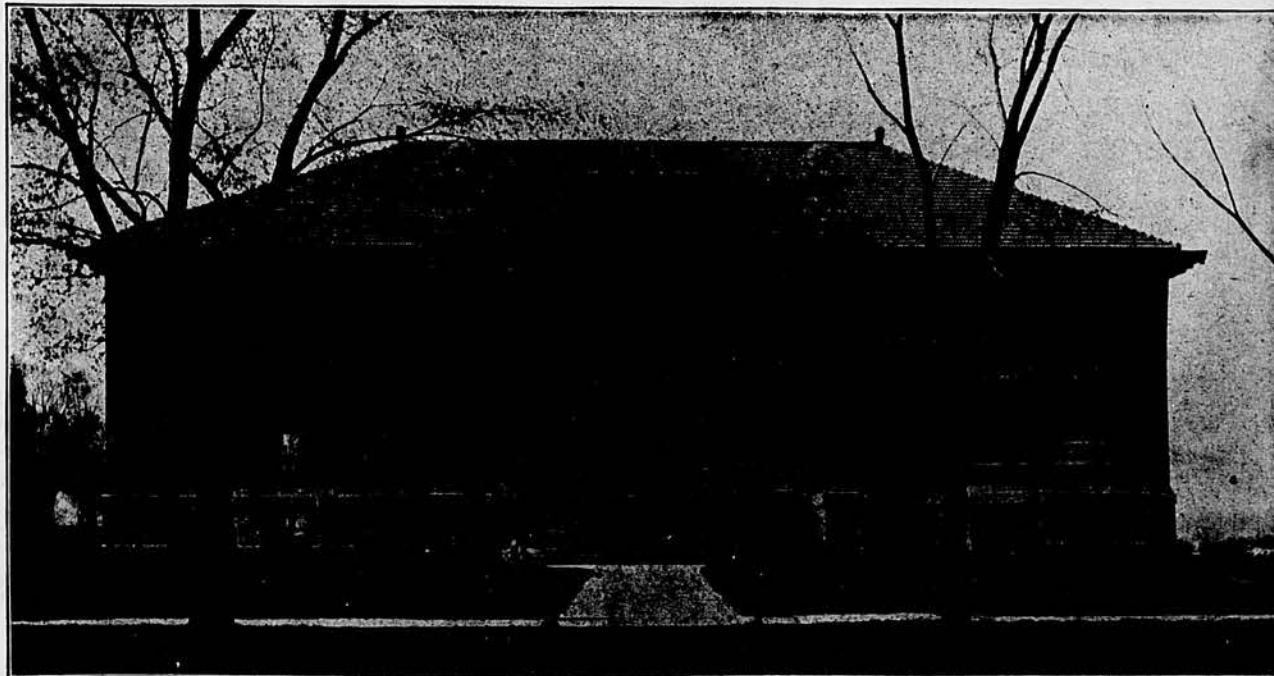
7. If you are a self-respecting girl (whom your mother can trust out of her sight), then don't forgo the immeasurable advantage of getting your education in a co-educational school. We live in an uneasy time when "the return to the mediaeval and monastic" is just now the especial eddy in the stream of progress. Don't be greatly disturbed by it. This reversionary nun's dream of the moral immunity of the cloister won't obtain long. God made the home co-educational, the nation has made the public schools co-educational and it has worked pretty well where the populations are homogeneous. "The normal, casual con-

indeed, an in-and-in breeding denominationally that often imperils, but in a school that is nobly catholic in its corps of instructors and instruction, hospitable to all evangelical faiths, but insistent on no sectarian shibboleths, there is great advantage. Secularism is always intellectual paralysis. The dynamic of the world is spiritual, not economic, or spec-



The Observatory Dome, as seen from the grove immediately west. The revolving dome, of copper and steel, weighs fifteen and a half tons, but can be revolved by a child, and cost \$3,500 above the masonry.

to any reflective mind that Topeka is the ideal college town, contributing incessantly a cultural atmosphere and numberless advantages which no village or petty town can hope to offer, all of which perquisites come with no added cost but which every day of the four re-shaping years are enriching all students who are far-sighted enough to avail themselves of them. With perfect frankness this may properly be said: Every young man or woman in the whole state should insist on having some very solid and commanding reasons why he should pass by so many manifest advantages at his state's Capital to go to some less-effi-



The Carnegie Library.

ciently equipped school and to some narrowing environment instead of this, the natural educational center of our Commonwealth.

Here already are the great treasures of the state—the museums of science, the archives of history, the law-library of over 60,000 volumes; here is the center of administration, of legal interpretation; here will be the great art galleries and museums, and more and more Topeka must be a musical Mecca. All roads lead to Rome. There is a natural political, social, philanthropic, and educational gravity that resistlessly pulls all things—administration, political conventions, fraternal orders, women's clubs, church congresses, charity associations, May-festivals, and teacher's associations to our beautiful, cosmopolitan capital, and will pull a thousand college students if they are sagacious enough to realize the superior advantages offered. Are you one of that thousand?

But What of the College Itself?

But a fortunate location, and its helpful environment are not the largest reasons offered for attending the College at the Capital. Washburn frankly puts forth some astonishing claims that the young people of Kansas and their parents are in duty bound to ascertain whether they are empty boasts or sober facts. If they are facts, they will be decisive for many prospective students of this fall. May a prefatory word be said before these facts are stated? Washburn knows no "foes" among the truly competent and efficient colleges of the land. It has only the most generous wishes for their prosperity. It institutes no invidious comparisons as to its own superiority as contrasted with any well-equipped school. The two things it does, and that without apology, is (in common with all high-grade colleges) to warn all young people against incompetency anywhere which advertises to do work which from lack of equipment or personality it simply cannot do. And, second, to frankly announce its intellectual wares in the open market of the world, just as every other school is warranted to do, and leave it to the good judgment of each patron to make his own decision. May the claims which follow be interpreted in this spirit?

Washburn in many ways stands in a class by itself among the colleges of the Southwest. It claims that in buildings, in completeness of equipment, in endowment, in the annual amount of money expended on its students, in the size of its faculty, in the numbers and fullness of its courses, in its advanced and practical methods of teaching, it has no near competitor. Now these are assertions that are capable of verification or disproof. The college does not ask that they be taken on the strength of bare assertion. It only asks a competent investigation by every boy or girl in the state. It asks no one either to take its word without proof or to take anybody's denial of these claims unless he can disprove them.

Where else do you find so superb, and sylvan a campus of 160 acres that is the delight of all visitors and the everyday home of all students?

Where else do you find eleven such buildings on one campus, worth nearly \$300,000, "built for the ages," chiefly stone, of acknowledged dignity of architecture, and by all conceded to be "the most capacious college group in Kansas."

Where else do you find a faculty of ninety-eight professors and instructors, with special training over and above a full college course, a faculty bearing more than seventy higher degrees above an A. B. or B. S., and who represent travel, scholastic residence, research and original investigation in the great schools of the two continents.

Where else do you find a chemical department occupying an aggregate floor-space of 56x156 (six rooms) for laboratories, balance-rooms, department-library, lecture-room, etc.

Where else the use of a floor-space of

over 12,000 square feet (two entire floors) for biology and geology.

Where else can you find as complete a battery of compound microscopes, biological work-rooms, photographic outfit, and every-day histological work, with such efficient equipment.

Where else can you find a mineralogical collection worth \$15,000 with a museum of natural history worth \$10,000 more?

Where else can you find in several near states, let alone Kansas, an astronomical equipment exclusive of observatory costing \$19,000?

Where will you look for another "Grand prix" telescope (which took the prize over Berlin, London, Paris and the competing world of telescope-makers at the last Exposition Universelle, at Paris)?

Where else can you as a student sit down at a \$1,000 transit instrument, and be allowed to use it, or operate an \$800 chronograph, or become familiar with more than \$8,000 worth of other astronomical apparatus not included in the above enumeration?

Where else in any state college can

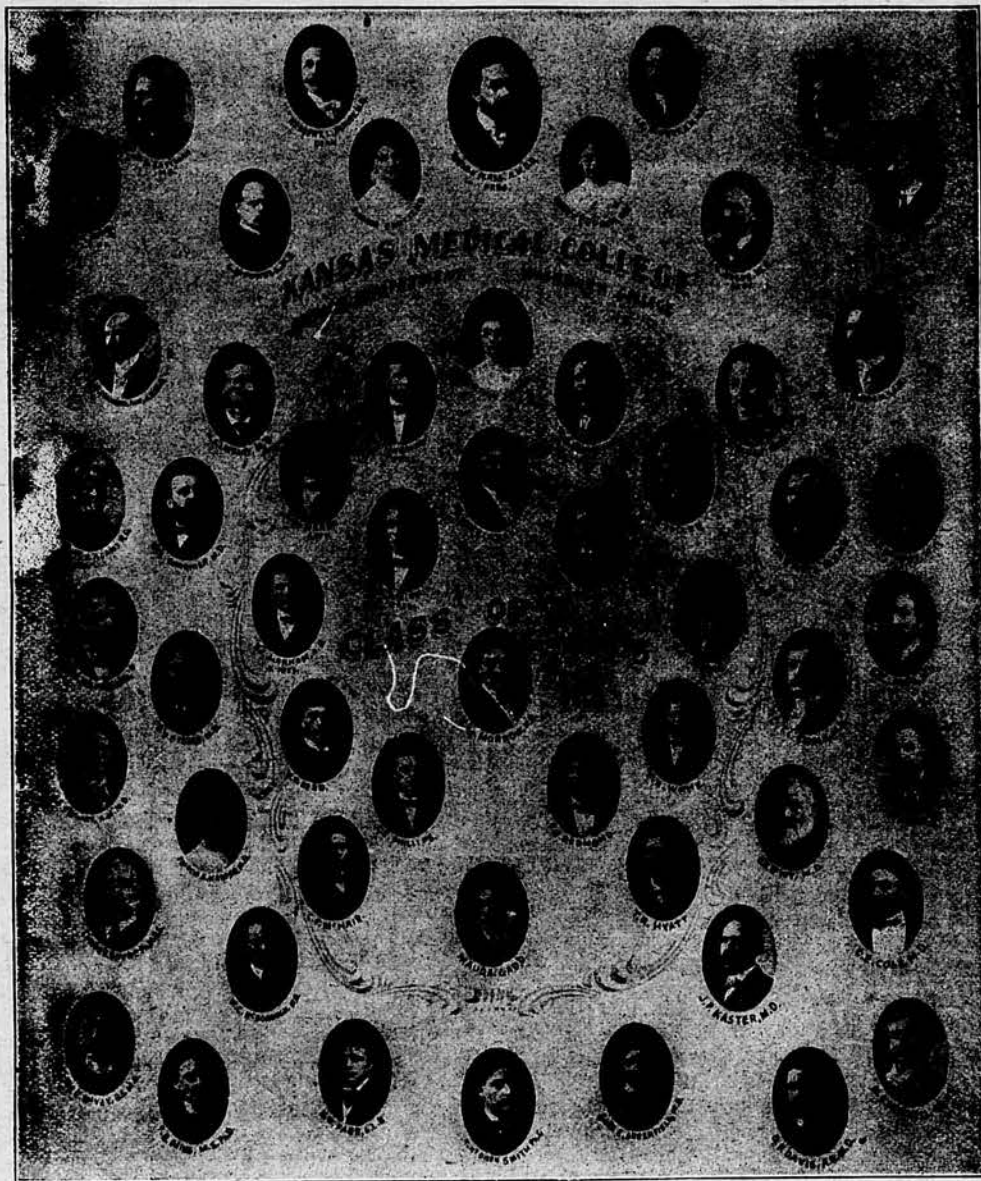
tion, with a provided "Lantern-room" and an always-ready electric "candle", to project at a moment's notice?

And if all this library and illustration equipment does not suffice, where else can you bank instantly on over 100,000 other library books, in easy reach which are freely at call, as in our noble Kansas State Library or in the Topeka City library?

Where else in Kansas can you find a medical course of such completeness, under a staff of over thirty able physicians and surgeons, with sixteen years of teaching experience, and with a curriculum that gives a degree which the National Medical Society will recognize? (as it recognizes no other medical degree in Kansas).

Where else can you find as able and as large a faculty in law, made up in part of ten great jurists, either now on the bench, or who have been judges?

Where else can you find in the whole state or any near state better chances to observe varied courts in action, from the United States District court and State Supreme court down to a morning police-court?



Washburn Medical College Faculty and Graduating Class of 1905.

you find such a superb Hall of Physics, with so many laboratories, shops, engines and appliances—an equipment alone of over \$8,000, all of which the student may not only use, but must use in systematic, practical ways?

Where else can you find over \$80,000 under one roof devoted to physics, astronomy and engineering?

Where else among the colleges can you find a \$40,000 Library building (with 15,000 square feet of floor-surface) and with a book capacity of 53,000 volumes, appointed "like a palace," equipped with every latest device known to library science, and all made level to everyday work and everyday growth?

Where else can you find so many "Department Libraries," not included in the general library, but with technical books "at hand" in each department—in literature, biology, geology, chemistry, Greek, sociology (1,600 in this department alone) in music and fine-arts?

Where else can you find over \$2,000 worth of lantern-slides, in the varied fields of history, geology, classical and modern art, social science, etc.—views kept for systematic, daily class-illustra-

tion, with a provided "Lantern-room" and an always-ready electric "candle", to project at a moment's notice?

Where else can you find more aesthetic, comfortable student homes than are furnished to the young ladies in the three steam-heated, electric-lighted campus dormitories—Holbrook, Hartford, Whittin, all bowered with trees, and near to the daily work?

Where else, in any college community can a self-supporting young man find so easily an opportunity to earn the money to keep him in college as in this populous city with its many calls for work, e. g., for eighty young men to handle the daily editions of its three newspapers?

What other college in the state pours out on its students as large an expenditure annually—over \$50,000 in each of the last two years, not including the erection of the two latest buildings (which cost \$100,000)?

It is of course impossible in these few pages to verify the preceding claims in detail, but this may properly be asked, that each young man and woman who is considering a college life will investigate these statements as fully as possible before dismissing them as "mere advertising." Make a careful study of the catalogue, of this rich body of photographic illustration, and, still better, come to Topeka for a personal inspection of the marvelous competency of Washburn College to be the open door of opportunity to a great career.

1865—WASHBURN COLLEGE—1905

Schools, Directory, and Calendar.

REV. NORMAN PLASS, D.D., President.

I. College of Liberal Arts, Professor D. L. McEachron, A.B., Dean.

II. The Academy, Ward W. Silver, A.M., Principal.

III. Kansas Medical College. The Department of Medicine and Surgery, Dr. William S. Lindsay, M.D., Dean.

IV. The College of Law. Professor Ernest B. Conant, A.B., LL. B., Dean.

V. The School of Fine Arts, Professor Geo. B. Penny, B.S., Dean.

Lewis H. Greenwood, LL.B., Secretary of the trustees, 611 Kansas Ave., Topeka.

James F. Griffin, Treasurer, Real Estate Building, Jackson and 7th Streets.

Rev. D. M. Fisk, D.D., Field Secretary, 1516 College Avenue, Topeka.

Miss Daisy M. Griggs, '04, Secretary and Treasurer Alumni, Topeka.

Calendar for 1905-6.

Sept. 12. Registration of new students and examinations for admission.

Sept. 13. First Term begins.

Nov. 30. Thanksgiving Recess.

Dec. 23. Christmas Recess.

Jan. 30, 1906. First Term ends.

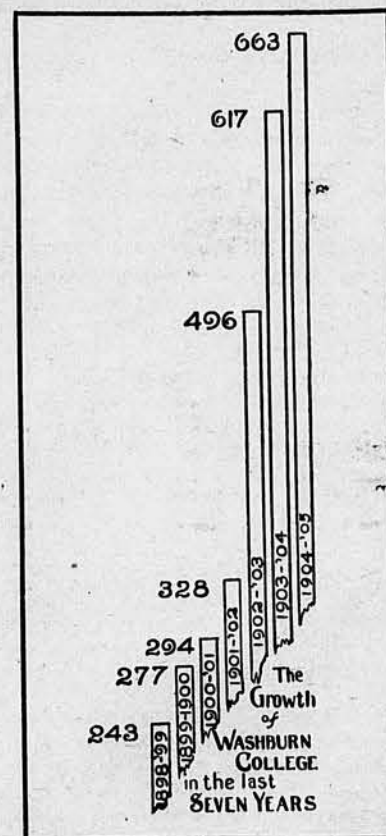
Jan. 31. Second Term begins.

Apr. 18. Commencement of Kansas Medical College.

June 6. Commencement.

Recent Years of College Growth.

The accompanying diagram tells its own encouraging story of the last seven years of College increase in attendance.



The increase represents the history of the last seven years for the whole "Varsity" aggregate, the most remarkable rise from 243 (in the academic year of 1898-'99) to the present total enrollment of 663 in all departments.

The increase in buildings, in equipments, teaching power and attendance

in Washburn in very recent years has probably been the most significant event in the educational history of Kansas among the church-supported colleges. Three years ago there was no Observatory, no general heating plant, no President's house, no Carnegie Library, no "Cooper mineral collection," no general student laboratories in physics, biology, psychology and advanced chemistry. These things alone stand for a gain of over \$124,500.

There are now ninety-eight professors and instructors in Washburn College Faculty.

The present Freshman class, including "specials" (who have an average college standing of a full freshman grade) numbers 131. The number last year was 117.

Washburn College is under Congregational supervision, denominationally, but its absolute catholicity is evidenced by the fact that neither its board of trustees, faculty or body of undergraduates is limited to any one denomination. There are 22 Presbyterian professors and instructors in its faculty, 10 Episcopalians, seven Methodists and others of other denominations. Probably not one in four of its students comes from Congregational homes. Topeka sent 320 students last year to some department of the college.

For Catalogues, Bulletins of the Medical, Law, Music Departments or Academy, or for other copies of this Bulletin, send to Norman Plass, President, Topeka, Kans.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

Sell Your Surplus Stock.

Now that the breeding-season is over is a good time to sell all fowls that you do not actually need for next season's breeders. Fatten them and sell to the butcher, as it is simply a waste of money to keep them any longer. Fowls fatten more rapidly in close confinement, kept by themselves in coops or pens and so darkened that they can not see anything which might attract their attention and cause them to worry and become excited. It is not well to fatten fowls on corn alone, as they would be pretty certain to suffer from indigestion. While this grain should form the principal food, they should be supplied with a variety of anything they will eat, clover, alfalfa, and all kinds of green food being particularly desirable. The more the appetite is tempted, the more quickly the fattening process will go on. It would be well also to sell all the surplus young fowls you do not need to keep over winter, especially all the cockerels. You can get a good price for them now as broilers; in fact, they will realize more money now than they would when mature.

If you breed pure-bred poultry, it would not do to follow this advice, for cockerels of any pure-bred fowls will bring better prices if kept to maturity; and as for the pullets, you will need all of them for next season's breeders, either for your own use or to sell to others. But if you have any culs among them, it is a good time to get rid of them as soon as they are large enough to fry, for as you will not need them for breeders, it is undesirable to have them among the good stock. If will give the balance a better chance to grow and thrive by eliminating all those that you do not desire to keep over to next season.

What About Your Chicks?

How are your chicks getting along? is a frequent question these days among poultry-breeders. One answers: "I had splendid success in hatching chicks but rats got into my coops the other night and got away with thirty of my earliest hatch." Another answers in about the same strain, but it was a neighbor's cat that was the depredator in this instance. Another forgot to close the coops at night and skunks made havoc among them. Another failed to call them up during a thunder-storm and lost dozens of them by drowning, and so on. One neighbor

told me that out of over 300 chicks hatched she had but 20 to 30 left. Rats, and other vermin had made such inroads into their numbers that they were rapidly dwindling down to nothing. We have often remarked that it is the number of chicks that are raised to maturity that counts and not the number that is hatched. Better hatch 50 and raise them to maturity, than hatch 300 and lose all but a dozen. It is a loss of time, a loss of feed, and a loss of patience. A great amount of this loss could be avoided if proper care of the chicks were taken after the hatching-period. But it seems that some people have a mania for hatching chicks but no aptitude for raising them. They let them take care of themselves. But young chicks can not take care of themselves, and unless some one takes care of them they will soon disappear. The moral, of course, is to look after them with solicitous care, see that their coops are rat-proof and cat-proof and that they are fastened securely at night. Feed them liberally and provide shade for them during warm weather. Count the chicks occasionally, so that you may know whether or not there is a falling off in their numbers, and if you find them dwindling, hunt up the cause in the shape of rats, skunks, or cats. Use poison for the former and shot-gun for the latter.

Chickenpox.

Can any one tell me what is the matter with my little turkeys and what to do for them? There are little bunches on the sides of their heads which grow larger and seem hard; some have them on the top of the head and some under the bill. One has died and I am afraid I shall lose them all. They were raised with a chicken hen and are weaned, though still quite small. Mrs. D. W. E.

Marion County.

Answer.—Your turkeys are afflicted with chickenpox, a disease prevalent among fowls. Anoint the sores with crude carbolic acid and put some flour of sulfur in their soft feed. Keep your young turkeys penned up till the dew is off the grass and during rain storms. They can not stand dampness or wet weather.

Feeding Young Chicks.

A writer in the Inland Poultry Journal tells of the method of feeding young chicks which is practiced by a farmer's wife, who is successful in hatching about 1,200 chicks a year. The woman does her hatching principally in April and May, using hens for the hatching. She gives each mother twenty chicks and keeps them in coops on grass sod. The first feed is given when the chicks are thirty-six to forty-eight hours old, and consists of steel-cut oats. These are sometimes called "pinhead" oats, the grain having been cut into bits about the size of a pinhead. The woman buys these oats and the first feed consists of these, mixed with small grit. This is their food three times a day for the first week, and they run at large on the grass. At the end of the first week broken corn is added, and by the beginning of the fourth week their grain consists entirely of whole wheat and broken corn, and from this on their food is kept before them in a trough that they can not get into. They come up to their trough and fill up a dozen or more times a day, and they grow like weeds. They have an abundance of water, grit and grass all the time. This woman feeds no charcoal, condiments or meat. Some other growers feed a little beef meal in wet or chilly weather.

Infertile Eggs.

Infertile eggs may be used for the feeding of young chicks, if they are removed from the nests after the hens have been incubating but one or two days. The poultry-owner can easily detect the infertile eggs by candling them, and this is a thing that should always be done. By it the eggs that would be rendered worthless in a few weeks can be used as mentioned above, while it is then possible to put other eggs under the hen. This increases the possibilities of a good hatch. What

is true of the sitting hen is also true if an incubator is used.

Infertile eggs are a great source of loss in the hatching operations of the farm. Sometimes a whole sitting of eggs is found to be infertile. The sooner this is found out the better. An egg that is fertile will appear cloudy after being exposed to incubation heat for two days, while the infertile eggs will still be clear.—Northwest Pacific Farmer.

Kansas Fairs in 1905.

Following is a list of fairs to be held in Kansas in 1905, their dates, locations and secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

Allen County Agricultural Society: J. T. Tredway, Secretary, Iola; September 12-15.

Barton County Fair Association: W. P. Feder, Secretary, Great Bend; August 29-September 1.

Brown County—The Hiawatha Fair Association: Elliott Irvin, Secretary, Hiawatha; September 5-8.

Butler County Fair Association: H. M. Balch, Secretary, Eldorado; October 2-6.

Chautauqua County—Hewins Park and Fair Association: W. M. Jones, Secretary, Cedar Vale; October 17-19.

Clay County Fair Association: Walter Puckey, Secretary, Clay Center; October 10-12.

Coffey County Agricultural Fair Association: Henry Jackson, Secretary, Burlington; September 19-22.

Cowley County—Eastern Cowley County Fair Association: J. M. Henderson, Secretary, Burden; September 27-29.

Cowley County Agricultural and Live-Stock Association: W. J. Wilson, Secretary, Winfield; October 3-6.

Crawford County Agricultural Fair Association: Frank McKay, Secretary, Pittsburg; September 18-21.

Elk County Agricultural Fair Association: E. B. Place, Secretary, Grenola; September 19-21.

Finney County Agricultural Society: A. H. Warner, Secretary, Garden City.

Ford County Agricultural Society: Nic Mayrath, Secretary, Dodge City; second week in August.

Franklin County Agricultural Society: Carey M. Porter, Secretary, Ottawa; September 5-9.

Greenwood County Fair Association: C. H. Weiser, Secretary, Eureka; August 15-18.

Harper County—Anthony Fair Association: W. W. Bird, Secretary, Anthony; August 7-11.

Harvey County Agricultural Society: J. T. Artell, Secretary, Newton; September 26-30.

Jefferson County Agricultural and Mechanical Association: Geo. A. Patterson, Secretary, Oskaloosa; September 5-8.

Jewell County Agricultural Fair Association: Henry R. Honey, Secretary, Mankato; September 5-8.

Linn County Fair Association: O. E. Haley, Secretary, Mound City; September 11-15.

Marshall County Fair Association: E. L. Miller, Secretary, Marysville; September 12-15.

Miami County Agricultural and Mechanical Fair Association: W. H. Bradbury, Secretary, Paola; September 26-28.

Mitchell County Agricultural Association: P. G. Chubbie, Secretary, Beloit.

Montgomery County—Coffeyville Fair and Park Association: R. Y. Kennedy, Secretary, Coffeyville.

Morris County Exposition Company: M. F. Amrine, Secretary, Council Grove; September 26-28.

Nemaha County Fair Association: W. H. Fitzwater, Secretary, Seneca; August 30-September 1.

Neosho County Fair Association: H. L. Age, Secretary, Erie; September 26-29.

Neosho County—Chanute Fair and Improvement Association: A. E. Timpone, Secretary, Chanute; August 28-September 2.

Ness County Agricultural Association: J. S. Wagner, Secretary, Ness City; September 6-8.

Norton County Agricultural Society: M. F. Garrity, Secretary, Norton; August 29-September 1.

Osage County Fair Association: E. T. Price, Secretary, Burlingame; September 6-8.

Reno County—Central Kansas Fair Association: A. L. Sponsler, Secretary, Hutchinson; September 18-21.

Rice County Agricultural Fair and Live-Stock Association: E. E. Potter, Secretary, Sterling; September 4-6.

Riley County Agricultural Society: Jno. W. Cone, Secretary, Riley; August 8-11.

Rooks County Fair Association: E. S. Williams, Secretary, Stockton.

Saline County Agricultural, Horticultural and Mechanical Association: H. B. Wallace, Secretary, Salina; September 18-22.

Shawnee County—Kansas State Exposition Company: C. H. Samson, Secretary, Topeka; September 11-16.

Smith County Fair Association: Milo Dimond, Secretary, Smith Center; August 22-25.

Stafford County Fair Association: Geo. E. Moore, Secretary, St. John; August 23-25.

Wilson County—Fredonia Agricultural Association: J. T. Cooper, Secretary, Fredonia; August 22-25.

POULTRY BREEDERS' DIRECTORY

BLACK LANGSHAN CHICKS—Either sex, weight 1 to 2½ pounds; price, 50 cents each, during July and August. A chance to get good breeding stock cheap. Mrs. Geo. W. King, Route 1, Solomon, Kans.

CHOICE B. P. ROCK cockerels and pullets—Collie pups; send for circular. W. B. Williams, Stella, Neb.

EGGS FOR SALE—S. C. W. Leghorns, W. Wyandottes; \$1 per 15. W. H. turkeys, \$1.50 per 9. Em-don geese, 20c each. W. African guineas, \$1 per 17. All guaranteed pure-bred. A. F. Hutley, Route 2, Maple Hill, Kans.

BUFF LEGHORNS EXCLUSIVELY—Eggs \$1.75 per 50; \$3 per 100. J. A. Reed, Route 2, Wake field, Kans.

R. C. W. LEGHORN EGGS \$1 per sitting; \$1.50 per two sittings; \$5 per hundred. Stock excellent. Mrs. A. D. Corning, Route 1, Delphos, Kans.

MAPLE HILL Standard-bred S. C. B. Leghorns champion layers, none better; cockerels from State prize-winners. \$1 per sitting; \$5 per 100. Mrs. D. W. Evans, Edgerton, Kans.

STANDARD BRED SINGLE COMB BUFF LEGHORNS—Headed by first prize pen Chicago Show 1903 and took six first prizes and first pen at Newton 1904. Eggs, \$3 for 15. S. Perkins, 801 East First Street, Newton, Kans.

WHITE WYANDOTTES—Large birds, farm range. Eggs, 75 per 15. Henry Harrington, Clearwater, Kans.

S. C. W. Leghorns and Buff Rocks. Winners at State Fairs. Eggs, \$1 per sitting. J. W. Cook, Route 3, Hutchinson, Kans.

S. C. B. LEGHORNS EXCLUSIVELY—Eggs for hatching from fine pure-bred stock at \$1 per 15. Write for prices on larger numbers. J. A. Kaufman, Abilene, Kans.

FOR BUFF PLYMOUTH ROCK eggs, from best stock, send to Gem Poultry Farm; 15, \$2; 30, \$3.50. Pure M. Bronze turkey eggs, 11, \$2. C. W. Peckham, Haven, Kans.

TO GIVE AWAY—50 Buff Orpingtons and 50 Buff Leghorns to Shawnee county farmers. Will buy the chicks and eggs. Write me. W. H. Maxwell, 921 Topeka Ave., Topeka, Kans.

BARRED AND WHITE PLYMOUTH ROCK Eggs, \$2 per 15; \$5 per 45. Hawkins and Bradley strains, scoring 98½ to 94½. Mr. & Mrs. Chris Bearman Ottawa, Kans.

Golden Wyandottes

Winners at Topeka Poultry Show, January 1905, 2, 3 hen, 3 pullet, 2 cock, 2 cockerel. A few birds for sale. Eggs, \$2 per 15. J. D. MOORE, Route 2, Blue Mound, Kans.

"A NINE TIMES WINNER"

Bates Pedigreed Strain of White Plymouth Rocks have been shown in nine poultry shows the past two years and

Won in Every One of Them.

If they win for us, their offspring ought to win for you. Eggs, \$1.50 per 15. Elmwood strain of White Wyandottes also hold their own in the show-room. Eggs, \$1 per 15.

W. L. BATES, Topeka, Kansas.

White Plymouth Rocks

EXCLUSIVELY.

Good for Eggs, Good to Eat, and Good to Look at

W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 250 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96½, and as good as can be found anywhere. Eggs only \$2 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College. Address THOMAS OWEN, Sta. B, Topeka, Kans.

POULTRY SUPPLIES

Thranolite (lice powder).....\$4
Oreo-carb (lice killer).....\$4
Egg Maker.....\$2
Poultry Care.....\$2
Roup Pills.....\$2
Medicated Nest Eggs.....\$2
Conkey's Roup Cure.....\$2
Buckeye Cholera Cure.....\$2

OWEN & COMPANY

529 Kansas Ave., Topeka, Kans.

SCOTCH COLLIES.

FOR SALE—Two litters of Scotch Collie pups and a few older dogs. All stock registered or eligible for registration. Burr Fleming, Kinsley, Kans.

FOR SALE—Pure-bred Scotch Collies; forty head pure-bred Shropshire ewes; registered Giltshire bulls. G. C. Wheeler, Mgr. Perkins' Farm, Harlem, Mo.

FOR SALE—Two male Scotch collies, nearly full grown. Eligible to registry, strong in the blood of Metchley Wonder. Price, \$10 each. Geo. W. Maffet, Lawrence, Kans.

SCOTCH COLLIE PUPS—Four more litters of those high-bred Collies, from 1 to 3 weeks old, for sale. Booking orders now. Walnut Grove Farm, H. D. Nutting, Prop., Emporia, Kans.

Largest Optical Mail Order House in the West

Eyes examined free accurately by mail. Any style glasses, \$1. Write for free examination sheet and illustrated catalog. Satisfaction guaranteed. R. H. Baker Optical Co., 624 Kansas Ave., Topeka

MONEY IN EGGS

Eggs may be bought while cheap and put away for winter use. A lady started with \$10, bought eggs at 8 to 10 cents in summer, preserved them and sold in January. Her profit for eight years was \$163.00. Why not make money on eggs yourself? To preserve them costs ¼ cent per dozen. But any person can get the desired information by addressing the Chemical Supply Co., 327 Quincy Street, Topeka, Kans., enclosing 14 two cent stamps.

Bee and Poultry Supplies

Plenty of Hives and Sections—If you are in a hurry, send us your order. Can ship same day order is received. We have plenty of everything the bee or poultry-raiser could possibly need, such as Hives, Sections, Foundation, Frames, etc. In poultry supplies we keep in stock Cypers Incubators, Brooders, Incubator and Brooder Lamps, and the celebrated Cypher's Chick Feed. To free your pen of vermin get some of our Lice Powder or Naprosol—they never fail. Send for free catalogue.

TOPEKA SUPPLY HOUSE, Topeka, Kans.

The Young Folks

CONDUCTED BY RUTH COWGILL.

A Step at a Time.

Heaven is not reached at a single bound;
But we build the ladder by which we
rise
From the lowly earth to the vaulted
skies,
And we mount to its summit round by
round.

I count this thing to be grandly true;
That a noble deed is a step toward God.
Lifting the soul from the common clod
To a purer air and a broader view.

We rise by the things that are under
feet;
By what we have mastered of good
and gain;
By the pride deposed and the passion
stain,
And the vanquished ills that we hourly
meet.

We hope, we aspire, we resolve, we trust.
When the morning calls us to life and
light,
But our hearts grow weary and, ere the
night,
Our lives are trailing the sordid dust.

We hope, we resolve, we aspire, we pray.
And we think that we mount the air on
wings
Beyond the recall of sensual things,
While our feet still cling to the heavy
clay.

Wings for the angels, but feet for men!
We may borrow the wings to find the
way—
We may hope, and resolve, and aspire,
and pray.
But our feet must rise, or we fall again.

Only in dreams is a ladder thrown
From the weary earth to the sapphire
walls;
But the dreams depart and the vision
falls,
And the sleeper wakes on his pillow of
stone.

Heaven is not reached at a single bound;
But we build a ladder by which we rise
From the lowly earth to the vaulted
skies,
And we mount to its summit round by
round.

—Josiah Gilbert Holland.

Some Things for a Young Man to Think About.

There was once a very fine English gentleman who was famous for being the most witty and well-bred man of his time. He wrote a good many things which men considered very good, and he made some brilliant speeches, which his friends thought—and he doubtless agreed with them—would make his name known for all time. This was two centuries ago and the gentleman's name was Lord Chesterfield. His speeches and fine writings are seldom read now; but one thing has come down to us through the years, which makes us respect and value him, but which he did not intend for the world's eye at all. It is a series of letters to his son, who was about sixteen years old and was away in France and Holland, traveling and studying.

Lord Chesterfield was anxious that his son grow up to be a gentleman even wiser and more polished than himself, and he wrote to him constantly, giving him such good advice that we are fond of reading the letters to-day; and we find good sense and worldly wisdom in them that are very useful and true after so many years.

Here are a few extracts from his letters:

TIME.

There is nothing which I more wish that you should know, and which fewer people do know, than the true use and value of time. It is in everybody's mouth, but in few people's practice. Every fool, who slatterns away his whole time in nothings, utters, however, some trite commonplace sentence, of which there are millions, to prove, at once, the value and the preciousness of time. The sun-dials, likewise, all over Europe, have some ingenious inscription to that effect; so that nobody squanders away his time without hearing and seeing, daily, how necessary it is to employ it well, and how irrecoverable it is if lost. But all these admonitions are useless where there is not a fund of good sense and reason to suggest them, rather than receive them. By the manner in which you now tell me that you employ your time I flatter myself that you have that fund: that is the fund which will make you rich indeed. I do not, therefore, mean to give you a critical essay upon the use and abuse

of time; I only give you some hints with regards to the use of one particular period of that long time which, I hope, you have before you; I mean, the next two years. Remember then, that whatever knowledge you do not solidly lay the foundation of before you are eighteen, you will never be master of while you breathe.

KNOWLEDGE.

Knowledge is a comfortable and necessary retreat and shelter for us in an advanced age; and if we do not plant it while young, it will give us no shade when we grow old.

DESERT AND REWARD.

Deserve a great deal, and you shall have a great deal; deserve little and you shall have but a little, and be good for nothing at all, and I assure you, you shall have nothing at all.

Solid knowledge, as I have often told you, is the first and great foundation of your future fortune and character; for I never mention to you the two much greater points of religion and morality, because I can not possibly suspect you as to either of them.

CONSIDER YOUR OWN SITUATION.

You have not the advantage or rank and fortune to bear you up; I shall, very probably, be out of the world before you can properly be said to be in it. What then will you have to rely on but your own merit? That alone must raise you, and that alone will raise you if you have but enough of it. I have often heard and read of oppressed and unrewarded merit, but I have oftener (I might say always) seen great merit make its way and meet with its reward, to a certain degree at least, in spite of all difficulties. By merit I mean the moral virtues, knowledge and manners; as to the moral virtues I say nothing to you; they speak best for themselves; nor can I suspect that they want any recommendation with you; I will, therefore, only assure you that without them you will be most unhappy.

AMBITION.

Everybody has ambition of some kind or other, and is vexed when that ambition is disappointed; the difference is, that the ambition of silly people is a silly and mistaken ambition; and the ambition of people of sense is a right and commendable one. For instance, the ambition of a silly boy, of your age, would be to have fine clothes, and money to throw away in idle follies; which, you plainly see, would be no proofs of merit in him, but only of folly in his parents, in dressing him out like a jackanapes and giving him money to play the fool with. Whereas, a boy of good sense places his ambition in excelling other boys of his own age, and even older, in virtue and knowledge. His glory is in being known always to speak the truth, in showing good nature and compassion, in learning quicker, and applying himself more than other boys. These are real proofs of merit in him, and consequently proper objects of ambition; and will acquire him a solid reputation and character. This holds true in men as well as in boys; the ambition of a silly fellow will be to have a fine equipage, a fine house and fine clothes; things which anybody, that has as much money, may have as well as he; for they are all to be bought; but the ambition of a man of sense and honor is to be distinguished by a character and reputation of knowledge, truth and virtue—things which are not to be bought, and that can only be acquired by a good head and a good heart.

HUMANITY.

It is certain that humanity is the particular characteristic of a great mind; little, vicious minds are full of anger and revenge and are incapable of feeling the exalted pleasure of forgiving their enemies and of bestowing marks of favor and generosity upon those of whom they have gotten the best. Adieu!

YOUNG STANHOPE'S CHARACTER.

In the strict scrutiny which I have made into you, I have (thank God) hitherto not discovered any vice of the heart, or any peculiar weakness of the head; but I have discovered laziness, inattention and indifference;

faults which are only pardonable in old men, who, in the decline of life, when health and spirits fail, have a kind of claim to that sort of tranquillity. But a young man should be ambitious to shine, and excel; alert, active, and indefatigable in the means of doing it; and, like Caesar, "Nil actum reputans, si quid superesset agendum." You seem to want that "vivida vis animi," which spurs and excites most young men to please, to shine, to excel. Without the desire and the pains necessary to be considerable, depend upon it, you never can be so; as, without the desire and attention necessary to please, you never can please. "Nullum in unum abest, si sit prudentia" is unquestionably true, with regard to everything except poetry.

LAZY MINDS.

There are two sorts of understandings; one of which hinders a man from ever being considerable, and the other commonly makes him ridiculous; I mean the lazy mind, and the trifling, frivolous mind. Yours, I hope, is neither. The lazy mind will not take the trouble of going to the bottom of anything; but, discouraged by the difficulties (and everything worth knowing or having is attended with some), stops short, contents itself with easy and, consequently, superficial knowledge, and prefers a great degree of ignorance to a small degree of trouble. These people either think or represent most things as impossible; whereas few things are so to industry and activity.

RESOLUTION.

But difficulties seem to them (lazy people) impossibilities, or at least they pretend to think them so, by way of excuse for their laziness. An hour's attention to the same object is too laborious for them; they take everything in the light in which it first presents itself, never considering it in all its different views; and, in short, never think it thorough. The consequence of this is that when they come to speak upon these subjects before people who have considered them with attention, they only discover their own ignorance and laziness, and lay themselves open to answers that put them in confusion. Do not then be discouraged by the first difficulties, but contra audentior ito, and resolve to go to the bottom of all those things which every gentleman ought to know well.

For the Little Ones

Did You Ever Think?

Did you ever happen to think, when dark
Lights up the lamps outside the pane,
And you look through the class on that
wonderland
Where the witches are making their tea
in the rain,
Of the great procession that says its
prayers
All the world over, and climbs the stairs,
And goes to a wonderland of dreams,
Where nothing at all is just what it
seems?

All the world over at eight o'clock,
Sad and sorrowful, glad and gay,
These with their eyes as bright as dawn,
Those almost asleep on the way;
This one capering, that one crosses,
Plaited tresses, or curling floss,
Slowly the long procession streams
Up to the wonderland of dreams.
—Harriet Prescott Spofford.

The Trees in the Forest.

(In Memory of Hans Christian Andersen, Born April 2, 1805.)

The Forest was not still. If you had wandered through it you would have thought that the warm spring wind was blowing the leaves and branches and that the rustling was due to it, but that would have been because you could not understand the tree language. For, you see, the Trees were Talking, and at times the discussion became so warm that the Pine sighed that a forest fire would surely result.

"We are gathered together," said the Oak, with a majestic sweep of branches, "to discuss the question: 'Which Tree Has Done Most for the Children?'"

"That's easy," vouchsafed the Willow, "the family tree."

A few saplings giggled, but the more

IN STRICT CONFIDENCE.

Women Obtain Mrs. Pinkham's Advice and Help.

She Has Guided Thousands to Health.—How Lydia E. Pinkham's Vegetable Compound Cured Mrs. Fred Seydel.



It is a great satisfaction for a woman to feel that she can write to another telling her the most private and confidential details about her illness, and know that her letter will be seen by a woman only, a woman full of sympathy for her sick sisters, and

above all, a woman who has had more experience in treating female ills than any living person.

Over one hundred thousand cases of female diseases come before Mrs. Pinkham every year, some personally, others by mail, and this has been going on for twenty years, day after day.

Surely women are wise in seeking advice from a woman of such experience, especially when it is absolutely free.

Mrs. Pinkham never violates the confidence of women, and every testimonial letter published is done so with the written consent or request of the writer, in order that other sick women may be benefited as they have been.

Mrs. Fred Seydel, of 412 North 54th Street, West Philadelphia, Pa., writes:

Dear Mrs. Pinkham:—

"Over a year ago I wrote you a letter asking advice, as I had female ills and could not carry a child to maturity. I received your kind letter of instructions and followed your advice. I am not only a well woman in consequence, but have a beautiful baby girl. I wish every suffering woman in the land would write you for advice, as you have done so much for me."

Just as surely as Mrs. Seydel was cured, will Lydia E. Pinkham's Vegetable Compound cure every woman suffering from any form of female ills.

No other medicine in all the world has such a record of cures of female troubles as has Lydia E. Pinkham's Vegetable Compound. Therefore no prudent woman will accept any substitute which a druggist may offer.

If you are sick, write Mrs. Pinkham, Lynn, Mass., for special advice. It is free and always helpful.

dignified and elder trees considered the joke a poor one.

Then the Cedar in a high voice began: "Surely," said the Cedar, "I am a great boon to children. Of me are made the lead pencils and—"

"Enough," interrupted the Maple; "you may furnish material for the poor, tired little brains to figure sums with, but the smiles come over their faces when my sap is poured on the buck-wheat cakes."

"Yes," said the Fir Tree, "but at Christmas Time I bring them gifts and good cheer."

"After I am made into paper," said the Poplar, "Mr. Riley writes poetry on me."

"Poplar poetry?" queried the Chestnut.

And the Elm and other trees that have Philadelphia streets named after them all spoke and each was certain its beneficence was greatest.

And then a Spruce said modestly: "Comrades, they will soon take me away and make paper of me. But it will not sadden me, for on the paper are to be written the Fairy Tales that shall give the children more joy than lead pencils and maple syrup, yea, than Christmas tinsel and Riley poetry."

And the North Wind laughed, and as he laughed his breath loosened a few leaves from the laurel tree which he caught up and made a wreath of and hung on the spruce.

And all the trees were glad.—N. Y. Mail.

Advertising is like a river—small at the beginning but constantly growing larger as it grows longer.

In our inner life there is a universe.—Goethe.

The Home Circle

CONDUCTED BY RUTH COWGILL.

The Little Home Body.

The little home body is fair of face,
Her heart is a soft, warm thing,
And her words are as bright as the bubbles light
That break in the home body's spring.
Her dresses are clean and shining and neat
And inexpensive and plain;
And they're starched and ironed and small
As the grasses on which they have lain.

The little home body has golden hair,
It shades a smooth, white brow,
And is simply coiled in a shining knot
Above a neck like snow.
The little home body has turned a house
Into a home more fair,
Her touch has given it all its grace,
Its comfort and character.

And oh! how light are her loaves of bread!

How simple her fare and good!
What a wonderful woman this woman is
That she bakes such wholesome food.
The children cluster like roses' buds
At her bosom and round her feet;
And their eyes lift up their gift of love
That renews and keeps her sweet.

The little home body is loved by all
She is helpful whenever there's need.
And at every home where she makes a call
She leaves a kind love deed.

And all folks love her, both great and small.

There is nothing false or shoddy,
But a wholesome nature rich and sweet,
In the darling little home body.
—Fannie Bolton.

Art in the Home.

ALICE E. WELLS, PRINCETON, KANS.

In the farm home, at that; and why not? Sitting in the art gallery at the World's Fair last fall, I was struck by the fact that simplest pictures of simple life attracted the most attention. Two remain with me. I can still see with memory's eye the little home by the wayside, the house rudely constructed, a rough board fence in front, big trees with bare limbs, standing sentinel, a woman and little girl at the gate awaiting the approaching man with a dinner-pail—his big feet leaving wonderful prints in the deep snow. Over all the yellow rays of the setting sun cast a halo of glory and the lengthening shadows mellow the scene. The atmosphere of home love and peace—blending with nature's handiwork are felt and remembered. The other picture was "Poverty," simply a little girl—standing—whose attitude and countenance portrayed absolute indifference to existence and environment. What a story the canvas told to observers who took time to study it.

Driving home from the city ten miles away, one day, my friend remarked, "How beautiful the landscape right here." "Yes," I replied, "as beautiful as those scenes we admired so much at St. Louis." And yet time after time that road had been traversed without particular notice of its beauties. And what has all this to do with art in the home? Much every way. Give the artistic nature, possessed to some degree by every one, something to feed upon and it will grow. "Whatsoever things are lovely, whatsoever things are true, whatsoever things are of good report," etc., "think on these things."

Loaves of bread made in attractive shape are really more palatable than when carelessly formed. Our dining-tables will tempt even waning appetites if arranged with an eye to appearance. Apparel, simple or elaborate, is attractive, if harmonizing with the wearer and circumstances. Cultivate straight lines, perfect curves, true angles, even in the hanging of pictures and curtains, the arranging of furniture, etc. Colors must harmonize to be restfully artistic. In the yard relegate to the orchard those gnarly peach-trees. If a fence is necessary, let it be low and as nearly invisible as possible. A few symmetrical trees, green grass, shrubbery, and flowers, arranged according to form, habit, and color, are more pleasing to cultured taste, than haphazard arrangement of shade and sunshine, bush, tree, and plant.

Then cultivate the art of seeing the beautiful in everything. Note the blending of colors on even a chicken's breast; the graceful curve of a kitten's paw and neck; the cute twist in a

pig's tail; the placid expression of the Jersey's eye; the abandon of a new calf's gallop around the pen; the spider's web; the ground mole, and so on ad infinitum. As in the pictures mentioned, harmony of scheme, form, and color is the key to the situation—in the farm home as elsewhere.

Simple Points in Cookery.

A few points for the American cook to remember, if she is to emulate the gentle art of the French chef, may not be found amiss.

Never make piecrust in a warm room, and never mix it with a spoon, but with an ice-cold knife. Use only ice water in moistening the pastry and shortening. The shortening should be cold and firm. Butter makes the best pastry. It is false economy to substitute anything else for it.

Bake piecrust in a very hot oven, not so hot that it will burn before the lower crust is done, and yet hot enough to prevent the shortening from melting before it browns. If an oven is more or less slow, the lard or butter will ooze out and make the dough a heavy mass. All piecrust should be thoroughly chilled just before it is put in the oven.

Never beat and stir whites of eggs, but "whip" them in light, firm strokes. If the recipe calls for well-whipped whites, never use eggs that refuse to be whipped to a froth stiff enough to cut with a knife. Too long a whipping of egg whites, however, will sometimes make them tough.

In boiling or steaming puddings never allow the water to stop bubbling for more than a moment. Have ready boiling water to pour immediately into the kettle when the water begins to boil down.

In regard to seasoning, it is better to adhere strictly to the recipe. One's taste is not often the best guide in this matter. Some women really seem to be lacking in the sense of taste, though they will seldom admit it. What to them is delicious is sometimes very disagreeable to other persons. Many dishes are completely spoiled by over or under seasoning. The printed recipes in the established cookbooks are generally correct.—Tribune.

Club Department

OFFICERS OF THE STATE FEDERATION OF WOMEN'S CLUBS.

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

Our Club Roll.

Mutual Improvement Club, Carbondale, Osage County (1895).
Give and Get Good Club, Berryton, Shawnee County (1902).
Women's Literary Club, Osborne, Osborne County (1902).
Women's Club, Logan, Phillips County (1902).
Domestic Science Club, Osage, Osage County (1888).
Ladies' Crescent Club, Tully, Rawlins County (1902).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).
Chalutso Club, Highland Park, Shawnee County (1902).
Cultus Club, Phillipsburg, Phillips County (1902).
Literature Club, Ford, Ford County (1903).
Sabers Club, Mission Center, Shawnee County, Route 2, (1899).
Star Valley Women's Club, Iola, Allen County (1902).
West Side Forestry Club, Topeka, Shawnee County, Route 8, (1903).
Fortnight Club, Grant Township, Reno County (1903).
Progressive Society, Rosalia, Butler County (1903).
Pleasant Hour Club, Wakarusa Township, Douglas County (1899).
The Lady Farmers' Institute, Marysville, Marshall County (1902).
Women's Country Club, Anthony, Harper County.
Taka Embroidery Club, Madison, Greenwood County (1902).
Mutual Improvement Club, Vermillion, Marshall County (1903).
Frontis Reading Club, Cawker City, Mitchell County (1903).
Cosmos Club, Russell, Kan.
[All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.]

MISCELLANEOUS PROGRAM.

The Day's Work.

Roll-call—Favorite recipes.
I. Planning the day's work.
II. How to keep young.
III. The simple life.
IV. "It's all in the day's work."
The topics for this week's club program need little explanation or suggestion. The article on planning the day's work should be distinctly practical. How to keep young can best be



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are superior Spring dress goods. Absolutely fast in coloring; rich in many effective designs; printed on durable well-woven cloths. Satisfactory because superior.

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Three generations of Simpsons have made Simpson Prints.

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told by one who has kept a cheerful spirit and mind alert, throughout the vicissitudes of a housekeeper's life.

The passion for the simple life has followed close on the heels of the fad for the strenuous. For this number, a chapter from Charles Wagner's popular book may be substituted for a paper.

Who was it did a kindness to some poor creature, and when an attempt at thanks was made, said with the self-forgetfulness of a great heart, "It's all in the day's work?" The deeds of charity and loving kindness which are in the way of the busiest women as well as of those of leisure, must not be overlooked, in summing up the day's work.

West Side Forestry Club.

June 29, "Field-day" at the beautiful "Prairie Dell" home of Robert I. Lee was one of the most enjoyable meetings of the club this year.

The program included an address by Dean Kaye, who was unavoidably detained. His paper on "Wild Flowers" was omitted.

Following roll-call responses Mrs. G. A. Huron made some appropriate remarks on wild flowers.

Misses Johnstone, Meade and Gobrecht entertained the club with some sweet music. Large tables were spread on the lawn and over thirty people enjoyed a picnic dinner, after which games were played, and all who cared to hunted wild flowers.


Before the club adjourned the host and hostess served ice cream and cake. All returned to their homes feeling they had had a delightful day's outing. Mrs. F. G. W. TRAVIS.

Want a California Home?

The San Joaquin Valley of California is sparsely settled, the land is rich, producing grapes, figs, oranges, alfalfa and all sorts of grains and fruits. A great dairying country. You can go there with small capital and make a comfortable, paying home. Read about it in the illustrated book, "The San Joaquin Valley," sent for 10 cents to any address by the Southern Pacific, Department H, San Francisco. Low colonist rates to California from September 15 to October 31, 1905. (3)

A Missouri paper claims that farmers nowadays walk and stand much straighter than they did thirty or forty years ago. Improved machinery and more scientific methods of farming are credited with this result.

Send a copy of the KANSAS FARMER to your neighbors.



Gem City Business College

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30 experienced teachers; 1400 students; \$100,000 school building. Shortland, Bookkeeping. 64-page illustrated catalog free. D. L. Musselman, Pres.

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Gossip About Stock.

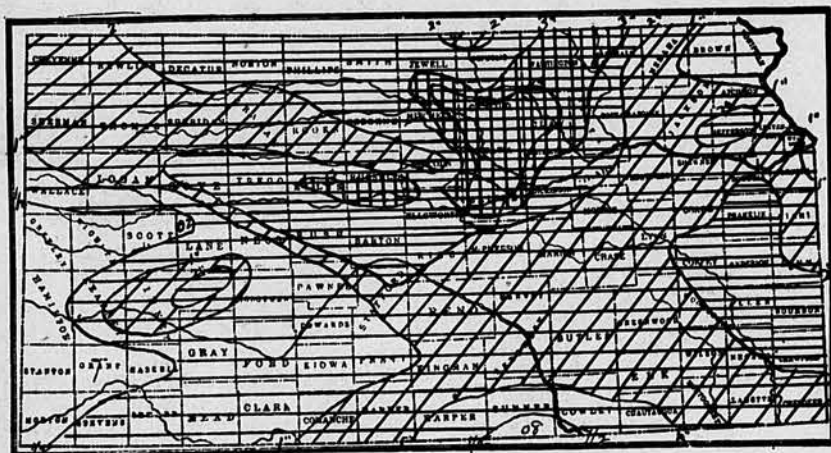
Volume 38 of the American Poland-China Record has just been received at this office. It is a handsome volume of 1081 pages and contains pedigrees of boars from 9166 to 9431 and of sows from 23002 to 23438. W. M. McFadden, Union Stock Yards, Chicago, is the secretary.

Col. J. W. Sparks, the noted live-stock auctioneer, of Marshall, Mo., is still doing business at the old stand and this same old stand covers a large share of the Mississippi Valley. The genial Colonel is always a welcome visitor in any company of breeders of pure-bred stock especially if he is on the auction block where he is a sure money-getter. Write him for open dates now.

Mr. A. G. McQuiddy, of Newton, Kans., who has been breeding the famous Ohio Silver strain of O. I. C. swine, has decided to close out his entire herd and now advertises a public sale to be held at Newton, Kans., on August 1, 1905. The offering will consist of boars and bred sows and gilts that are good individuals of choice breeding. Here will be an opportunity for Kansas Farmer readers to get some of this splendid breed of hogs at their own prices. Newton is on the main line of the Santa Fe and is easily reached from any direction. Remember the time and place and write to Mr. McQuiddy for a catalogue. The advertisement appears on page 697.

Col. John Brennan, of Esbon, Jewell County, Kansas, commences his card this week. We have long known of his excellent work selling pure-bred stock and take pleasure in commending him to the Farmer's patrons. Mr. Brennan has made some of the best stock sales of Nebraska and Kansas, and is now listed with the ablest auctioneers of these States. A poor auctioneer may spoil an otherwise good sale; but a good auctioneer greatly increases the chances for success and many times over earns the difference in cost of his services. Colonel Brennan has

Rainfall for Week Ending July 1, 1905.



SCALE IN INCHES:

Less than $\frac{1}{4}$. $\frac{1}{4}$ to 1. 1 to 2. 2 to 3. Over 3. T. trace.

the happy faculty of keeping his crowd good natured and the bidding lively. Thoroughly acquainted with the different breeds of live stock, a good judge of individual quality, he knows when to sell and when to hold on. His terms are very reasonable, in fact, less than he usually earns and what others charge. Write him concerning dates, prices, and suggestions about your coming sale and mention the Kansas Farmer.

J. W. Buck, Portis, Kans., proprietor of White Elephant Herd, breeder of O. I. C. swine is one of our new advertisers, who says: "I have pigs from three different herd boars and two different sets of sows. I have some pigs that are great-grandsons and daughters of the champion boar at the St. Louis World's Fair last fall; also stock that is related to a pair of premium pigs that were raised and sold by L. B. Silver, of Cleveland, Ohio. Most of my pigs are from long, lengthy sows and a short, extra heavy-boned boar. My herd is headed by Honest Tom 12883, and B. S. Perfection 31598. The brood sow, Elephant Girl 12882, is a fine, large, white curly sow that weighed 350 pounds when 9 months old. Victoria 31601 is from a litter of 15 pigs with 10 raised and herself farrowed 9 fine pigs at her first litter. Queen B. 31599 is from a litter of 14 with 9 raised, and she farrowed 8 fine pigs at her first litter. Princess 31600 is from a litter of 23 pigs with 19 raised. Clara W. 30386, the granddam of Victoria 31601 and Queen B. 31599, never farrowed less than 10 and when last farrowed was raising strong, well-built pigs. So you can all judge for yourself if my stock is prolific or not. Honest Tom 12883 is a very long pig with two good ends and an extra good body between, and a sure breeder, getting every sow in pig that I bred to him. B. S. Perfection 31598 is a very choice pig with a good body, well-arched neck, extra-heavy boned, broad between the eyes, with nicely drooped ear so much admired by fancy swine breeders."

The real estate firm of Garrison & Studebaker, Salina, are doing a splendid business in East and Central Kansas lands especially adapted to corn, wheat, oats and alfalfa. Their business has grown to such an extent that they now have offices at Florence, Minneapolis, and Salina, Kans. The secret of their success in doing such an extensive business is owing to the fact that they have such a desirable list of farms, real bargains for buyers, and also have the nerve to ad-

vertise the same as such, and thoroughly understand the land business and how to treat their customers. There is hardly an issue of the Kansas Farmer that does not offer some rare bargain in farm lands which they handle.

WEEKLY WEATHER CROP BULLETIN

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending July 4, 1905, prepared by T. B. Jennings, Station Director:

GENERAL CONDITIONS.

The temperature has been more nearly normal this week. The first part of the week was dry, but the latter part has been wet. Good rains have fallen over nearly the whole State; heavy rains have fallen over the larger part of the State, and excessive rains have occurred in the north central counties.

RESULTS.

EASTERN DIVISION.

Wheat harvest is practically over and thrashing from shock is progressing in all parts of the division developing a good yield of a fine plump berry; stacking is also progressing. Spelt is mostly cut in Morris County.

The oat harvest is over in many counties and is progressing in others; the oat crop has improved during the week.

Corn has been laid by in many counties and is mostly laid by in the others; it is tasseling in the southern counties.

The cornfields are clean, the corn has grown rapidly and gives fine promise.

The second cutting of alfalfa has been secured. Flax is ready to cut.

Grass, and the pastures have been greatly benefited by the rains.

Timothy hay is ready to begin in Johnson County, and clover cutting had begun in Anderson, but was stopped by rain. Prairie hay has begun in Woodson County.

Many apples have been blown off by the winds.

Early potatoes were damaged by the dry weather in Geary County, and the crops shortened in Jefferson.

Sweet corn is large enough to use in Anderson and Woodson Counties.

English blue grass is being cut in Johnson County but the crop is light.

Anderson.—Recent rains beneficial to corn

and pastures but injurious to grain in shock and have delayed wheat thrashing; some clover cut but too wet for curing; sweet corn large enough for use; gardens generally improved.

Atchison.—Much wheat harvested during past week and yield is good; recent rains will greatly benefit the corn, and most of this crop has been laid by; apples and peaches will be scarce.

Bourbon.—Wheat and oats all cut; flax doing well; good crop of potatoes; grass making good growth.

Brown.—Wheat about all harvested and quality of crop is good; oats harvest in progress, with fair yield; corn being laid by and prospect for crop is good; hay making commenced.

Chase.—Wheat harvest progressing in northern portion and completed in southern portion of county; corn doing well and much laid by; too dry for good growth of alfalfa.

Chautauque.—Corn doing very well, with prospect of good crop; some of the earliest corn is tasseling; oats late but promise good crop; third crop of alfalfa doing well; all forage crops in good condition.

Coffey.—Thrashing stopped by rain; corn in good condition; pastures benefited by rains.

Crawford.—Oats harvest in progress but delayed somewhat by rains; corn making rapid growth and beginning to tassel; wheat shocks blown down in many fields; corn broken and apples blown off by wind.

Douglas.—Wheat all cut and most of oats in shock; flax soon ready to cut; corn making fine growth.

Elk.—Wheat thrashing begun during week but stopped by rains; yield of wheat is fairly good; corn about all laid by and promises large crop.

Geary.—Wheat harvest over, with yield fair to good and quality good; oats being cut; very short in straw but will make fair yield; second crop of alfalfa cut and mostly in stack; early potatoes damaged by dry weather; corn, fruit and wheat in shocks damaged by wind.

Greenwood.—Small grain all harvested; early corn laid by; all crops doing well.

Jefferson.—Wheat and oats in shock and their condition is good; corn doing well; crop of early potatoes short; second crop of alfalfa in shock; hay interfering with by rains, but growing corn and pastures were greatly benefited by them.

Johnson.—Wheat harvest completed and thrashing begun; oats about all in shock; English blue-grass being cut but crop is light; flax about ready to cut; timothy hay making commencement next week; pastures and gardens improved by recent rains.

Linn.—Thrashing stopped by rains; quality of wheat fine; corn in very good condition; pastures improved.

Lyon.—Wheat all in shock; corn too large to plow; rains have been very beneficial to crops.

Marshall.—Wheat nearly all in shock although rains have interfered with harvest to some extent; corn nearly all laid by and making good growth.

Montgomery.—Corn growing rapidly and in

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Sirs:—We take this means of informing you that we have in NITROLINE DIP, one that requires only one application by dipping or spraying to thoroughly exterminate all vermin such as LICE, TICKS, PARASITE GERMS, FLEAS, MITES, GNATS, FLIES, SCREW WORMS, MANGE, SCAB, GALLS, SORES, INSECT BITES, IMMUNES AGAINST CHOLERA, PLAGUE, FEVERS, and TUBERCULOSIS, of all ANIMALS AND FOWLS, while, as you know, two applications within ten days are necessary with other good dips, and very often the results are unsatisfactory even after two dippings, while we guarantee NITROLINE DIP to do the work with first dipping or spraying, besides NITROLINE DIP costs only 75 cents per gallon in 50 gallon barrels or \$1.20 in 5 gallon cans, or \$1.25 in 1 gallon cans, delivered at your station, by freight. A 50 gallon barrel will make ready for use 3,750 gallons of dip. You can not afford to be without such a remedy about your premises.

NITROLINE SPECIFIC is an infallible remedy for internal diseases among animals and fowls, and will cure if given in time CHOLERA, PLAGUE, TUBERCULOSIS, COLIC, WORMS, GRUBS, ROUP, LIMBER NECK, COUGHS, COLDS, Etc. Price \$2.00 per gallon delivered. It pays to dip or spray your stock with NITROLINE DIP, so says many customers who have been using NITROLINE DIP for the past two years.

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fine condition; thrashing and stacking of wheat delayed by rains.

Morris.—Rye and wheat all cut, both crops being good; barley and spelt mostly cut; corn doing well.

Pottawatomie.—Wheat harvest almost over and thrashing begun; oats short but heavy; late potatoes doing well; pastures good; second crop of alfalfa cut; corn doing well and some laid by.

Riley.—Wheat harvest nearly completed; second crop of alfalfa being cut; corn doing well and much cultivated for last time; early apples being marketed; good crop of blackberries.

Shawnee.—Corn clean and making rapid growth; pastures and hay land greatly benefited by recent rains.

Wabaunsee.—Wheat thrashing begun and yield is good; pastures improved by recent rains; corn mostly laid by with prospect of large crop.

Wilson.—Wheat stacking and thrashing progressing well although delayed to some extent by rains; yield of wheat is generally good; corn cultivation almost completed and prospect for crop is good; some corn fields damaged by wind; kafir-corn looking well.

Woodson.—Thrashing delayed by rain; corn generally laid by and looks well; some prairie hay cut.

MIDDLE DIVISION.

Wheat harvest is finished in some counties, and was progressing in the others when it was stopped by the rains. Thrashing has begun in several counties and generally discloses a much better yield and grade than was anticipated. Oat harvest is progressing in several counties and is finished in Reno. Corn fields are clean and the corn has grown rapidly; it is tasseling in the southern counties and shooting in summer, and is being laid by in the central counties. The second crop of alfalfa is being cut in many counties and is ready to cut in others; it has been damaged by web worms in some counties and by rain in others. Grass has grown rapidly and pastures are good. Potatoes are a good crop and are plentiful. The apple crop has been pruned by the wind in some counties. Early apples are ripe but not abundant. Gardens are fine. Hail damaged some uncultivated wheat in Russell County.

Barber.—Crops improved by recent rains; second crop of alfalfa being put up but is

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very light on account of worms and dry weather; corn looking well but needs more rain. Barton.—Corn and all growing crops benefited by recent rains; second crop of alfalfa short and damaged by web worms.

Butler.—Beneficial rains and condition of crops good; corn and alfalfa looking well; advances; corn beginning to tassle.

Clay.—Harvest delayed by rain; some uncultivated what has suffered damage; apple crop damaged by wind; much corn being broken down by the wind.

Cloud.—Much wheat harvested during first half of the week, but all work delayed by rain since June 28th.

Dickinson.—Wheat harvesting nearly completed but stopped by heavy rains; thrashing begun; corn all laid by and growing rapidly; pastures doing well; early apples in market but crop is scarce; potatoes small but yield is good.

Edwards.—Wheat harvesting making good progress but delayed somewhat by rains; thrashing begun.

Ellsworth.—Corn in fine condition; pastures good; wheat nearly all cut.

Harper.—Wheat all cut and thrashing in progress; grain tests better and yields better than expected; oats nearly all cut, with fair yield and good quality; corn has very good color, most fields are clean and the crop is growing well; larger acreage of corn than usual.

Jewell.—Wheat harvest progressing although delayed somewhat by rains; second crop of alfalfa almost ready to cut; potatoes beginning to ripen.

Kingman.—Wheat harvest about completed; corn tasseling; grass growing rapidly and stock doing well.

Lincoln.—Wheat ripe but harvesting delayed by rains; corn clean and doing well; some of second crop of alfalfa damaged by rain; some wheat thrashing done and yield is fairly good.

McPherson.—Recent rains have delayed wheat harvest but have improved condition of corn and other crops; corn has good color, is clean and growing well but stand is somewhat thin; second crop of alfalfa ready to cut and promises better crop than first cutting.

Ottawa.—Wheat about all cut; grain better than last year and yield will be moderate; corn doing well; fair crop of oats expected.

Pawnee.—Wheat harvest nearly completed; corn doing very well but more rain would be beneficial.

Phillips.—Wheat harvesting retarded by rains; corn making rapid growth; full crop of potatoes.

Reno.—Wheat all cut and in shock; this crop is in very good condition; thrashing has begun and some thrashing is being done; yield is fair to good and quality very good; oats all cut, with only fair yield but of good quality; corn doing well and beginning to tassle; corn is being laid by; second crop of alfalfa being put up; this crop has suffered much damage from web worms.

Republic.—Wheat ready to cut but too wet in most fields for harvesting; corn growing well and clean from weeds; alfalfa in good condition; oats short, some loss of stock on account of heavy rains.

Rush.—Wheat harvest about half completed; recent rains have been beneficial to corn and spring crops.

Russell.—Wheat harvest progressing but delayed in many fields by the rains; some uncultivated wheat has been damaged by hail; corn and other growing crops doing well; pastures good and stock doing well; too wet to cut alfalfa.

Saline.—Some damage to crops by heavy rains; harvesting nearly completed.

Sedgwick.—Wheat thrashing progressing; yield better than expected and quality generally fine; crop of oats is expected to be only fair and it is thin in places; corn very promising; gardens in fine condition.

Stafford.—Wheat harvesting almost completed; corn doing well.

Sumner.—Wheat harvest completed and thrashing in progress; yield not so good as expected; oats harvest in progress and completed in some fields; early apples ripe; corn making good growth although rain would be beneficial.

Washington.—Wheat harvesting has been in progress although wet weather has interfered; the crop has good quality; oats filling well and nearly ripe; alfalfa and all grasses making rapid growth; light crop of apples; very good yield of potatoes.

WESTERN DIVISION.

Wheat harvest is over in the southern and is progressing in the other counties; the quality is good. In some localities in Norton County the wheat was damaged by hail. The oat harvest is about finished in Finney County. Oats are promising in Sheridan and ripening in Wallace County. Barley harvest has begun in Thomas County. Rye harvest is finished in Finney and progressing in Lane County; the crop is ripening in Wallace County. Corn has grown rapidly, the crop is good and the fields clean. The second crop of alfalfa is nearly ready to cut. The range grass is good, except that in the extreme western counties south of Wallace it needs rain. Forage crops have made rapid growth, but are now needing rain in some counties. Gardens are good; potatoes a fair crop.

Decatur.—Wheat harvest in progress; corn making rapid growth; pastures improved by recent rains; much damage to crops by hail storm.

Finney.—Favorable conditions for harvest; forage crops making rapid growth; wheat, oats and barley mostly cut; thrashing will begin next week.

Ford.—Harvesting about completed.

Gove.—Harvest delayed by recent rains; corn looks well; pastures good and cattle doing well; second crop of alfalfa nearly ready to cut; fair crops of peaches and plums; crop of apples not so good.

Greeley.—Corn and forage crops making good growth; grass needing rain.

Lane.—Winter wheat and barley harvest progressing rapidly; forage crops needing rain.

Ness.—Harvest making good progress; corn looking well but would be benefited by rain.

Norton.—Wheat harvest progressing well and quality of crop is good; some wheat fields badly damaged by hail; corn making good growth and most fields clean; all corn somewhat late.

Sheridan.—Early sown fall wheat has good quality and yield; late wheat injured by dry weather; oats promise good crop; corn small but doing well; fairly good crop of potatoes; gardens doing well.

Thomas.—Wheat harvest progressing well although delayed somewhat by rains; corn doing well.

Trego.—Harvesting progressing; corn benefited by rains; forage crops doing well.

Wallace.—Wheat, barley, oats and rye ripening; small grains, fruits and gardens were damaged by hail in some portions of county; first crop of alfalfa up; range grass good and cattle doing well.

A Universal Stable Remedy.

If it could be left to a vote of the horse-owners over this country to determine what the most valuable stable remedy is, the one that is available to treat the most of the characteristic horse ailments, and which would effect the most speedy and permanent cures, we do not think there is much doubt about what the result would be. We believe that Ken-

dall's Spavin Cure would be chosen by almost common consent. The vote would include thousands of persons who have been using this horse remedy continuously for as many as thirty years. It would include people who have begun to use it every year since its original compounding by Dr. Kendall, the eminent veterinarian, and have continued its use ever since. The simple truth is that no remedy has ever been found to take the place of Kendall's Spavin Cure. We believe we would be borne out in the statement by the generality of horse-owners and veterinarians. It is their remedy for spavins, ringbones, curbs, splints, wounds, in fact all the most common ailments of the horse. What other remedy has been so widely used, or has continued for so many years? What other remedy for the horse can be found wherever there is a drug store? People have learned to know by using it and the demand exists everywhere. Of course it is generously advertised; an ad is to be found now in our columns; but no claim is made for it that is not borne out by those who always keep it on hand. It is a remedy which our readers will do well to keep in their stables. We are especially desirous that all who read this should go to their drug store or write to the Dr. B. J. Kendall Co., Enosburg Falls, Vt., and procure a copy of the little book, "Treatise on the Horse and His Diseases." It is mailed free and we know of no other book which gives in such compact and reliable form the things which every man should know about his horse.

The Markets

Kansas City Live-Stock Market.

Kansas City, Mo., Monday, July 3, 1905. The total supply of cattle last week was 36,000 head, quite an increase over the previous week, and the heaviest this summer. The class of the receipts suited the needs of the packers better than that of the previous week, as fewer heavy beef steers were included, receipts running more to light-weight cattle, not so much beef. Demand was good from all sources for killing cattle and prices advanced steadily all week, a total gain of 10 to 25 cents being made on killing cattle, choice heifers and yearling steers 25 to 50 cents higher. Stockers and feeders remained quiet, small demand from the country, account of urgency of farm work, and speculators were timid about loading up till after the holiday tomorrow, the 4th.

The supply of cattle today is 5,000 head here, moderate at all points, and market is 10 to 20 higher. A good deal of the stuff is in the Quaintance division, probably half, and proportion of good cattle in the Native division small. Best steers in the last week sold at \$5.40, but they were not extra good, and a great many cattle sold at \$5.00 to \$5.35, fair to good steers at \$4.65 to \$5.15. Top today 1905.65. Heifers and yearling steers sell up to \$5.10, 50 cents about any recent price, and bulk of this class at \$3.75 to \$4.75, cows unchanged \$4.75 to \$5.25, lower, \$2.25 to \$3.75, veals unchanged \$4.75 to \$5.25, stockers and feeders \$3.00 to \$4.35, stock calves \$2.75 to \$4.00. Receipts will be heavy Wednesday, and a good run is expected from now on, but packers took the liberal supply of last week in such a manner as to indicate a large outlet for beef, and fairly good markets for killing cattle can be counted on.

Hog receipts were small here last week, account of harvesting in this territory, and prices were higher. The market declined last three days, but is backed up this morning, top around \$5.45, bulk of sales \$5.35 and better. Competition is keen for the hogs and indications favor strong markets. Shippers would do well to see that hogs are well cooled when loaded, as the loss on account of heat is heavy.

Mutton markets are strong and higher nearly every day. Small run today, market 10 to 15 higher. Good many spring lambs came in last week, at \$5.50 to \$7.25, native ewes up to \$4.55, wethers \$5.00, yearlings \$5.50. The general market is 30 to 40 cents higher than a week ago. J. A. RICKART.

South St. Joseph Live-Stock Market.

South St. Joseph, Mo., July 3, 1905.

The country was again conservative in shipments Monday, the number in sight at the five markets being only 27,300, which was 3,600 less than received last Monday and 15,700 less than were received two weeks ago, when the values were demoralized. Supplies in Chicago were again within the limits of the demands of the trade, and the result was again beneficial to the country interests, as all values showed a general strengthening. Local receipts while somewhat larger than on last Monday, were still very small, and did not include any choice offerings, and only a few lots of dressed beef steers that could be classed as 10 cents higher, although some holders of pretty good weights of dressed beef steers thought they were not getting out to any advantage than the close of last week. There was a small showing of common to fair light and medium butcher and dressed beef steers, more or less grassy, that sold with a little more freedom than late last week, but prices did not show any particular change. There was a poor showing of all kinds of butcher stock today, and competition was very keen for the few that might be buyers. As a result there was much activity and anything at all desirable in the cow and heifer line showed a 10 to 15 cent advance over the sales of last week. There were spots where bulls also met the same advance, but as a rule the trade in bulls was quiet and steady. Veals were in small supply and prices ruled steady. There was nothing doing in the stocker and feeder trade today, as there were no fresh arrivals of consequence. There were a few fairly large orders on hand for fleshy feeders of quality, and offerings of this character would sell to pretty good advantage the latter part of the week. Regular dealers were also looking for the same class of stock, and also for some good twos and light young steers. There is also a better inquiry for young stock cows and stock heifers, both on order and regular dealer account, but the week opens with no improvement for the inquiry for stock bulls.

The moderate marketing of hogs at all points today advanced the market 5 to 10 cents, with light and light mixed selling at \$5.35 to \$5.45; medium and heavy at \$5.32 to \$5.40, and the bulk of sales at \$5.35 to \$5.42. These figures are only slightly under the extreme high point of the year, and should moderate marketing continue for a week or ten days, it is quite probable that values will go still higher. Packers claim that hogs are not killing out, but regardless of this assertion, they are taking everything freely and paying the advance with a good grace, which indicates that they want the hogs regardless of the higher tendency of values. The fact that a holiday breaks into the receipts for the week will have the effect of stimulating the trade during the latter days, when packers will be able

Special Want Column

"Wanted," "For Sale," "For Exchange," and small want or special advertisements for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than \$1.00.

CATTLE.

SIX SHORTHORN BULLS—13 to 16 months old, eligible to registry, mostly reds, all sired by British Lion 138892 and out of the finest breeding—mixed Bates, Booth and Cruickshank. Price, \$40 each if taken soon. Address D. P. Norton, Dunlap, Morris County, Kans.

FOR SALE—My entire herd of registered Shorthorn cattle, consisting of 19 head of the Bates, Pomona, Marya, Primrose, and Scotch topped families, all of the large beef type; straight red. Address W. H. Shoemaker, Route 2, Narka, Kans.

HOLSTEINS—Bull calves cheap while they are little. H. B. Cowles, Topeka, Kans.

FOR SALE—Red Polled cattle, male and female. D. F. VanBuskirk, Blumound, Kans.

YOUNG HOLSTEINS—Both sexes; from butter-bred cows and descendants of Sarcastic Lad, World's Fair Champion and other selected sires. Attractive prices. Hillcrest Farm, Greenwood, Mo.

FOR SALE—10 Registered Galloway bulls, cheap. J. A. Darrow, Route 3, Miltonvale, Kans.

FOR SALE—Eight good, registered Shorthorn bulls, four straight Cruickshank, good ones, and prices right. H. W. McAfee, Station C, Topeka, Kansas.

FOR SALE—A 3-year old Shorthorn bull, sired by Royal Bates. Address Dr. N. J. Taylor, Berryton, Kans.

HORSES AND MULES.

STRAY MARE—A black mare came to Wm. Cook's residence, one-half mile east of the city of Downs, Kans., on or about the 10th day of October, 1904, weight about 800 pounds, age about 8 years, worth \$40; branded on the left shoulder; owner or owners will please come, prove property and pay expenses.

SWINE.

FOR SALE—Say! I have some fine, big-boned, broad-backed Berkshires, brood sows or pigs. Want some? Write me; turkeys all sold. E. M. Melville, Eudora, Kans.

SEEDS AND PLANTS.

WANTED—English blue-grass or meadow fescue seed. Correspond with us. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

PLANTS FOR SALE—Strawberry, blackberry, dewberry, rhubarb, grape-vines. Write for special prices. Address J. C. Santa, Topeka, Kans.

FOR SALE—Seed Sweet potatoes; 6 kinds; write for prices to I. P. Myers, Hayesville, Kans.

FOR SALE—Speltz, 600 bu. f. o. b. Two registered Galloway bulls, Wheeler & Baldwin, Delphos, Kans., or S. B. Wheeler, Ada, Kans.

SEED CORN—Both white and yellow at 90 cents per bushel; cane, millet and Kafir-corn seeds. Prices and sample on application. Adams & Walton, Osage City, Kans.

FARMS AND RANCHES.

DO YOU WANT to buy a farm, ranch, city property, or buy, sell or exchange a stock of merchandise, or want a bargain in some of my wheat farms, write me F. C. Purdy, Sterling, Kans.

CHEAP HOMES—80 acres, 80 acres, second bottom, good alfalfa land, \$1,800; 80 acres, 40 acres cultivated, \$1,000; 80 acres, 5-room house, level land, \$1,200; 160 acres nice smooth land, near town, \$3,000; 160 acres, 5-room house, all smooth, \$3,200; 160 acres, 50 acres cultivated, balance pasture, partly rough, \$2,000. We have all sizes cheap. Try us at Florence, Minneapolis or Salina, Kans. Garrison & Studebaker.

WANTED TO TRADE—Good Topeka city property for 160 acre or 80 acre farm within 8 miles of Topeka, Osage or Salina. Frank Johnson, 1121 West 3d Street, Topeka, Kans.

FOR SALE—Country grocery store, modern, up-to-date, good trade, good business. Price, \$400; \$450 cash, \$450 time. Stock in good brick building, cheap rent. Write F. C. Purdy, Sterling, Kans.

FOR SALE—The best fruit and dairy farm of 80 acres in Kans. 40 minutes drive from Topeka, finely improved, large barn, 7-room house, 3 chicken houses, large young orchard, hanging full of choice varieties of apples, 400 peach trees, 2 acres grapes, 1 acre blackberries, 50 cherry trees and other fruit in smaller quantities, 10 acres alfalfa, 8 acres clover and timothy, 25 acres tame grass, pastured, 2 acres Kaw bottom in potatoes, 15 acres corn, 5 acres in cane and millet, enough timber for fuel and posts. The above is a very pretty and picturesque place on rural free delivery and telephone; cannot be beat for a home. Also sell the cow and horses, implements, etc. My health will not permit me to farm, the reason for selling. Can give terms on part, equal to or better than rent at 6 per cent. Will give possession as soon as a deal is made. Address R. F. D., care Kansas Farmer, Topeka, Kans.

FOR SALE—In Osborne, Russell, and Rooks Counties, improved farms, pasture lands, two twelve hundred acre ranches, mercantile stocks. Will trade one ranch for good stock hardware and implements. We can please you, write to-day. Otis & Smith, Natoma, Osborne Co, Kans.

NICE HOMES—Cheap 80 acres all level bottom land, no better land anywhere, owner estimates improvements at \$3,000. Price, \$4,200. Four miles from town, 320 acres, 6-room-house, barn and out-buildings, 100 acres cultivated, \$4,500. 316 acres well improved with buildings, 40 acres alfalfa, 20 acres timothy and clover, 10 acres of blue-grass. Price, \$7,900. We have a few places that we can sell on very liberal terms. Try us, at Florence, Minneapolis or Salina, Kans. Garrison & Studebaker.

FOR SALE—Good farm and pleasant home, one-half mile from county high-school and city public school, three-fourths of a mile from several churches and stores, 2 grain elevators and stations. Farm consists of 800 acres, adapted to farming and stock raising, good 9-room house, with water, bathroom and good cellar, ice-house, tool-house, barn and well sufficient to hold 40 tons of hay and 150 head of cattle and horses, alfalfa, shade and fruit trees. Farm can be divided. Price, \$15 per acre. Call on or address the owner, Box 192, Wakeeney, Kans.

to take care of much larger supplies without impairing the good tone of the market.

The supply of sheep today was only nominal and the market was active and steady, nothing choice was on sale as good as the \$7.60 Idaho lambs of last week. Pretty good Idaho yearlings and lambs sold at \$4.75.

WARRICK.

FARMS AND RANCHES.

200 ACRE WELL IMPROVED FARM for \$3,200, to close an estate. Address Hurley & Jennings, Emporia, Kans.

FIFTY farms in Southern Kansas, from \$15 to \$70 per acre; can suit you in grain, stock or fruit farms. I have farms in Oklahoma, Missouri and Arkansas for sale or exchange. If you want city property, I have it. Write me. I can fix you out Wm. Green, P. O. Box 986, Wichita, Kans.

FOR SALE—200 acres fine pasture land, 175 acres of it mow land, two miles from Alma, living water that never fails, all fenced. This is a bargain if taken soon. Call on or address Mrs. M. A. Watts, Alma, Kans.

LAND FOR SALE in Western part of the great wheat State. H. V. Gilbert, Wallace, Kans.

FARM LOANS

Made direct to farmers in Shawnee and adjoining counties at a low rate of interest. Money ready. No delay in closing loan when a good title is furnished and security is satisfactory. Please write or call.

DAVIS, WELLCOME & CO., Stormont Bldg., 107 West 8th, Topeka, Ka.

I CAN SELL YOUR FARM, RANCH OR BUSINESS, no matter where located.

Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same. A. P. TONE WILSON, JR., Real Estate Specialist, 413 Kansas Ave., Topeka, Kans.

California Land For Sale

If you are figuring on a home in the Golden State, write the undersigned for information

KETCHUM & PROCTER, Occidental, Cal.

AGENTS WANTED.

WANTED—Canvassers for a fruit can holder and sealer. Territory given. J. W. Adams, 741 Tennessee, Lawrence, Kans.

AGENTS WANTED Sell 1st bottle Sarsaparilla for 50c; best seller; 200 per cent profit. Write today for terms. F. R. Greene, 116 Lake St., Chicago

MISCELLANEOUS.

WANTED—Good, experienced farm hand; permanent employment. References exchanged. T. Saxon, St. Marys, Kans.

SEA SHELLS from Long Island Sound; 25 assorted for 15 cents, stamps or silver. Alice L. Cramp-ton, Madison, Conn.

FOR SALE—A second-hand surrey, cheap. E. B. Cowgill, Kansas Farmer Office.

WANTED—Girl for general house work. No washing. Mrs. E. B. Cowgill, 1325 Clay Street, Topeka, Kans.

HONEY New Crop about July 1. Ask for prices. A. S. PARSON, 403 S 7th Street, Rocky Ford, Colo.

WANTED—Middle aged woman with no incumbences to do house work in a family of three. R. J. Linscott, Holton, Kans.

FOR SALE—Second-hand engine, all kinds and all prices; also separators for farmers' own use. Address the Geiser Mfg. Co., Kansas City, Mo.

LEGAL.

PROPOSALS FOR LEASING CERTAIN of the tribal lands of the Kiowa, Comanche, and Apache Indians for agricultural purposes. Department of the Interior, Office of Indian Affairs, Washington, D. C., June 24, 1905. Sealed proposals will be received at the Office of the U. S. Indian Agent, Kiowa Agency, Anadarko, Okla., until 2 o'clock, p. m., on Monday, December 4, 1905, and will be immediately thereafter opened in the presence of such bidders as may attend, for leasing for farming purposes about 400,000 acres of tribal Indian lands. Maps showing the location and description of each tract to be leased can be procured on application to the U. S. Indian Agent. Such lands will be leased in tracts not exceeding one quarter-section, or fraction thereof, where the quarter is fractional, for the period of five years from January 1, 1906. No bid for a different period or different quantity will be considered; and no person, firm, company, or corporation will be permitted to lease more than two sections. Posters giving fuller information, and the terms to be served in the submission of bids, can be obtained by addressing the U. S. Indian Agent. The bids must be addressed to the U. S. Indian Agent, Kiowa Agency, Anadarko, Okla., and must be plainly marked on the outside of the envelop, "Proposals for leasing Kiowa lands for agricultural purposes." Bids not conforming to the requirements of the printed poster may be rejected if such action shall be deemed necessary in the interests of the Indians. Any further information desired may be obtained from the U. S. Indian Agent, Anadarko, Okla. C. F. LARRABEE, Acting Commissioner.

Stray List

Allen County—J. W. Kelo, Clerk. HORSE—Taken up by C. C. Thompson, in Cottage Grove tp., May 29, 1905, one 10-year-old black horse, 2 white hind feet, star in forehead, spavined both hind legs; valued at \$15.

CANCER

Cured to stay cured. MY TRUE METHOD kills the deadly germ which causes Cancer. No knife! No pain! Longest established, most reliable cancer specialist. 16 years in this location. I give a WRITTEN LEGAL GUARANTEE. My fee depends on my success. Send for free 100-p. book and positive proofs.

DR. E. O. SMITH, 2835 GERRY ST., KANSAS CITY, MO.

In the Dairy

Milk and Milking.

"System" is said to be "a good servant but a bad master." This is true of many kinds of work, but in dairy work—an iron-clad system is imperative. The cow is an animal of regular habits. She expects to be fed at a certain time, writes M. C. Blue, in Ohio Farmer, and also to be milked at a certain time. And any variations from the regular program results in a loss of milk. Even a change of stalls or a change of milkers will often reduce the yield of milk and frequently the milk will be of poorer quality.

Every dairyman knows that bad treatment quickly results in a decrease of profits. Neglect in bad, stormy weather is another source of loss. The farmer who has his cows out in a storm sees quite a difference, when the milk is taken to the factory, between his yield and his neighbor's who had his cows well sheltered. All food was used for fuel with no surplus for milk. Food has some effect upon the quality of milk, but dairymen have proved there is not so much effect as would be supposed. Quality of milk depends more upon the breed and individuality of the cow.

The operation of milking requires skill, as the amount of milk depends somewhat upon the milking. Every dairyman knows that a poor milker will almost ruin a good cow. Milking should be done with dry hands, quickly, cleanly, thoroughly, the cows milked in the same order and exactly at the same hour both morning and evening. The milkers should always be on the lookout for abnormal milk. When it is necessary to use such milk it should always be boiled.

Certain diseases attack both animals and man alike. Tuberculosis is the most common of these. There have been cases where the disease has been transmitted to the consumers by the milk. But it is a wise provision of nature that when any dangerous disease attacks a cow the milk-flow stops. Many attacks of typhoid fever, cholera, diphtheria, scarlet fever, etc., have been traced to the milk-supply. The milk becomes contaminated from external sources and carries the germs to the consumers. When perfect cleanliness is not observed in milking the milk often acts as a poison to infants and invalids, causing severe intestinal trouble.

A persistent fight with germs is essential to pure milk and pure milk is essential to health and comfort. The process of aeration often renders milk palatable to persons of sensitive taste who could not otherwise drink milk at all.

Straining the milk is an important process. On many farms the milk is just strained through a wire strainer, but this does not eradicate all the dirt. The work can be much more efficiently done by straining through a layer of cheese cloth or other material on each side of cotton. Cotton is so cheap that it should be discarded after each milking. A flannel cloth is also excellent. Poor milk, poor butter and poor cheese can usually be attributed to uncleanliness in the stable or dairy.

Many persons think the animal or "cowy" odor of milk is just the milk, but this is not true, as this odor is entirely due to dirt in the milk. It is very difficult to make good butter in the winter time when the milk must be kept where the odors from the cooking vegetables and meats will be absorbed by the milk. Butter made in a cellar (unless the cellar is well ventilated) usually has a musty or moldy smell.

When no separator is used and the milk is set in pans or crocks the best results are obtained by keeping the temperature about 60° F. At this temperature milk is just about right to skim in thirty-six hours. Usually it is not safe to let it "set" longer. When the milk has soured just enough to be a little thick at the bottom of the pans or crocks and to thicken the cream is right for skimming. The cream can

not be skimmed off when thin and sweet without loss.

When new cream is put into the cream jar the whole should be stirred and mixed. The separator solves the problem of setting and skimming milk and also saves much time and labor. Still those using the separator must be willing to take it apart and thoroughly clean after each milking if good results are to be obtained.

The Milking Machine.

Loomis Burrell of Little Falls, N. Y., is the inventor of a milking-machine, mention of which has been made in these columns before. There are twenty-eight of the machines in actual use on six different farms at present.

Mr. Burrell says that so far as the cost of the machine is concerned, he believes in a dairy of thirty cows or over they will very soon pay for themselves on account of the saving in labor. Each machine will milk ten or twelve cows per hour, and one can attend to four machines. It renders the farmer much more independent and the work is done better than by hand. The cows are milked more regularly, the machines never get angry and abuses them, and at the same time they are milked more thoroughly.

A Little Falls News reporter thus describes the new invention: "First we were shown an air suction pump, driven by an electric motor of small power. A pipe line from his runs into the stable and along the rows of stanchions to a vacuum tank which regulates and steadies the pressure of air in the pipes to about half an atmosphere, or perhaps seven and a half pounds per square inch. At every other stanchion a stop-cock connections the pipe with a rubber tube that is attached to the machine proper, which is set over the receptacle for the milk. Another rubber tube runs from the machine to the cow, and is then subdivided into four tubes, at the ends of which are hollow cups with flexible mouthpieces that are slipped over the cow's teats, the air pressure at once attaching them firmly. The air pump does the rest. The machine is provided with an automatic cut-off that admits air to the tubes at short intervals, causing a pulsating effect which is the secret of the success of the machine. It is easily seen when the milking is completed and the cups are then taken off by a very slight pull. One machine milks two cows at once, and completes the operation in from five to eight minutes. A few minutes after milking, the scribe, who is not without experience, stripped four cows clean by hand and took less than half a pint of milk from all.

"The cows take kindly to the machines, young heifers being more easily accustomed to them than hand milking. The steady, uniform flow more favorably affects the yield of milk than could the most careful hand-milking, and one can do the work of at least four hand-milkers, while the cleanliness of the operation is absolute. This point deserves particular emphasis.

"S. A. Seymour, up the river, uses six machines, and is more than enthusiastic over them. Two men milk sixty-five cows in from an hour to an hour and a half, and any farmer can compute the saving of labor effected. The machines do not oversleep, never slight their work, and will not leave the farm for higher wages in haying. For moderate size or large dairies they seem to solve the milking problem completely."—Rural World.

California Opportunities.

If you want a comfortable home where the climate is mild and "everything grows," read the book, "The Great Sacramento Valley of California," sent for 10 cents by the Southern Pacific, Department I, San Francisco. Write to-day, and visit California on the low rate colonist tickets sold from September 15 to October 31, 1905. (4)

There is no surer way to destroy grass and weeds that spring up uninvited in walks and gravel paths than to sow them with salt and sprinkle thoroughly with water.

INCREASED CAPACITY CREAM SEPARATORS

In line with its established policy of always keeping FAR IN THE LEAD of all possible competition by further improving its separators every few years, the DE LAVAL COMPANY has just let out another "link" of superiority, which still further widens the gulf of practical efficiency between the DE LAVAL and the best of imitating cream separators.

Seemingly perfect as they have been before, the MAY, 1905, DE LAVAL machines are still further improved, run still easier, have lower-down supply cans, and LARGELY INCREASED CAPACITIES, all for the SAME PRICES as heretofore.

STYLE	OLD	NEW
"HUMMING-BIRD"	250 lbs.	300 lbs.
"DAISY"	350 "	400 "
"BABY" No. 1	450 "	500 "
"BABY" No. 2 (Iron-Stool)	600 "	700 "
"BABY" No. 2 (Solid-Frame)	600 "	700 "
"BABY" No. 3	1,000 "	1,200 "
"DAIRY" Turbine	1,000 "	1,200 "

Send for new 1905 Catalogue giving complete particulars.

THE DE LAVAL SEPARATOR CO.

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FOND DU LAC, Wis., September 15, 1904.

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Why not spend the summer down East—at the seashore? Breathe the health-giving air, bathe in old ocean, and at night be lulled to sleep by the music of the restless, seething surf as it dashes on the beach. You'll find these and other attractions at Asbury Park. New York City is distant only a couple of hours ride. Santa Fe is the block signal line. Only \$33.90 if you buy ticket Topeka to Asbury Park.

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The Atchison, Topeka & Santa Fe Railway Co.
Topeka, Kansas

The Veterinarian

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the inquirer's postoffice, should be signed with his full name, and should be addressed to the Veterinary Department, Kansas Farmer, Topeka, Kans., or Dr. C. L. Barnes, Manhattan, Kans. Where the Kansas Farmer readers cannot obtain the services of a veterinarian, or, if living at a distance from a drug store, they may obtain the necessary materials at a reasonable price, prescribed in the Veterinary Columns, from the Veterinary Department of the Kansas State Agricultural College, Manhattan, Kans.

Ailing Hefers.—I have just lost an 18-months-old heifer calf. It did not seem sick this morning but would not go to pasture with the rest, and preferred to lie with hind legs spread apart, front legs drawn under it, and to lie on its belly. It was not much bloated until noon. I gave it linseed oil and a little copperas. It died about noon. Blood had settled around hips and thighs—dark blood, and some seemed full of bubbles. Was it blackleg? The bowels seemed normal and I noticed no other peculiarity.

Eldorado, Kans. H. L. M.
Answer.—The symptoms you give are those of blackleg. I would advise you to burn the carcass and then throw lime on the ground where the animal died, and thus prevent further spread of the trouble. We send you, by mail, a bulletin on blackleg.

Tumors on Hogs.—In the issue of the KANSAS FARMER of two weeks ago, I think, you answered questions for me concerning treatment of hogs that had been castrated, after which an enlargement formed, which at first seemed to be hernia. The hogs (two cases) were castrated about two months ago, and have now broken open; for a time the enlargement would grow and then decrease again. I note what you say as to cause, but thought we had been very careful. You say that the only treatment is to remove, but you are not very explicit. You did not say whether with a knife or with some caustic, and what the probabilities of successful treatment would be. Some use knife and scrape until diseased part is removed, but such operation is a little severe. Is it not dangerous to perform such operations in such warm weather, or, is it safe if you use some good antiseptic, as iodiform? Can you give me a few concise directions?

Sunbeam, Kans. B. B.
Answer.—It is much more satisfactory to simply cut in on the tumor the same as in castrating; follow up the cord and cut off just above the tumor. To be sure this is rather warm weather to perform such and operation; and I will also add that if the tumors are the size of your two fists there is very little hope that the animal will recover from the operation. Unless the tumors are removed by the time they are, say, the size of a goose egg, there is very little hope of the animal getting well after the operation. Use any common disinfectant handy, after the operation. If I can explain further, will be glad to do so.

Barb-Wire Cut.—I have a horse that was cut in barb-wire fence six weeks ago, about 5 inches above knee on the front of the hind leg; the leg was cut about 3 inches across, cutting most of the first muscle in two. The wound seemed to be doing well for the first few days—seemed almost well, then the flesh seemed to rise from the inside turning outward, and looking almost like proud flesh. It continued to turn out until it was cut off with a knife, when it looked as though it were going to heal for four or five days. At this time it was cleaned and washed thoroughly every day, and calomel rubbed on; but in five days the flesh turned out as before. We then burned it off, washed and dressed as before, using carbolic acid in the grease and calomel. It appeared to be doing well until the fifth day when it turned out again. The horse is not at all lame. What course shall I pursue?

Daisy, Okla.

Answer.—We have been very successful in treating barb-wire cuts by

IT
MAKES
THE MOST
DOLLARS
FOR
YOU

It makes the most dollars for you, because it is the simplest in construction—has fewer parts—turns more easily—lasts longer—more easily cleaned—gives less trouble.

EMPIRE CREAM SEPARATOR

If you are interested in making the most dollars, write for our proofs.
EMPIRE CREAM SEPARATOR COMPANY, BLOOMFIELD, N. J.
Branch Office, 311 Temple Block, Kansas City, Mo.

using a healing powder and nothing else. We simply keep the wound clean by washing with a disinfectant and then dusting on the healing powder. We put the powder up in cans of 50c each, and send it directly from the veterinary department of the State Agricultural College to any one who desires it.

Cow Will Not Give Down Milk.—I have a very fine milch cow that absolutely refuses to give her milk down in the evening. Is there any remedy? I sold her calf.

St. John, Kans.

Answer.—The above question has been referred to me from another department, and though it does not come properly in the veterinary department, will tell you what I think is the trouble with the cow. While on the farm it was often the case that we had a nervous cow that if excited by being driven too hard from the pasture to the barn in the evening by a dog or a thoughtless boy, would come in the stable so nervous that perhaps for an hour she would not give down her milk. If you will write me more of the particulars, I may be able to suggest a treatment. Possibly using milk tubes or the like until the cow becomes natural would answer.

Injured Eyes.—My 2-year-old black Hambletonian stallion hurt his eyes last winter by some cockle-burrs getting into his foretop; the eyes seemed to get well for a time, but the right eye has a scum over it about once a month and after a week or ten days it will clear up. What can be done for him?

Webber, Kans.

Answer.—We are writing you a personal letter speaking of the merits of a preparation we are using on our college horses when a scum comes over the eyes. We sell it in 50c bottles, which we send to any one desiring to use it. It has proven to be very satisfactory, and I think would greatly relieve your horse. When it is to be sent by mail, 10c or 12c should be included for postage.

C. L. BARNES.

It is a curious fact that a boy's hair grows one-half slower than a girl's. In boys the average rate of growth is three feet three inches in six years, being an average of .018 inch a day. During the twenty-first and twenty-fourth years a man's hair grows quicker than at any other period. It takes an eyelash twenty weeks to reach a length of .429 inch, and then its life is from 100 to 150 days. By means of a camera the wink of an eyelid has been measured, and it was found that twenty winks can be made in four seconds.

A big advertisement may make a great splash but the business pond soon gets smooth. It is the little ripples constantly moving that wear away the rock.

Spasmodic advertising is like an automobile. Mighty fine while it is running, but very disappointing when it stops.

NOTICE.

State Grain Inspection Department.
Under the provisions of an act of the Legislature of the State of Kansas passed and approved by the session of 1903 to establish grades of grain by the Grain Inspection Commission, appointed by the Governor of Kansas, under the provisions of said act said commission will meet at the office of the Governor at 10 o'clock on the 12th day of July, 1905, to fix and establish grades for all kinds of grain handled in the State of Kansas, to be in effect on and after said date.

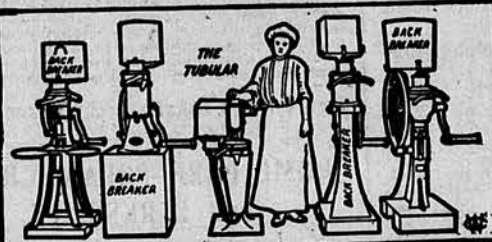
The said commission will hear all persons or their representatives, interested in the grain business at said time and place above mentioned.

G. W. GLICK,
J. M. CORY,
J. T. WHITE,
Done at Topeka, Kans., this 20th day of June, 1905.

TUBULAR--or "Back Breaker?"

When you see the waist low Tubular you can't be driven into buying a back-breaking, "bucket bowl" separator. Can and crank are just the right height on the Tubular. Here is the largest Dairy Tubular along side four "back breakers." The girl with her hand on the Tubular is 5 feet, 4 inches tall. This is an exact reproduction from a photograph. Which kind for you? Makers of "back breakers" try to get their cans low by setting the cranks low. High cans break your back backward—low cranks break it forward. Unless you are a double jointed giant, you'll find a high can is no joke. To show you how high these "back breaker" cans really are, when the machines are set high enough to turn easily, we raised these "back breakers" 'til their crank axles were level with the Tubular crank axle. "Back breaker" makers don't like this picture—it's too true. They try to squirm out of it. You wouldn't like turning cranks as low as "back breaker" makers put them.

The low can is only one of many advantages Dairy Tubulars have over all others. Dairy Tubular bowls are simple—"back breakers" are complicated. Tubulars are self-oiling—no oil holes to fill up. "Back breakers" are oil drippers and oil wasters. To learn a lot more about Tubulars, write today for catalog N-166.



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CHILD'S SO-BOS-SO KILFLY.

Kills flies and all insects; protects horses as well as cows. Perfectly harmless to man and beast. Rapidly applied with Child's Electric Sprayer. 30 to 60 cows sprayed in a few minutes. A true antiseptic; keeps stables, chicken houses, pig pens in a perfectly sanitary condition.

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FOR \$25.00 we sell the celebrated **SEARS' CREAM SEPARATOR**, 700 capacity, 500 pounds per hour; 500 pounds capacity per hour for \$25.00; 500 pounds capacity per hour for \$34.00. Guaranteed the equal of separators that retail everywhere at from \$75.00 to \$125.00.

OUR OFFER. We will ship separator on our 30 days' free trial plan, with the binding understanding and agreement if you do not find by comparison, test and use that it will skim closer, skim colder milk, skim easier, run lighter and skim one-half more milk than any other Cream Separator made, you can return the Separator to us at our expense and we will immediately return any money you may have paid for freight charges or otherwise. Cut this ad out at once and mail to us, and you will receive by return mail, free, postpaid, our **LATEST SPECIAL CREAM**

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Young stock for sale.

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DUROCS Spring pigs, sired by five leading males, either sex or pairs after weaning. Bred sows for fall litters. John Schowalter, Cook, Nebr.

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J. B. DAVIS, Fairview, Brown Co., Kas.

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Duroc-Jersey Swine, Shorthorn Cattle and B. P. Rocks. FOR SALE—Two September 27, 1904 males. Eggs 75 cents per 15; or \$4.00 per 100.
Newton Bros., Whiting, Kansas.

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LEON CARTER, Mon., Asherville, Kans.
Glittered Duroc-Jersey Swine.

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Registered Duroc-Jersey Swine. A few choice gilts and two fall boars for sale.

JNO. W. JONES & SON, R. R. 3, Delphos, Kan.

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For Sale—Fall gilts, tried brood sows, bred and open and spring pigs of either sex.
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FOR SALE 75 head of pedigree Duroc-Jersey spring pigs, boars or sows, no akin, good color, well built, very cheap, order now from
CHAS. DORR, Route 6, Osage City, Kans.

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OF DUROC-JERSEYS
Spring pigs are ready to go. They will be sold at a bargain to make room.

R. F. NORTON - Clay Center, Kans.

DUROC-JERSEY HOGS All stock registered. Pigs for sale weighing 150 to 200 pounds, both sexes. Will have sows for early farrowing at \$20 each. Spring males and gilts, \$10 to \$15. Address
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Herd headed by King of Kansas 28283, sired by Improver 24, the hog which brought \$300 for a half interest. For sale: A lot of pigs sired by King of Kansas. The brood sow, Daisy E, is very large and a good breeder of show hogs. There are several sows in the herd of the Tip Top Notcher strains. Send in your orders and get a bargain.
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A few Gold Dust gilts of the big-boned, hardy variety and out of large litters bred for April farrow.
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Five good males at special prices to close out. Spring pigs in pairs, trios, fours, fives and sixes not akin. Can ship on Santa Fe, Missouri Pacific, Union Pacific or Rock Island.
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Eight choice young boars, bred and open gilts, good size and finish; first draft for \$20; take choice of boars. **WM. KNOX, SOUTH HAVEN, KANS.**

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Twenty serviceable boars at special prices for next 30 days, sired by Black Perfection 37132, Slick Perfection 32604, Perfection Now 32580, and Ideal Perfection. They are lengthy and good-boned pigs, with plenty of finish. Write me description of what you want and I will guarantee satisfaction.
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Pure-bred Poland-Chinas from leading strains. Visitors welcome and correspondence solicited. Satisfaction guaranteed. **C. P. BROWN, R. 2, Whiting, Kas.**

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Herd headed by Nonpareil 86106A. Sweepstakes boar at Missouri State Fair 1904. Can spare a few choice sows bred for May and June farrow.
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Pigs by On and On and U. S. Model. 3 fall boars and a number of choice gilts, large, fancy and well bred. Perfection and Sunshine blood

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Empire Chief 30379, heading champion herd and winner in class at Iowa and Nebraska State Fairs. He is of great size and finish. Sire Chief Tecumseh 3rd and out of Columbia 24. The combination that produced so many State fair champions. A grand lot of sows bred to him; and summer boars for sale at reduced rates. Try me for quality and prices.

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I have about twenty boars ready for use and twenty-five sows bred, and some unbred, and a large number of good pigs, both breeds.

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A choice lot of early spring pigs now ready to ship. All out of mature sows and sired by as good boars as the breed affords. No inferior stock shipped at any price. Write for prices describing what you want.
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CEDAR LAWN BERKSHIRES My sows are Prime 64778, and Berryton Duke 72946. Boar at head of herd, Jourist topper 76277.
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From the best breeding that can be had, for sale at all times. Male and female, bred and open. Prices and breeding that will suit you.

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Boars of July and August, '04, farrow for sale, sired by Forest King 72668. Orders booked for spring pigs.

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30 extra choice Boars, 100 to 150 pounds.
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Fancy heads, strong bone and all-around good ones. Bargains at \$15 to \$25 to close quick.

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I have purchased the great S. B. Wright herd, of California—are of the best in America, and the best sows and boars I could find in Canada, and have some fine young boars by several different herd boars. Can furnish fresh blood of high quality.

Eight pure Collie pups, cheap

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A pure Scotch bull.
Stock for sale at all times.
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Sleazy 649 of Vol. 40, Rose of Sharon blood, Norwood Barrington Duchess 654 Vol. 50, Bates blood. Pure-bred unregistered bulls for sale.
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Grand array of Scotch herd bulls. Victor of Wildwood 126054, Prince Fawonia 216307, Happy Knight by Gallant Knight 124468, and Charm Bear. Good bulls and females always for sale. Show material. Visitors welcome.

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FOR SALE—Young bulls, cows and heifers. Come and see them. Telephone via
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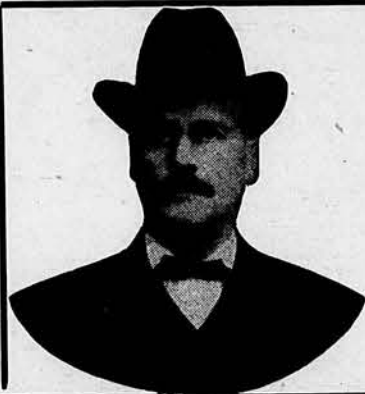
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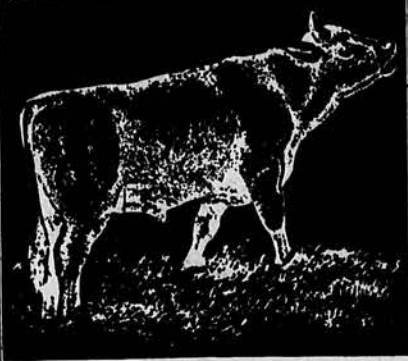
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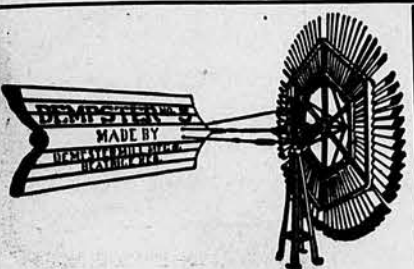
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